EFFECT OF THE ENHANCED HIV COUNSELING ON STUDENTS TESTING NEGATIVE FOR HIV/AIDS

A Thesis in
Biobehavioral Health

By
Titilayo Ainegbesua Okoror

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This thesis of Titilayo A. Okoror was reviewed and approved* by the following:

Collins O. Airhihenbuwa  
Professor of Biobehavioral Health  
Thesis Advisor  
Chair of Committee  
Interim Chair, Department of Biobehavioral Health

Patricia B. Koch  
Associate Professor of Biobehavioral Health

Edward A. Smith  
Associate Professor  
Health & Human Development Prevention Research Center

Edgar P. Yoder  
Professor of Agricultural and Extension Education

*Signatures are on file in the Graduate School.
ABSTRACT

College students are at increased risk for HIV/AIDS because of perceived invulnerability to HIV, and increasingly engaging in HIV risk behaviors by having multiple sexual partnerships, unprotected sexual intercourse and using alcohol in many of these situations. African American college students are at even higher risk for HIV due to some cultural beliefs and misconceptions. Although HIV counseling and testing is considered a primary line of defense in reducing HIV transmission, models on which such services are based do not explore socio-cultural contexts within which HIV behaviors takes place. Use of a cultural model that explores the socio-cultural contexts of students’ behaviors may provide more insight into factors that either enable them to, or prevent students from engaging in HIV risk reduction behaviors. In addition, providing students with the necessary skills to negotiate such contexts along with daily management of their behaviors may prove effective in reducing HIV risk behaviors.

The purpose of this study was to examine the effect of the Enhanced HIV counseling program in reducing HIV risk behaviors by increasing condom use, reducing the number of sexual partners, and alcohol use, as compared to the Standard HIV counseling program (brief counseling) currently offered at the Penn State University Park campus. Using mixed approaches of behavioral surveys and content analysis of semi-structural interviews, opinion guides and field-notes, the study specifically compared the effectiveness of the Enhanced HIV Counseling program with the Standard Counseling program in reducing HIV risk behaviors; determined which component(s) of the Enhanced counseling was most effective, and explored socio-cultural factors identified by students that prevent them or enable them to engage in HIV risk reduction.

Using the PEN-3 model as a guide, the Enhanced HIV counseling consisted of forty minutes of pre-test counseling on skills training on condom application, negotiating safer sex,
and exploring socio-cultural factors; followed by the actual HIV testing. Participants were also provided with self-monitoring logs to complete daily and drop off at the end of each week for the duration of the study. Participants also received twenty minutes of post-test counseling based on completed logs when they returned for their HIV test results, and five minutes of telephone counseling support at nine weeks into the study. The Standard Counseling comprised of twenty minutes of pre-test counseling’s assessment of risks, and development of behavioral goals, followed by the actual HIV testing, and a ten minutes post-test counseling when students returned 3 weeks later to receive their HIV test results. Main outcomes of interest were participants’ knowledge about HIV/AIDS; reduction in number of sex partners, use of alcohol and increase in condom use during last sexual encounter; the most effective component in the Enhanced HIV counseling program and socio-cultural factors identified by students’ as supportive of, or impediments to reducing HIV risk behaviors.

Students using the off-site testing locations were recruited to participate in the study. Of the 108 students using the off-site testing locations, fifty students agreed to participate in the study, and were randomly assigned to receive the Enhanced HIV counseling or the Standard HIV counseling. Participants were equally distributed into both study groups, were mostly African Americans (68%), females (64%) and single (66%).

Participants’ knowledge about HIV/AIDS increased at post-treatment when compared with pre-treatment, although this was not statistically significant. Cross-tabs analysis showed that more participants in the Enhanced Counseling group reported a reduction in the number of sex partners in comparison to participants in the Standard Counseling group. In addition, more participants in the treatment group reported less use of condoms and more alcohol use at last
sexual encounter when compared to those in the Standard Counseling group. However, these results were not statistically significant.

Content analysis of the semi-structural interviews showed that equal number of the participants’ selected the skills training and self-monitoring logs as effective components of the Enhanced HIV counseling. Only one participant selected the telephone counseling, and one participant selected both the skills training and self-monitoring logs. Using the PEN-3 model, cultural identity, sexual satisfaction and perception of body image were socio-cultural issues that enabled and/or prevented participants from engaging in HIV risk reduction behaviors.
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[Psalms 146: 2; 145: 1-3]

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Chapter 1

INTRODUCTION

Human Immunodeficiency Virus and Acquired Immunodeficiency Syndrome (HIV/AIDS) is the most tragic pandemic and the most serious threat of the 21st century. It has resulted in the death of over 25 million people since its first reported cases over twenty years ago. An estimated 40.3 million people are living with the disease by the end of 2005 with 4.9 million people becoming infected in 2005 (UNAIDS Global Report, 2005). HIV/AIDS is listed as the leading cause of death worldwide bringing social, political and economic detriment to many nations, and “will have an increasingly serious impact into the foreseeable future, unraveling the fabrics of societies in its path” (WHO, 2005; UNAIDS Global Report, 2004, pg. 23).

The disease is especially rampant among the productive age group and the epidemic remains extremely dynamic, growing and changing character such that it is not homogeneous within regions or even nations (UNAIDS Global Report, 2004). Sub-Saharan Africa remains hardest hit with two-thirds of all people living with HIV/AIDS (some 25 million) in this region while industrialized countries like the United States have less than 1% (0.6%; range 0.3% to 1.1%). The non-homogeneity of HIV/AIDS becomes apparent with race/ethnicity and age group distribution of the disease rate showing that the epidemic is highest among African Americans (50% of estimated HIV/AIDS cases in 2003) and young adults (12% of estimated HIV/AIDS cases in 2003) (UNAIDS Global Report, 2004; CDC, 2005).
Youth and HIV/AIDS

The impact of HIV/AIDS on the foreseeable future can be seen in the growing number of youths becoming infected with the disease. “In a world with AIDS, many young people’s life choices vanish” (UNAIDS Report, 2004, pg. 97). Young adults aged 15-24 account for half of the 5 million new cases of HIV infection worldwide each year “making HIV/AIDS a disease of young people” (UNFPA, 2003). Every 14 seconds, a youth is infected with HIV with an estimated 6,000 youths infected each day, though only a small percentage of them know their HIV serostatus. An estimated 11.8 million people aged 15-24 years old were said to be living with HIV/AIDS (7.3 million young women & 4.5 million young men) by the end of 2001. This accounted for one third of the global total number of people living with HIV/AIDS [See Figure 1.1] (UNFPA, 2003; UNAIDS 2004). Since nearly half of the global population is less than 25 years old, combating HIV/AIDS takes on a more heightened urgency. Abating the epidemic among this population is described as “the greatest hope for turning the tide against AIDS” and “the key in the fight against AIDS” (UNAIDS Report, 2004, pg. 93).

![Figure 1.1: Total Number of People Living with HIV/AIDS Globally](Image)

Source: UNAIDS
In the United States, the situation is not too different from the global picture described above. According to the Centers for Disease Control and Prevention (2004), the proportion of young people with an AIDS diagnosis increased from 3.9% in 1999 to 4.7% in 2003. Young adults accounted for 12% of all estimated cases in 2003, which is a 37% increase in the number of young adults living with HIV/AIDS since 1999. Fifty percent of all new HIV infections is said to have occurred among people under the age of 25, with many being infected through sexual activities. It is reported that diagnosed HIV cases among young adults is indicative of the overall trends in HIV incidence since this “age group has more recently initiated high-risk behaviors” (CDC, 2004). Youths or young adults are defined as 15-24 year olds, and the average college student is between 18 to 24 years old, making college students to be considered either youth or young adult (National Center for Educational Statistics, 2002).

**College Students and HIV/AIDS**

College life presents both an exciting and challenging time to students. For many, it is the first time they are away from home, including away from their parents’ rules and regulations along with the support they had depended on. This presents college students with the freedom to enjoy their pleasures of being an adolescent independent of adult supervision. College life also presents many students with the opportunity to try new things, either out of curiosity, a need to experiment or just for the fun of doing it. Moffatt (1991) wrote that college students engage in “friendly fun” that “consists almost entirely of spur-of-the-moment pleasures” such as “going out to a bar, flirting and other erotic activities” (pg. 47). However, this newfound separation from adult supervision brings
new experiences and individual freedom. Responsibility and self-reliance comes with such freedom (Capsouras, 1998). Many students have had to make decisions for the first time, and have to live with the consequences of such decisions, be it for good or bad. College students are described as ‘decision-makers’ that “tend to be experimental by nature, unskilled at evaluating risks and options, incompletely sure of themselves and their peers, and secretive about their judgments and actions” (Keeling, 1987, pg. 26).

Curiosity and the need to experiment have led many students to engage in behaviors that put them at risk for HIV/AIDS. A UNAIDS Report (2004) states that young adults are vulnerable to HIV due to their experimentation and curiosity which goes with their age, along with such things as lack of HIV information, education and services. Experimentation and curiosity have led to injecting drug use, engaging in sexual acts under the influence of drugs and/or alcohol, lack of condom use, multiple sex partners, among many other things. According to the American College Health Association Executive Summary Report (2004), 14.4% of college students report having unprotected sex after drinking alcohol (Males –16.6%, Females –12.6%) while 8.9% has had 4 or more sexual partners (Males –11.4%, Females –7.2%) in the last twelve months. “It is completely unsurprising that an infection transmitted chiefly by sex and drugs is occurring most often in age groups that experiment commonly in both arenas” (Keeling, 1987, pg. 27).

African American college students are even at more risk for HIV/AIDS and disproportionately affected by it. African Americans aged 13 –24 accounted for 56% of all HIV infections ever reported in the United States among young adults by the end of 2001, thereby making them the largest group of young people affected by HIV.
HIV/AIDS is listed as one of the top three causes of death for African American males aged 25–54, and one of the top four causes of death for African American females aged 20–54 years by the end of 2001. In fact, HIV/AIDS is the number one cause of death for African American women aged 25–34 years, and African Americans accounted for 50% of all HIV/AIDS cases diagnosed in 2004 (CDC, 2005).

It should be noted that, given the latency period between becoming infected with HIV and developing AIDS, infection of young adults must have taken place sometime during their young lives. Overall, African Americans accounted for 42% of all people living with AIDS and 50% of new HIV/AIDS diagnoses in 2003 (CDC, 2005). McLean (1994) listed “inaccurate and missing information about HIV transmission, beliefs about invulnerability that have both cultural and developmental origins, and behaviors that result from perceived expectations specific to African American relationships between men and women” as some factors that increase African American college students’ vulnerability to HIV infection.

Knowledge and information have been described as the first lines of defense for young people (UNAIDS Report, 2004) and prevention and intervention efforts for this population have focused on increasing HIV/AIDS knowledge and awareness and providing easy access to services such as HIV counseling and testing, along with access to condoms. HIV counseling and testing is considered a primary preventive effort in reducing HIV transmission, since knowledge of one’s own serostatus is believed to be “the key stepping stone into care or ongoing behavioral risk reduction services” (CDC, 2001, pg. 5).
HIV/AIDS Voluntary Counseling & Testing (VCT)

According to the UNAIDS/WHO Joint Policy on HIV testing (2004), HIV Voluntary Counseling and Testing (hereafter HIV VCT) is one of the four types of HIV testing recommended and is described as *client-initiated* testing to learn HIV status. It takes place in two phases: pre-test counseling, followed by the actual testing, and then a posttest counseling session for both HIV-negative and positive individuals. The pre-test counseling session allows the counselor to assist the client to assess their risk for HIV infection. The posttest counseling is when the test results are given and possible follow-up arranged if the client is HIV positive, or requests such follow-up. Three conditions (or 3 Cs) outlined as the “underpinning principles” for conducting HIV VCT are: 1) Confidentiality; 2) accompanied by Counseling and 3) only conducted with informed Consent, meaning that it is both informed and voluntary (UNAIDS/WHO, 2004).

HIV Counseling, Testing and Referral (CTR)

In accordance with the above, the Centers for Disease Control and Prevention published its first guidelines on HIV testing and counseling in 1986. It highlighted the importance of offering voluntary testing and counseling and maintaining confidential records, and was geared toward both public and private sectors on how to implement HIV VCT (MMWR, 1986). In 1987, new guidelines were added to emphasize the need to decrease barriers to counseling and testing (MMWR, 1987). Technical guidance on HIV counseling was provided in 1993. This report focused on using the interactive model (currently in use) for HIV counseling as opposed to the didactic model. The didactic model involves providing factual routine information about HIV to clients, while the
interactive model is much more “client-centered.” It involves tailoring the counseling to the behaviors, circumstances, and special needs of the person being counseled, and making sure that the risk-reduction messages are personalized and realistic. Clients are assisted in developing a personalized risk-reduction plan (MMWR, 1993). The following were recommended as to what the HIV counseling should be:

- “Culturally competent (i.e., program services provided in a style and format sensitive to cultural norms, values, and traditions that are endorsed by cultural leaders and accepted by the target population)
- Sensitive to issues of sexual identity;
- Developmentally appropriate (i.e., information and services provided at a level of comprehension that is consistent with the age and the learning skills of the person being served);
- Linguistically specific (i.e., information is presented in dialect and terminology consistent with the client's language and style of communication)” (MMWR, 1993, pg. 6).

To emphasize the need for client referral to other services for follow-up, especially in an effort to maintain new behaviors initiated, the term HIV Counseling, Testing and Referral (CTR) was used (hereafter CTR). In 1994, more information was added to the guidelines on standard counseling and testing procedures, with further reiteration of the importance and confidentiality of HIV prevention counseling (MMWR, 1994). Based on empirical evidence on the efficacy of HIV CTR (Kamb, et al., 1998), the CDC made revisions to the *HIV Counseling, Testing and Referral Standards and
Guidelines in 1999 using a five-step evidence-based approach. A number of similarities can be found between the current and previous guidelines, such as ensuring that HIV testing is informed, voluntary and consented, and recommending use of prevention counseling aimed at personal risk reduction for HIV-infected persons and those at high risk for HIV.

Two principal points in the current guidelines that were not in the previous one are: 1) using an evidence-based approach to provide specific recommendations for CTR; and 2) acknowledging providers’ need for flexibility in implementing the guidelines, given their particular client base, setting, HIV prevalence level, and available resources (MMWR, 2001; See Figure 2). Five tasks were identified in HIV CTR: relationship building, risk assessment, dissemination of information, behavior change, and emotional and coping support (Sikkema & Bissett, 1997).

![Diagram of HIV counseling, testing and referral](image)

**Figure 1.2:** Example of HIV counseling, testing and referral in settings serving populations at increased behavioral or clinical HIV risk (adopted from MMWR, 2001)
The Risk Reduction Model

The HIV Counseling, Testing and Referral service is based on the risk reduction model (also called the harm reduction model). According to Marlatt (1998), the model is founded on “a set of pragmatic principles and compassionate strategies designed to minimize the harmful consequences of personal drug use and associated high risk behaviors” (pg. 3). Though the approach was developed in response to drug problems in the 19th century (Berridge, 1992 referred to in Marlatt 1998), and reactivated in the wake of the AIDS crisis in the 1980s, it has been found effective in reducing risk behaviors for HIV. The use of the approach in HIV prevention grew out of grassroots community efforts to reduce the rate of HIV infection among members of certain at-risk groups. It is described as a ‘bottom-up’ as opposed to a ‘top-down’ approach (Marlatt, 1998).

The goal of the model in HIV prevention is to meet individuals where they are on the risk reduction continuum and move them along from higher-risk to lower-risk behaviors. It emphasizes lowered exposure to risk by providing realistic options for clients, rather than complete elimination of all risks. In the context of the HIV testing and counseling program, the risk reduction model recognizes abstinence as the ideal outcome, but accepts alternatives that will lower the risk of harm. The implementation of the model means that the behavior(s) is seen or viewed from the perspective of the client rather than that of the provider. Instead of setting abstinence as the requirement for clients to attain, counselors implementing the risk reduction model meet clients where they are and encourage them to take immediate, yet gradual ‘baby steps’ in their efforts to change risk behaviors. Counselors do not ask if the behavior is right or wrong (moral
model), but are concerned with daily management of affairs and practices (compassionate pragmatism) (Marlatt, 1998).

Three main strategies are employed in the risk reduction model: 1) working with individuals or groups, 2) modifying the environment, and 3) implementing public policy changes. When working with individuals or groups, education or provision of information is viewed as key to prevention and minimization of harm (UNAIDS, 2004; CDC, 2001). Modifying the environment utilizes the Rogerian Client-Centered therapy, which involves allowing the client to control the content and pace of the therapy (non-directive), and the Cognitive Behavior Therapy, which involves making connections between behaviors, thought patterns and coping. The implementation of public policy dictates what can and cannot be legally done to make risk reduction tools available to the public.

**Rogerian Client-Centered Therapy**

Rogerian client-centered or person-centered theory (also known as non-directive therapy) was developed in the 1940s by Carl R. Rogers (1902 - 1987). It is based on the principle that if the client experienced a relationship characterized by genuineness, unconditional positive regard, and empathy from the therapist, then a self-directed process of growth will follow (Raskin, 2004). It is argued that, “human beings become increasingly trustworthy once they feel at a deep level that their subjective experience is both respected and progressively understood” (Thorne, 1992, pg. 26). Therefore, when a therapist demonstrates the “core conditions” of client-centered therapy, which are “unconditional positive regard, emphatic understanding, and congruence,” and the client
perceives these at least to a minimal degree, “then psychotherapeutic personality change and its positive correlates are inevitable” (Kirschenbaum & Jourdan, 2005).

Displaying these core conditions mean that the therapist is non-judgmental, does not put up a professional front thereby alienating the client, acknowledges the client’s reality and choices without imposing any restrictions on them, shows genuine empathy and beliefs in the client’s feeling and capacity for change (Kensit, 2000; Raskin, 2004). By so doing, “the therapist provides the environment and the client directs the session” (Kensit, 2000, pg. 347). The above attitudinal display by a therapist is very much similar to some of the tenets in the risk reduction model. Marlatt (1998) wrote that one of the unique principles in HIV harm reduction is the recognition that individuals have the ability and competence to make choices and change their lives.

**Cognitive Behavioral Therapy**

Cognitive Behavioral Therapy is described as a “form of psychotherapy that emphasizes the important role of thinking in how we feel and what we do” (http://www.nacbt.org/whatiscbt.htm). It is based on the belief that individual’s *thought* patterns influence his/her feelings and subsequently behaviors, and connecting them is necessary for behavioral change to take place. It is a collaborative efforts between the client and the therapist, in which the therapist assists the client by listening, teaching, encouraging and implementing efforts to achieve set goals. Cognitive Behavioral Therapy is considered most relevant to the tasks of HIV counseling because its “client-centered and crisis counseling approaches were appropriate for the relationship building and emotional/coping support components of HIV counseling” (Sikkema &
Bissett, 1997, pg. 15). The centrality of these tenets to HIV counseling is seen in Grinstead’s (1997) description of HIV counseling that, it “entails the development of a relationship between a counselor and client for the purpose of assessing risk for HIV infection or transmission, developing a plan to reduce risk, and assisting the client to cope with emotional and interpersonal issues related to HIV” (pg. 127).

Statement of the Problem

College students are especially vulnerable to HIV/AIDS infection due to their engagement in HIV risky behaviors, non-use of protection, and low perception for HIV infection. African American college students are even at more risk due to beliefs about invulnerability that have both cultural and contextual origins, and behaviors that result from perceived expectations specific to African American relationships between men and women. Understanding the socio-cultural contexts of students’ HIV behaviors, while providing them with the necessary skills to negotiate such contexts along with daily management of their behaviors (Enhanced HIV Counseling and Testing) may prove effective, even more than the Standard approach to HIV Counseling, Testing and Referral (CTR).

Purpose of the Study

The purpose of this study is to examine the effect of the Enhanced HIV counseling program in reducing HIV risk behaviors by increasing condom use, reducing number of sexual partners and alcohol use, as compared to the Standard HIV counseling and testing program (brief counseling) currently offered at the Penn State University Park campus. Standard HIV Voluntary Counseling, Testing & Referral (CTR) services are
offered to students at Penn State University Park campus. Of specific focus are the
students of the African descent using the University services who test negative for HIV.
Using concurrent mixed approaches of behavioral surveys and content-analysis of one-
on-one semi-structured interviews, the study will specifically compare the effectiveness
of the Enhanced HIV Counseling program with the Standard Counseling program in
reducing HIV risk behaviors by increasing condoms use, reducing number of sexual
partners and alcohol use. If the Enhanced Counseling program is found to be effective,
the specific component(s) that is most effective in reducing HIV risk behaviors will be
determined. In addition, the socio-cultural factors identified by students that prevent
and/or enable them to engage in HIV risk reduction behaviors will be identified.

**Research Questions**

1. Is there a difference between pre-treatment and post-treatment in the level of
   students’ knowledge about HIV/AIDS?

2. Is there a significant difference between the Enhanced HIV counseling as
   compared to the Standard counseling in effectively increasing condom use (safer
   sex method), reducing number of sexual partners and alcohol use among students?

3. Which component(s) of the Enhanced HIV Counseling program (skills training,
   self-monitoring log and telephone counseling support) do students identify as
   providing them with the most support in initiating and maintaining the HIV risk
   reduction behaviors by increasing condom use, reducing number of sexual
   partners and alcohol use?
4. What socio-cultural factors do students identify that prevent and/or enable them to engage in HIV risk reduction behaviors?

**Significance of the Study**

Almost fifty percent of new HIV cases occur among 15-24 year olds, the age group most college students represent. African Americans aged 13–24 accounted for 56% of all HIV infections ever reported among young adults by the end of 2001 (CDC, 2005). One in five hundred college students are infected with HIV/AIDS, though only one in three know their HIV serostatus (Anastasi et al., 1999; Gayle et al., 1990). Extensive research accessing college students’ levels of knowledge, perceptions, attitudes and behaviors has shown that they generally have a low perception of their risk for HIV infection and tend to engage in risky behaviors with no protection (Malloy et al., 1997).

College students tend to underestimate their HIV risk, despite the fact that they are knowledgeable about HIV preventive measures (Hou & Wisenbaker, 2005; Rolison & Scherman, 2003; Mattson, 2002; Lance, 2001; Lance, L. M. 2001; Thompson, et al., 2001; DiLorio, et al., 2000; Brown, 2000; MacNair-Semands, & Simono, 1996). Opt & Loffredo (2004) found that though the majority of the students participating in the study correctly responded to questions about HIV treatment availability, lack of cure for HIV, and condom use, “they are neither very concerned personally about becoming infected nor do they take appropriate safer sex precautions, such as using latex condoms” (pg. 400). In addition, results from a study accessing AIDS-related risk behavior among college students show that 60% of the 407 students who participated engaged in unprotected sex, while 59% engaged in sex while under the influence of alcohol. Even
though they are knowledgeable about HIV preventive measures, these students underestimated their HIV risk (Brown, 2000).

College students’ sexual behaviors give credence to the notion that knowledge does not necessarily translate into action, even though knowledge is necessary for change to take place. Various researches have proposed combining a number of strategies (components) in designing interventions for college populations, such as increased awareness in changing behaviors (Zak-Place & Stern, 2004; Thompson et al., 2001; Malloy, et al., 1997). Others have added a skill-training component to the above strategy with the realization that knowledge alone is limited if the ‘technical know-how’ is missing (Hawa, et al., 1998; Fisher, et al., 1996). Further, other studies have included a motivational counseling component, either through one-on-one interaction, or through peer educators, in the hope of aiding students to adopt HIV risk reduction behaviors by increasing condom use, developing skills in negotiating safer sex, and communicating with sex partners (Mattson, 2002; Kamb, et al., 1998; Fisher, et al., 1996; Richie & Getty, 1994; Wenger, et al., 1992).

However, study populations of most of the interventions reviewed above have consisted largely of Caucasian students with the inclusion of very few African American students. In addition, many of these interventions have focused primarily on the individual, without particular attention to the context in which behaviors take place. Even though the HIV-risk reduction model, along with components from the Rogerian’s client-centered therapy, all focused on the individual, addressing the context within which behaviors takes place increases the effectiveness of HIV interventions (Duncan, et al., 2002, McLean, 1994).
Further, HIV prevention programs on college campuses often “are not developed with the level of sensitivity that makes them suitable for all students.” In many instances, “such oversight leads to gaps in delivery of services,” and “all too frequently, it is students of color who are missed because of these gaps” (McLean, 1994, pg. 221). De La Cancela (1989) wrote “when intervention methodologies are applied indiscriminately and without cognizance of the groups’ varied social economic, educational and political experiences” then it becomes “problematic to educate any group of people” (quoted in McLean, 1994, pg. 221). It’s even more imperative to design interventions using culturally sensitive and culturally appropriate model(s) geared towards effectively reducing HIV/AIDS among this population while making sure that such interventions identify, assess and accommodate the different needs of groups of students (Keeling, 1987).

Without exploring contextual factors such as positive/negative enablers and nurturers of behaviors (Airhihenbuwa, 1999), assisting students to develop needed skills, such as negotiating safe sex with partners is meaningless. Furthermore, assisting students with behavior self-management (such as using a self-monitoring daily log), while providing follow-up support to students who already acknowledge their risk by seeking HIV testing, could lead to an effective intervention that can sustain behavior change among this population (Duncan, 2002, McLean, 1994). Therefore, in addition to the HIV-risk reduction model already used in implementing HIV CTR, the PEN-3 model (Airhihenbuwa, 1999, 2004) will be used in examining socio-cultural contextual factors hindering and/or encouraging behavior change in this study. More explanation on this model is presented in Chapter Two.
Assumptions

In conducting this study, the following assumptions were made:

1. Socio-cultural factors play an important role in health decisions and health behaviors of college students, especially African Americans.
2. Understanding these factors is needed to effectively assist students in their efforts to reduce their HIV risk behaviors.
3. Providing necessary skills to negotiate these socio-cultural contexts will reduce HIV risk behaviors among them.
4. The HIV counseling and testing services are available and accessible to all students where this study was conducted.

Delimitations

The study was delimited as follows:

1. Penn State students at the University Park campus participated in the study.
2. Participation in the study was restricted to students who were 18 years or older.
3. Only students using the HIV counseling and testing program on campus were recruited to participate in the study.
4. A negative HIV test result was required for continued participation in the study.

Definition of Terms

Acquired Immunodeficiency Syndrome (AIDS) is best described as the last phase in succumbing to HIV infection. It refers to a group of symptoms that collectively characterize or indicate a weakening or an impaired immune system.
Enhanced HIV Counseling program is composed of skills training, self-monitoring logs and telephone counseling support to assist college students in reducing their HIV risks.

Skills’ training is provided on condom application, negotiating safer sex and negotiating socio-cultural contexts of HIV behaviors.

Self-management is the monitoring of HIV behaviors by completing daily logs on such sexual activities.

Telephone Counseling is the provision of additional support by telephone.

HIV Counseling, Testing and Referral (CTR) is an informed, voluntary and confidential client-initiated testing to know HIV sero-status. It consists of a pre-test counseling, followed by the actual HIV testing, a subsequent post-test counseling, and a referral to follow-up services if and when needed.

HIV/AIDS Voluntary Counseling and Testing (VCT) is an informed, voluntary and confidential client-initiated testing to know HIV sero-status. It consists of a pre-test counseling, followed by the actual HIV testing, and a subsequent post-test counseling.

Human Immunodeficiency Virus (HIV) infection is a retroviral infection (either HIV-1 or HIV-2) that progressively attacks and destroys the white blood cells in the immune system thereby causing AIDS.

OraSure HIV-1 is a specimen collection device used to collect oral fluid from the mouth in only a few minutes without using needles. The oral fluid is tested to see if it contains HIV antibodies. It involves no needles, and there is no visible sign that one has been tested.
The PEN-3 Model is a model that centralizes the role of culture in health decisions and behaviors. It addresses the role of culture by applying the domains of cultural identity, relationships and expectations, and cultural empowerment to the development, implementation and evaluation of health promotion programs (Airhihenbuwa, 1999; Airhihenbuwa & Webster, 2004).

The Risk Reduction Model is founded on a set of pragmatic principles and compassionate strategies designed to reduce, rather than eliminate risk (Marlatt, 1998).

Conclusion

In conclusion, college students are at increased risk for HIV as shown in incidence and prevalence rates of HIV among this population. Many college students have perceived invulnerability to HIV and engage in HIV risk behaviors. African American college students are at even higher risk for HIV due to some cultural beliefs and misconceptions. HIV counseling and testing is considered a primary line of defense for reducing HIV transmission. However, models on which HIV counseling and testing is based do not explore socio-cultural contexts in which HIV behaviors takes place among college students. Use of a cultural model that explores the socio-cultural contexts of students’ behaviors may provide more insight into these contexts. In addition, understanding these socio-cultural contexts, while providing students with the necessary skills to negotiate such contexts along with daily management of their behaviors, may prove effective in reducing HIV risk behaviors among them.
Chapter one of this thesis introduces the problem, purpose of the study, research questions, and significance of the study. It also presents the assumptions of the study, delimitations and definition of terms used in the study.

Chapter two provides a review of literature on college students’ HIV/AIDS knowledge, HIV risk behaviors, HIV testing practices, and effectiveness of past HIV intervention programs. It also discusses the rationale for the present study, and the theoretical framework used in the study.

Chapter three describes the methodology used in this study, participants’ recruitment, the implementation and the intervention, and data analysis methodology. Reliability issues of the quantitative instruments, along with the validity and reliability challenges in using qualitative method are presented.

Chapter four presents the study’s findings from both the quantitative and the qualitative data. Quantitative results were presented first followed by the qualitative findings.

Chapter five presents the summary, discussion and implications of the findings, and offer recommendations for future researches. It also includes the reflections of the investigator.
Chapter 2

LITERATURE REVIEW

The purpose of this study is to examine the effect of the Enhanced HIV counseling program in reducing HIV risk behaviors by increasing condom use, reducing number of sexual partners and alcohol use, as compared to the Standard HIV counseling and testing program (brief counseling) currently offered at the Penn State University Park campus. Standard HIV Voluntary Counseling, Testing & Referral (CTR) services are offered to students at Penn State University Park campus. Of specific focus are the students of the African descent who test negative for HIV using the University services.

Using concurrent mixed approaches of behavioral surveys and content-analysis of one-on-one semi-structured interviews, the study will specifically compare the effectiveness of the Enhanced HIV Counseling program with the Standard Counseling program in reducing HIV risk behaviors by increasing condoms use, reducing number of sexual partners and alcohol use. If the Enhanced Counseling program is found to be effective, the specific component(s) that is most effective in reducing HIV risk behaviors will be determined. In addition, the socio-cultural factors identified by students that prevent and/or enable them to engage in HIV risk reduction behaviors will be identified.

This chapter presents a review of literature on college students’ HIV/AIDS knowledge, HIV risk behaviors, HIV testing practices, and effectiveness of past HIV intervention programs. It also discusses the rationale for the present study, and the theoretical framework that will be used in the study.
College years present many students with their first taste of freedom: to do what they want, when they want it, how they want it and where they want it. For some, it is the first time ever that they actually feel the words of the old English adage, “master and commander of my own ship.” College experience for many students, have being described as the first time in which “different facets of personality, sexuality, and identity may be tried out away from the watchful eyes of parents” (Keeling, 1987, pg. 29). Moffatt (1991) wrote, “college is about being on your own, about autonomy, about freedom from the authority of adults…about fun, about unique forms of peer-group fun before ... the grayer actualities of adult life in the real world begin to close in on you” (pg. 46). It is suggested that college environment “provides students with a sense of new independence, self determination and strong peer pressure to experiment with a variety of sexual behaviors,” while some are described as having “a belief in personal immortality” (Bazargan, et al., 2000). Sadly though, current data on HIV/AIDS infection rates among this population have had many college students groping with the “grayer actualities of adult life.”

It is estimated that 50% of all new infections of HIV occur among people under the age of 25, majority of whom are infected through sexual activity. Youths between the ages of 13-24 are contracting HIV at the rate of two per hour, with one in every 500-college students infected with HIV even though only one in three know their HIV serostatus (CDC, 2005; Anastasi et al., 1999; Gayle et al., 1990). HIV/AIDS is the 8th leading cause of death among 15 to 24 year olds, and although there is a decline in HIV incidence, there has not been a comparable decline in the number of newly diagnosed HIV cases among youth (CDC, 2004). Seventy-five to eighty-five percent of heterosexual
college students do not feel themselves at risk for HIV infection, and many engage in risky sexual behaviors with others whom they feel are trustworthy based solely on appearance (Malloy et al., 1997; Hammer, et al., 1996). The belief in their invincibility tends to promote the denial of any personal risk from HIV infection and “the disavowal of risk in any given sexual encounter” (Keeling, 1987, pg. 31).

HIV Knowledge among College students

Fisher & Misovich (1990) found that students’ attitudes toward prevention is in the neutral range, actual preventive behavior is low, and unsafe sexual practices are high, even though their current levels of AIDS-knowledge is relatively high. This result is similar to Opt & Loffredo (2004) findings of students’ knowledge and perception about HIV/AIDS. Majority of the participants in the study correctly responded to questions about HIV treatment availability, lack of cure for HIV, condom use, among other things. However, “they are neither very concerned personally about becoming infected nor do they take appropriate safer sex precautions, such as using latex condoms” (pg. 400).

In addition, results from a study accessing AIDS-related risk behavior among college students show that 60% of the 407 students who participated engaged in unprotected sex, while 59% engaged in sex while under the influence of alcohol. Though they are knowledgeable about HIV preventive measures, these students underestimate their HIV risk (Brown, 2000). Latman & Latman (1995) wrote, “Notwithstanding their [students] concern and knowledge about human immunodeficiency virus/acquired immunodeficiency syndrome, a significant percentage [in the study] reported participating in highly risky behavior” (pg. 107).
It has been suggested that students’ may have ‘problematic knowledge and perceptions’ about HIV/AIDS, which may distort estimates of personal HIV risk behaviors or a partner’s estimates (Opt & Loffredo, 2004; Siegel, et al., 1999; Dilorio, et al., 1993; Latman & Latman, 1995; McGuire, et al., 1992). In a review of literatures on HIV/AIDS risk among heterosexual college students, Lewis et al., (1997) found that even though college students are highly knowledgeable about basic HIV/AIDS facts, they still retain some misperceptions about disease transmission. In accessing behavioral determinants on risk perceptions for HIV among college students, Hou (2004) found that the overall perception of HIV risk was low, while results from Dilorio et al., (1993) indicate that though students are knowledgeable about cause and transmission of HIV and condom’s effectiveness in preventing the spread of the virus, they are less knowledgeable in differentiating the effectiveness of latex versus non-latex condom.

African American college students are not different from other college students in that they “share the same behaviors of all college students who are likely to engage in risky sexual behaviors and experimentation” (Bazargan, et al., 2000, pg 394). Much of the research on this group suggested that there is little or no relationship between knowledge of HIV transmission and safer sex behaviors among African American college students (Duncan, et al., 2002). In a study by Jemmott and Jemmott (1991, referred to by Bazargan et al., 2000), they reported that there is a weak link between knowledge and protective behavior for African American college students with only 20% of those sexually active unmarried undergraduates reporting using condoms always.

However, Bazargan and colleagues (2000) reported that high levels of HIV knowledge, positive experience in condom use, behavioral skills in negotiating and
practicing safer sex and involvement in non-monogamous relationship are significant predictors of those engaging in condom use in a study investigating the effect of HIV knowledge, motivation and behavioral skills (IMB) on African American college students. Adding to this mix is what Bazargan et al., (2000) described as the “duality of their developing identities”. They described components of the duality as adhering to “culturally prescribed mode of behavior and belief systems as well the new knowledge, attitudes and beliefs that are developed as their identities are refined” (pg. 392). This is said to lead to conflict in behavior change as African American college students have “one foot in their communities (since they represent a valuable prospective leadership pool for their communities) and another in the world of academia” (pg. 392).

**Alcohol Use, Condom Use and Multiple Sex Partners among College students**

Alcohol use, unprotected sexual intercourse (i.e. non-use of condoms) and having multiple sexual partners are considered high-risk behaviors for HIV infection. Although these factors are separate, they most usually take place within the same contexts, especially among college students. By the same token, studies (Butcher, et al., 1991; Graves, 1995; Anderson & Mathieu, 1996; Douglas, et al., 1997; Kokotailo, et al., 1998; McNair, et al., 1998; Apostolopoulos, et al., 2002; Fierros-Gonzalez & Brown, 2002; Gullette & Lyons, 2005; Abbey, et al., 2006; Robert & Kennedy, 2006) usually examine these factors together. Therefore, this section, as much as possible, will review these factors together.

Alcohol use is considered a part of college life, a “rites of passage” on most college campuses. Its use by college students is described as the “most pervasively
Schall, et al., (1992) examined students’ *individual* drinking and drug use attitudes, beliefs, personality, gender, ethnic and social group differences as possible factors associated with alcohol use among students. They concluded that “a biopsychosocial matrix of determinants influenced” both the use of alcohol and excessive use of alcohol (pg. 122). Contrarily, Presley (2002) examined the collegiate factors associated with alcohol use and concluded that, organizational property variables (e.g. presence of a Greek system), physical and behavioral property (e.g. type of residence and institution size), campus community property variables (e.g. pricing and availability) are all related to alcohol use on college campus.

Studies (Butcher, et al., 1991; Graves, 1995; Douglas, et al., 1997; Kokotailo, et al., 1998; McNair, et al., 1998; Apostolopoulos, et al., 2002; Fierros-Gonzalez & Brown, 2002; Gullette & Lyons, 2005; Abbey, et al., 2006; Robert & Kennedy, 2006) have also examined the effect of alcohol on health behaviors, especially HIV risk behaviors among college students and have linked alcohol use to HIV risk behaviors.

Butcher, et al., (1991) reported that forty-seven percent of the men and fifty-seven percent of the women in a sample of 243 college students had had sexual intercourse from one to five times primarily because they were intoxicated. Results from a 1990 National Survey on risky sexual behaviors and alcohol use among young adults also found that young adults men who reported consuming five or more drinks per sitting were more likely to have had multiple sexual partners in the last year, and more likely not
to have used condom in at least one sexual encounter in the last year (Graves, 1995). Graves (1995) further reported that, “alcohol is traditionally part of the courtship ritual and part of the symbolism in a sexual encounter, and alcohol serves as a way to telegraph sexual messages” (pg. 35). The use of alcohol did not change much as seen from the results of the 1995 National College Health Risk Behavior Survey. It was reported that “about one third of all students reported current episodic heavy drinking (consuming five or more drinks of alcohol) on a least one occasion during 30 days preceding the survey” (Douglas, et al., 1997, pg. 60).

In a study assessing college students’ high-risk sexual behavior following alcohol consumption, Anderson and Mathieu (1996) reported that 33.2% of the men and 17.4% of the women in the study had met the criterion of “letting themselves drink more than normal in order to make it easier for them to have sex with someone” (pg. 262). Noormohamed, et al., (1998) also reported that heavy drinking (five or more drinks on one occasion) was strongly correlated with unintended sexual contact in a study examining alcohol use, drug use, and sexual activity among college (pharmacy) students. Simkins (1995) accessed the risk of HIV transmission in the sexual behaviors of 190 college students, and found that “the risks most predominant in the sample were the practice of unprotected sex, having multiple sex partners and the consumption of alcohol in conjunction with sexual activity,” although “there was an increased concern about contracting AIDS” (pg. 787). Alcohol use decreases the likelihood of condom use, and increases the risk of HIV infection.

Consistent condom use, especially proper application, is the most effective type of protection against HIV and other sexually transmitted infections. Although it is believed
that there is no ‘safe sex’ since all sexual acts carries some risk, use of condom is considered an effective method of “safer sex.” Condom use during sexual intercourse (oral, vaginal, and/anal) lowers the exposure risk to HIV/AIDS.

According to the Youth Risk Behavior Surveillance (1997), 29.6% of sexually active students reported that either they or their partner had used condom during last sexual intercourse. Prince and Bernard (1998) found that slightly less than 10% of the study participants (1,919) used condoms consistently, and “students who had multiple sex partners during the past year were more likely to practice unsafe sexual practices, such as not using condoms...”(pg. 19). In a sample of 879 college students, Mahoney (1995) reported that 17.2% were classified as non-users of condoms and 50.2% were classified as sporadic users of condoms.

Critelli and Suire (1998) explored factors associated with lack of condom use among college students. They found that type of relationship context influence condom use. This was similar to the findings by Wendt and Solomon (1996) that non-users of condoms (both males and females) in the study who were in monogamous relationship were more likely to report a low perceived need to use condoms. Misovich, et al., (1996) found that individuals in committed relationships were more likely to engage in unprotected sex compared to those in casual sexual encounters, and von Sadovszky, et al., (2003) reported that risky (i.e., unprotected sexual intercourse) occurred more with a girlfriend or a boyfriend among participants in a study exploring situational factors involved in college students’ safer and risky sexual encounters.

College students are also more likely to have more than one sexual partner during the course of their academic years. In a study examining high-risk sexual behaviors
among college students, Reinisch, et al., (1995) found that females reported having had an average of 5.6 sexual partners, and males reported an average of 11.2 partners. Mahoney (1995) also found that 35.2% of the students reported having three or more sexual partners in the last year, while 22.4% reported two or more one-night stands. Mahoney, et al., (1995) reported found that sporadic condom users had significantly more sex partners and were more drunk more often when engaging in sexual intercourse. In a study accessing perceived risk, drug use and developmental vulnerability of young college women not using condoms, Roberts and Keneddy (2006) concluded that the women in the study tend to focus on their “future risk” and fail to protect themselves in their current sexual situations. In addition, many of them had multiple sex partners, 64% were inconsistent condom users, and 52% used drugs and alcohol during sex.

**HIV Testing among College students**

Anastasi, et al., (1999) found that students seeking HIV testing are usually females, report low rates of STDs, have low risk perception of HIV and have previously tested for HIV, though they did not provide separate demographic profile on first-time testers. Results from a web-based survey (Hou & Wisenbaker, 2004) on intention to test for HIV among students indicate that 80% of the 344 students who had never had an HIV test report being sexually experienced, and over 90% of them had no intention of being tested for HIV. However, the results also indicate that students who perceive more benefits of testing are more likely to express intention to get tested, while those who perceive higher risk for HIV are more likely to have higher intention of getting tested. In essence, students perceiving that there are benefits to getting tested express intention of
getting tested, though they are yet to be tested, while those who perceive themselves as
having higher risk for HIV showed higher intention of getting tested, though they also are
yet to be tested.

Zak-Place & Stern (2004) also examined HIV and STD preventive behavioral
intentions among college student using the Health Belief Model. Results show that self-
efficacy in condom use is the primary and significant predictor for intended condom use,
STD and HIV testing (or HIV test seeking), though perceived HIV severity (threat
appraisal) is negatively related to HIV testing intentions. This indicates that students that
correctly use condoms have higher intention of using condom and seeking STD and HIV
testing, and those that have higher perceived severity of HIV have a lower intention of
testing for HIV. This is similar to some of the findings by Dorr et al. (1999). They found
that perceived severity and perceived susceptibility did not predict HIV test seeking
behavior, rather, risky behavior predicted HIV test seeking, “although individuals who
perceived that they were more likely to test positive for HIV reported riskier sexual
behaviors” (pg. 22). Also, students who perceive more benefits of getting tested for HIV
are more likely to seek testing. In essence, students engaging in HIV risky behaviors
show HIV test seeking behavior, while students who are more likely to test positive for
HIV report engaging in even riskier sexual behaviors.

Despite differing results from the above studies on what predicts students’
intentions to get tested (perceived benefits, perceived severity or perceived risk for HIV),
it is not farfetched to say that students seeking HIV testing not only acknowledge their
own risk for HIV infection but also acknowledge the advantage of knowing their sero-
status. This is supported by Granich & Mermin (2001) who wrote that, “because it can be
hard to decide to take [HIV] test, people are often ready to think about changing behavior that put them at risk” (pg. 87). It is reported that knowing one’s HIV sero-status through testing is important in preventing HIV infection and there is persistent need for increased HIV Voluntary Counseling, Testing and Referral (CTR) as a crucial prevention effort in reducing HIV transmission.

**Effectiveness of HIV CTR and Telephone Counseling Support**

Studies have shown that HIV CTR can lead to reduction in drug and sexual risk-taking behaviors (Amaro et al., 2005; Ellen et al., 2004; Des Jarlais et al., 2000). Amaro et al., (2005) reported that positive sero-status was the most significant predictor of safer sex behavior following HIV VCT. In addition, many sero-negative participants also stopped sex with non-main partners. Roffman et al., (1995) also report similar findings in a study of HIV testing among homosexual men. Participants who had tested for HIV reported more protected and safer sexual activities.

The use of telephone as a means of providing support and counseling has being found effective for HIV positive patients (Albus et al., 2005; Chiou et al., 2004; Lazev, et al., 2004). Lazev et al., (2004) reported effective and successful smoking cessation program for HIV positive patients using cellular phones. The use of cellular phones increased quit rates among patients, and provide an “underserved population with access to care” (pg, 285). They suggested that telephones might provide unique opportunities for intervention. Choiu et al., (2004) also found that HIV patients in group teaching along with telephone counseling report higher self-care of symptom management.
The studies reviewed above on HIV CTR and telephone counseling were all conducted on non-college populations, participants with specific sexual orientation, people living with HIV/AIDS, and those returning for a HIV test results, usually at 3 weeks after the pre-test counseling. Of the studies reviewed for HIV CTR, none reported HIV post-test counseling for participants, since HIV post-test counseling is only provided to individuals that test positive for HIV. Individuals testing negative for HIV do not receive any form of support or counseling following their HIV test results, even though some who test negative have also stopped having sex with non-main partners as indicated above. When risk reduction is addressed as part of an alcohol or drug intervention, it is those that are registered in drug-therapy or alcohol treatment (Ellen et al., 2004). It is quite evident that there is a need to develop an intervention to engage students who test negative for HIV to continue to refrain from risk behavior that could make them vulnerable to HIV.

Some facts can be gleaned from the studies reviewed above: college students have low perception of HIV risk despite their knowledge and engage in HIV risk behaviors; college students seeking HIV testing acknowledged their risk for HIV infection and see the advantage or benefits in getting tested; HIV VCT can be effective in reducing HIV risk behaviors, and telephones may prove effective in providing counseling. However, none of the studies reviewed address the need for assisting those who test negative for HIV to remain negative; address the socio-cultural needs of African American college students and none address the unique opportunity provided by cell phones proliferation among students as a means of providing counseling support. In fact, telephone counseling may indeed provide a unique opportunity to assist students testing negative
for HIV. In a recent national survey by Student Monitor reported by MSNBC News (February 12, 2005), over 90% of college students have cell phones, as opposed to 33% in 2000. Using telephone as a means of counseling eliminate the need for students to schedule a face-to-face meeting (given their already tight schedule), to provide them with access to a service they need.

With no known cure for HIV/AIDS, there is an urgency to provide HIV counseling tailored to needs, with a focus on the context within which HIV behaviors take place. There is also a need for tools to negotiate such contexts coupled with post counseling support to individuals testing negative for HIV. This should assist them in remaining negative thereby reducing HIV transmission that rakes among youths. HIV epidemic can only be controlled if those who test negative remain negative, and providing follow-up counseling through the telephone, may increase sustainability rates in assisting college students to maintain their sero-negative status.

This study intends to address these needs by exploring contextual factors within which behaviors take place, providing skills training and self-monitoring tools to students, and actively provide follow-up encouragement and support through telephone counseling. It is hoped that by helping students identify contextual factors that prevent or enable them to engage in HIV risk reduction behaviors, providing them with skills to negotiate such contexts and monitor their behaviors along with telephone counseling support to assist them, they can maintain their HIV sero-negative status.

In addition to the current models employed in HIV CTR, the PEN-3 model will be used in this study to examine contextual factors that hinders/encourages HIV risk reduction behaviors among students.
Theoretical Framework: The PEN-3 Model

The PEN-3 Model was developed by Airhihenbuwa (1995) and it addresses the cultured context of behavior by applying the domains of cultural identity; relationships and expectations; and cultural empowerment to the development, implementation and evaluation of health promotion programs (Airhihenbuwa, 1999). Each of the domains in the model has three components. The name of the model is derived from the acronyms of the components within the domains.

**Cultural identity:** examines how identities influence decision-making. Based on factors such as socio-political and economic experiences, identity makers become significant in making health decision and health behaviors, and thus make a difference in determining intervention entry into any community or neighborhood. This domain is explored through the following constructs:

- **Person:** the degree to which the person is dealing with his/her own identity
- **Extended family:** the influence and power of family members in decision-making
- **Neighborhood:** availability or lack thereof of community resources, such as infrastructural and institutional power in affecting decision-making.

**Relationships and Expectations:** examines how cultures define the roles of persons and their expectations in family and community relationships, such that personal actions are examined as functions of broader social cultural contexts. This domain is explored through the following constructs:

- **Perceptions:** knowledge, attitudes, beliefs and values in decision-making that may facilitate or hinder personal, family, and community motivation to change.
**Enablers:** cultural, societal, systematic or structural resources or influences that may enhance or be barriers to change.

**Nurturers:** supportive (reinforcing) and/or discouraging influences of families, friends and community members to efforts of change.

*Cultural Empowerment:* affirms the possibilities within cultures, which ranges from positive to negative, and everything in-between. It is based on the “belief that culture represents the continuum of good, indifferent and bad” (Airhihenbuwa & Webster, 2004, pg. 7). This domain is explored through the following constructs:

- **Positive:** beliefs, values and relationships that promote the health behavior of interest.
- **Existential:** values and beliefs that are unique to a culture and pose no threat to health.
- **Negative:** beliefs, values and relationships that may create a barrier to the health behavior of interest.

The model has an assessment phase and an intervention phase. In the assessment phase, components from two of the domains, cultural empowerment and relationships and expectations are cross-tabulated in a 3x3 strategy to produce nine cells. Thus, one phase examines and explores the relationship or association between perceptions, enablers and nurturers in light of which are positive, existential or negative. In the intervention phase, a decision is made about the intervention point of entry amongst persons, extended family and neighborhood or community.
As seen from the foregoing, PEN-3 is a cultural model that addresses the role of culture and/or context in the adoption or non-adoption of health behaviors. It shifts the focus primarily from the individual to looking at the context and culture within which the individual operates. College students operate within a sub-culture in the general society, and as with any culture, it has its own norms, values and beliefs, and specific perceptions and expectations from students (Kelley, 1958; Shipman, 1967; Moffatt, 1991). Addressing what is positive or negative perception(s) within this culture, as it relates to what nurtures and/or enable students to adopt health behaviors is central to reducing students’ vulnerability to HIV/AIDS. Using this model will aid counselors to ‘zero-in’ on factors outside of the individual that may hinder proposed behavioral change, and suggest means of dealing with such, while encouraging factors that enable proposed behavioral change.

**Cultural Identity**

Person
Extended Family
Neighborhood

**Relationships & Expectations**

Perception
Enablers
Nurturers

Positive
Existential
Negative

**Cultural Empowerment**

Figure 2.1: The PEN-3 Model
Conclusion

Studies reviewed above showed that though college students are knowledgeable about HIV, they have low perception of their risk. They are at increased risk for HIV because of multiple sexual partnerships, high rates of unprotected sexual intercourse and use of alcohol in many of these situations. In addition, they are less likely to seek HIV counseling and testing, even though knowing one’s serostatus is considered the first line of preventing HIV infection. By the same token, African Americans college students are no different from other students, and are at even higher risk due to cultural misconceptions and beliefs. Intervention programs that used combined strategies had effected some behavioral change among them, although such effects were not sustained at later follow-up.

Lack of sustainable effects may be due to the fact that many of the interventions did not explore the socio-cultural context of students’ behaviors, especially students of African descent. Using a cultural model to understanding the socio-cultural contexts of their behaviors may prove effective and lead to sustainable behavioral change among them. HIV counseling and testing provides an opportunity to assist students, since students seeking the service already acknowledge their risk for HIV and are motivated to change. Therefore, using a cultural model and combining interventions strategies of skills training, self-management and telephone counseling may more effective for students. In the next chapter, methodology of the study will be addressed.
Chapter 3

METHODOLOGY

The purpose of this study is to examine the effect of the Enhanced HIV counseling program in reducing HIV risk behaviors by increasing condom use, reducing number of sexual partners and alcohol use, as compared to the Standard HIV counseling and testing program (brief counseling). Standard HIV Voluntary Counseling, Testing & Referral (CTR) services are offered to students at Penn State University Park campus. Of specific focus are the students of the African descent who test negative for HIV using the University services.

Using concurrent mixed approaches of behavioral surveys and content-analysis of one-on-one semi-structured interviews, the study will specifically compare the effectiveness of the Enhanced HIV Counseling program with the Standard Counseling program in reducing HIV risk behaviors by increasing condoms use, reducing number of sexual partners and alcohol use. If the Enhanced Counseling program is found to be effective, the specific component(s) that is most effective in reducing HIV risk behaviors will be determined. In addition, the socio-cultural factors identified by students that prevent and/or enable them to engage in HIV risk reduction behaviors will be identified.

This chapter presents the methodology used in this study, including participants’ recruitment, program implementation and data analysis. Reliability issues of the quantitative instruments, along with the validity and reliability challenges in using qualitative method are also presented.
Mixed-Approaches Design

As stated above, this research study used a mixed-method design. Multi-method or multi-approaches in one research study is reported to have evolved from psychology when Campbell and Fiske (1959) used a “multi-method matrix” to study the validity of psychological traits in an effort to ensure that the observed variance was due to the traits and not the method (Creswell, 1994; 2003). Since then, combining approaches to study social phenomenon and/or human behaviors have received more visibility in its design and implementation. Denzin (1978) used the term “triangulation” to describe seeking convergence across quantitative and qualitative methods.

A combined methodology or mixed-methods is used when multiple approaches of data collection and analysis are employed in one research study (Creswell, 1994), this allows the researcher to use “between methods” involving drawing from qualitative and quantitative data collection strategies, such as a survey and in-depth interviews. “Mixing” might occur within one study or among several studies in a program of inquiry, and terms such as ‘integrating, synthesis, multimethod, multimethodology’ have been used in the past to describe this approach, while the term “mixed-methods” is currently being used (Creswell, 2003). Patton (1990) wrote that quantitative and qualitative approaches in research study are complimentary, not competitive, and “recognizing that all methods have limitations” (Creswell, 2003, p. 15), it is assumed that combining approaches could neutralize or cancel inherent biases of other methods.

It should be noted that a primary criterion for selecting any research method is the research question(s) that is to be tested and/or explored. Various reasons have been
offered as to why methods should and/or could be combined, and Greene, et al., (1989) advanced five purposes for combining both methods in a single research study:

1. To seek convergence of results through triangulation,
2. Overlapping yet different facets of the phenomenon may emerge when methods complement each other,
3. The first method is used sequentially to inform the development of the second method
4. Contradictions and fresh perspectives may emerge when methods complement each other
5. Mixed methods is used to add scope and breathe to the study (expansion)

As discussed above, integrating qualitative and quantitative methods in one research study is expected to bring about broadly generalized outcomes by triangulating different data sources and methods (Jick, 1979). Combining methods allows for a better understanding of a concept being tested or explored (Creswell, 1994). Based on reviews of literatures in which mixed-methods have been used, Creswell (2003) proposed three general procedures for mixed-methods strategies of inquiry:

1. *Sequential* procedure, also known as the two-phase design, in which the researcher seeks to elaborate on the results from one method with another method. The researcher would conduct two separate phases of the research: the qualitative followed by the quantitative or vice versa. This strategy is said to be advantageous since it allows for a clear and thorough presentation of the paradigm of assumptions behind each phase (Creswell, 1994).
2. *Concurrent* procedures is when the researcher collects both qualitative and quantitative data at the same time during the study, and integrates or converges the data in the interpretation of the overall results in order to provide a comprehensive analysis of the research problem. It should be noted that this procedure was also known as the dominant-less dominant design because it was believed that it is impossible to use both approaches simultaneously without one approach being ineffectively privileged in its implementation over the other. By the same token, use of this design is said to be advantageous since it allows the presentation of “a consistent paradigm picture in the study and still gathers limited information to probe in detail one aspect of the study” (Creswell, 1994, pg. 177).

3. *Transformative* procedures allow a researcher to use a theoretical lens to provide a framework for topics of interest, methods of data collection (both qualitative and quantitative) and outcomes or changes anticipated by the study. The data collection could involve the use of either sequential or concurrent approaches.

Given the discussion above, this study adopted a concurrent mixed-method procedure, which involves collecting both qualitative and quantitative data at the same time during the study. This allowed for an integration of data from both strategies in the interpretation of the results thereby providing a comprehensive analysis and understanding of the research problem. As mentioned earlier, quantitative and qualitative research methodologies are complimentary. Both are valuable when their use is determined by the research question(s), such that the quantitative arm of the research
supplies a framework and a sense of scale while the qualitative arm enhances understanding and depth of the research. Patton (1990) further states:

“The advantage of a quantitative approach is that it is possible to measure the reactions of a great many people to a limited set of questions, thus facilitating comparison and statistical aggregation of the data. This gives a broad, generalized set of findings presented succinctly and parsimoniously. By contrast, a qualitative method typically produces a wealth of detailed information about a much smaller number of people and cases. This increase understanding of the cases and situations studied but reduces generalizability” (pg. 14).

Qualitative methodology might be of particular usefulness if the study deals with people’s attitudes, beliefs, values, or meanings attached to experiences or social phenomenon. It is particularly relevant when researchers seek to understand the context or setting of participants, so as to interpret the meaning attached to such experiences. Understanding the context is important since “humans engage in their world and make sense of it based on their historical and social perspective…bestowed upon us by our culture and the basic generation of meaning is always social, arising in and out of interaction with a human community” (Creswell, 2003, pg. 9).

In summary, combining quantitative and qualitative research methodologies in a single study is a valid form of research. Thus the use of a mixed-approaches concurrent procedure was employed in the present study. For the quantitative method, the traditional pretest-posttest using random assignment was utilized. This involved the use of random assignment of a convenience sample of participants into two groups. Using semi-structural interviews, qualitative methodology was used to gather data among participants who agreed to be interviewed at posttest. These interviews used the grounded theory strategy of inquiry. In addition, the investigator kept a field notebook detailing
participants’ reactions, concerns, questions and/or comments, and the investigator’s personal reflections.

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**Figure 2.2 Concurrent Triangulation Strategy** {adopted from Creswell, 2003}

**Quantitative Research Design: Pre-treatment and Post-treatment with Comparison Group**

This procedure involved the use of a convenience sample selection and random assignment of participants to two groups. Group A was the comparison group while Group B was the treatment group. Group A (comparison) received the usual care (Standard Counseling), while Group B (treatment) received the intervention (Enhanced Counseling). Both groups completed pre-treatment and post-treatment questionnaires. The time between pre-treatment and post-treatment was twelve weeks.

Group A  
(Comparison)  
O₁/X₁  3 weeks  X₃  6 weeks to 9 weeks  O₂

Group B  
(Treatment)  
O₁/X₂  3 weeks  X₄  X₅  O₂

O₁ – Pre-treatment observation (completion of questionnaires)
X₁ – Usual care (Standard HIV Pre-test Counseling)
X₂ – Intervention (Enhanced HIV Pre-test Counseling)
X₃ – Usual care (Standard HIV Post-test Counseling)
X₄ – Intervention (Enhanced HIV Post-test Counseling)
X₅ – Intervention (Enhanced - Telephone Counseling)
O₂ – Post-treatment observation (completion of questionnaires)

Qualitative Research Design: Grounded Theory Strategy

Grounded theory is a strategy in which the researcher attempts to “derive a
general, abstract theory from a process or …interactions grounded in the views of the
participants” (Creswell, 2003). With no preconceived idea on what is to be studied or
what may emerged, the researcher focus on the process, reviewing many of the
information gathered over and over again, thereby allowing the information gathered to
drive the theory. As Strauss & Corbin (1998) pointed out, this process of generating
theory grounded in the participants’ views uses multiple stages of data collection with
continuous refinement of the interrelationship of emerging categories of information
gathered. Information is gathered through interviews, observations, diaries and field
notes, personal experiences of the researcher while researching. Thus, participants’ view
of their experience in receiving the Enhanced counseling intervention was explored
through one-on-one semi-structured interviews. Also, participants completed five-item
opinion guides at both pre-treatment and post-treatment sessions. In addition, the
investigator kept field notes during the course of the research.

One-on-one semi-structured interviews: involves fact-to-face interviews with participants
using unstructured and generally open-ended questions that are few in number.
The questions are intended to elicit views and opinions from the participants (Creswell, 2003).

*Opinion guides:* involves the use of open-ended questions to elicit views and opinion from participants. However, unlike face-to-face interviews, participants were provided with papers to write their responses (Creswell, 1994).

*Field-notes:* involves unstructured or semi-structured record keeping of activities by the researcher. It is based on observations of participants’ behaviors, comments/questions, and activities. It also includes reflective notes from “the researcher’s personal thoughts, such as ‘speculation, feelings, problems, ideas, hunches, impressions and prejudices” (Creswell, 2003, pg. 189, taken from Bogdan & Biklen, 1992, pg. 121).

**Research Study Procedures**

The Institutional Review Board at The Pennsylvania State University approved the research protocol for this study (see appendix A). The Pennsylvania State Health Department also approved the protocol. The Director of the Office of Health Promotion and Education (henceforth, OHPE) at Penn State University Health Services agreed to allow the investigator to work with students seeking HIV Counseling and Testing at the health center and off-site locations. Health services offered at the health center include alcohol intervention, Quit and Win smoking intervention, and free HIV counseling and testing services. Students seeking any of these services call the office to make appointments. Services typically are provided by peer-educators/counselors who had received training from the Pennsylvania State Health Department. To further provide
more access to the services offered by OHPE, especially the HIV counseling and testing, off-site counseling and testing is offered in collaboration with offices requesting such service, or as part of the HIV outreach awareness campaign on campus.

With support from the community health educator and HIV CTR coordinator, the investigator identified three off-site locations as the testing and recruitment sites: the Multicultural Resource Center (henceforth, MRC), the Lesbian, Gay, Bisexual and Transgender Student Resource Center (henceforth, LGBT) and Paul-Robeson Cultural center (henceforth, PRCC). Of the three off-site testing centers identified, only the LGBT center had been a regular site for offering counseling and testing to students. The other two centers (MRC and PRCC) were chosen given the fact that a higher proportion of students of African descent use these centers.

Prior to conducting this study, the investigator along with the HIV counseling coordinator from OHPE met with the directors of each off-site center to make arrangements as to when the HIV counseling and testing services would be offered. The meeting took place during the first week of classes, January 2006.

_Multicultural Resource Center (MRC):_ provides professional counseling and educational services, and assists minority undergraduate students, primarily African/Black American, Latino/Hispanic American, Asian and Pacific American and American Indian/Alaskan Natives in meeting the challenges associated with education and attaining a degree at a major research institution.

_Paul-Robeson Cultural Center (PRCC):_ functions as a forum for cultural enrichment, educational development, and social advancement of all students. Its primary mission is
to emphasize the diversity of the historic, present and future roles of African American cultural productions. This includes offering programs that demonstrate the way in which African American culture overlaps, and complements the cultures of Latino, Asian/Pacific islander, Caribbean, European and Indigenous peoples of Africa.

HIV/AIDS Awareness Campaign

Due to the low number of African American students that make use of the HIV counseling and testing services, a decision was made to have an awareness campaign. Unlike the HIV awareness campaign implemented in the past, the goal of this campaign was to identify places where African American students were likely to congregate in large numbers. The investigator, under the counsel of the supervising professor, selected classes that had large enrollments of African American students, and minority students’ groups/organizations comprising of mostly students of the African descent.

Working with the HIV counseling coordinator from OPHE, flyers (see appendix B) were designed to advertise free HIV counseling and testing offered by the OHPE. By the second week of classes in January 2006, e-mail advertising the research along with the flyer was sent to minority students, especially those of the African descent through a listserve created by the director of the Multicultural Resource Center for the purpose of the research. The listserve was comprised of email addresses of about 2,839 minority students [African Americans and Hispanic/Latino(a)s].

In that same week, the investigator also contacted instructors of classes in the African and African American Studies Department with a higher percentage of students of African descent to seek permission to offer a five-minute presentation about HIV free
testing and the research study. The investigator also contacted minority student groups/organizations including the Caribbean Students Association, Black Caucus, and African Students’ Association. At each meeting, she gave a short presentation about the research, informed students about the HIV free testing, days and times when the service was offered, and encouraged students to use the opportunity to be tested for HIV. In total, the presentation was given in six classes and two student groups/organizations. This also took place during the second week of classes in January 2006.

Flyers advertising the service and research were distributed to those present after the class and students’ group presentations. Following the presentation, flyers were also sent to presidents of minority student groups who were encouraged to send them to their various listserves. Students at such presentations were encouraged to inform their friends about the service, and the financial incentive of fifteen dollars they would receive in participating in the research. It should be noted that email “as reminders” about the service and the research study was sent out every two weeks through the listserv. The investigator also re-visited the students’ groups twice before the end of the research to give presentations.

HIV counseling, testing and referral services were offered at the following centers: the Multicultural Resource Center (MRC) on Mondays, Wednesdays and Thursdays from 12noon to 4pm; the Paul-Robeson Cultural Center (PRCC) on Tuesdays from 10am to 1pm; and the Lesbian, Gay, Bisexual and Transgender (LGBT) Student Resource Center on Tuesdays from 2pm to 5pm. The investigator met every Friday with the supervising professor to discuss the progress and/or possible challenges from the study.
Recruitment and Sampling

Recruitment for the research study took place only after the HIV CTR protocols (outlined in pages 55-58, also see appendix G) had been followed as dictated by the Pennsylvania State Health Department. Using the recruitment script approved by the Institutional Review Board at Penn State University [see appendix C], potential participants were asked if they want to participate in the study only after they had taken the OraSure HIV-1 test. If the answer was yes, further explanation was provided about the purpose and procedures of the study and participants were asked to sign the consent form. Although a convenience sample was used, those who agreed to participate were randomly assigned to either the Standard Counseling group or the Enhanced Counseling group.

Randomization was done using the strategy that every other person that consented to participate in the study was assigned to the treatment group, such that those in the treatment group (Enhanced Counseling) had even numbers (2, 4, 6, 8…), while those in the comparison (Standard Counseling) group had odd numbers (1, 3, 5, 7…). Each participant was provided with detailed information on the purposes and procedures of the research (see appendix D), then he or she and was assigned an identity number. Only the investigator had access to the code-links connecting participants to their identity numbers. A requirement for continued participation in the study was a negative HIV test result.

Participants were paid five dollars at the pre-treatment session and ten dollars at the post-treatment session. Partial funding for this research study was provided by The Africana Research Center, Pennsylvania State University. It should be noted that the
recruitment of participants into this research study occurred at several points over a period of time. The entry time into the research study varied for each participant resulting in some variations in the duration of participants’ involvement in the study. Thus the participation period for all participants ranged from a minimum period of six weeks to a maximum period of twelve weeks. The research began during the fourth week of classes (January 30th, 2006) and ended during finals week (May 1st, 2005). Recruitment into the research ended on March, 18th, 2006.

Of the 108 students that came in to get tested at the off-site locations, specifically, the MRC and LGBT centers, 50 students were recruited to participate in the study. No student used the services at the Paul-Robeson Cultural Center, so the service was discontinued at that location. Most of the students that came in for testing came to the MRC center, and they were mostly African Americans.

Instrumentation

All participants in both groups completed two instruments at pre-treatment and post-treatment: the College Student Behavioral Questionnaire (CSBQ) and a five-item open-ended opinion guide developed specifically for the study. It took appropriately 20 minutes to complete these instruments.

Quantitative Instrument - College Student Behavioral Questionnaire (CSBQ): was adopted and modified from the study by MacNair-Semands & Simono (1996) assessing the link between specific sexual behaviors, levels of HIV knowledge, personal vulnerability to HIV, and alcohol and condom use among college students. Also,
“differences based on gender, ethnicity, age, school status and relationship status were investigated” (pg. 575). The CSBQ is a 58-item questionnaire that assessed HIV/AIDS knowledge, attitudes, and specific risk behaviors [see appendix E]. It is divided into six sections, and each section has a specific focus of inquiry. However, for this analysis, only the following sections and questions were used: all questions in Section One; all questions in Section Two; questions 1 and 2 in Section Five, and questions 3a and 4 in Section Six. With the exception of the question on age (in section 1) and question on number of sexual partners in the last three months (in section 5) which had interval scales, all the other questions used nominal scales for measurement.

Section One had five questions dealing with demographic information, such as age, year in college and race/ethnicity. Each question in this section had options to choose from, except the question on age. Section Two had 13-items testing students’ knowledge of HIV/AIDS (e.g. Most people with HIV look unhealthy; Some cases of AIDS have been linked to social (dry) kissing or sneezing) with “True or False” answer as options.

Questions 1 and 2 in Section Five accessed the number of sexual partners the participant had in the last three months and the type of sexual contact. There were no options provided for question 1, rather participants had to fill in the blank. Question 2 had four options for participants to choose from: one-night-only sexual contact to no sexual contact at all.

Questions 3a and 4 in Section Six accessed the use of alcohol during last sexual encounter and the type of safer sex method used. Question 3 had two options of yes and no, while question 4 gave participants six types of safer sex method to choose from.
Qualitative Instrument – Five-item Opinion guide: As part of the concurrent mixed-method procedure for data gathering, a five-item open-ended opinion guide [see appendix F] was developed specifically for the study. Creswell (2003) wrote that the use of a mixed methods approach allows for the use of either parts of or all aspects from both research methodologies to be implemented. Use of open-ended questions, interviews and observations were employed to provide further indepth understanding of the phenomenon under investigation.

The investigator met with the supervising professor to consult on making sure the five-item opinion guide captured the aspect of the research not addressed in the quantitative questionnaire, such as factors that enable or prevent students from engaging in HIV risk reduction behaviors. In addition, the development of the five-item opinion guide was guided by the PEN-3 model in order to provide participants with the opportunity to identify positive, neutral and negative enablers/nurturers within their socio-cultural contexts and to describe situations that put them at risk for HIV.

The items included in the opinion guide were: 1) what behaviors do you think expose you to HIV; 2) when are you most likely to engage in the behavior; 3) how often do you find yourself in the situation(s) that lead you to engaging in the behavior(s); 4) what did you experience in your efforts to change the behavior(s) (positive, neutral and negative); and 5) what factors in your environment influence your effort to change the behavior(s) (perceptions, enablers and nurturers)?

The investigator ensured that completed pre-treatment and post-treatment for both the qualitative and quantitative instruments were matched with the identity number of each participant in the study at pre-treatment and post-treatment.
The investigator also took field-notes. These notes were written usually after counseling, and in rare instances, during counseling. Although these notes were unstructured (Creswell, 2003), they enabled the investigator to record observations, phrases, questions, concerns, behaviors and activities of the participants. In addition, the field-notes allowed the investigator to keep track of the “personal lens” through which she “filters the data” (Creswell, 2003) and her reflective thoughts. Reflective thoughts were written usually at the end of day, or in-between times when there were no clients waiting for counseling.

Semi-structural interviews: This took place at the end of the research study. Due to time constraints, only twenty-two participants agreed to participate in the semi-structured interviews. This was because some interviews took place during finals week. For participants in the treatment group, they were asked specific questions relating to the treatment that they received, along with their experience. Those in the comparison group received general question relating to their experience during counseling. Questions for participants in the treatment group were:

1. Which component(s) of the Enhanced counseling do you personally feel was helpful to you?
2. In what way was this helpful? (only asked if the participant did not explain)
3. What do you think of the counseling service you received?

Participants in the comparison group were asked only question three.
Study Implementation Procedures

The investigator, who was also the HIV counselor, provided all the counseling to participants in both the treatment and comparison groups. It should be noted that the investigator is a certified HIV counselor by the Pennsylvania State Health Department. Participants assigned to the comparison group received the standard counseling as outlined by Centers for Disease Control (2001) and the Pennsylvania State Health Department, while participants in the treatment group received Enhanced HIV counseling, developed by the investigator in consultation with the supervising professor. The Enhanced HIV counseling was based on a literature review of approaches that have been found effective in HIV intervention and prevention. These approaches were behavioral skills training (Kelly, et al., 1989; Kelly, et al., 1990; Fisher, et al., 1996; Bazargan, et al., 2000); daily self-management (Kelly, et al., 1989; Kelly, et al., 1990; Stopka, et al., 2004) and telephone counseling (Albus et al., 2005; Chiou et al., 2004; Lazev, et al., 2004). Participants were compensated financially for participation: five dollars at the pre-treatment session and ten dollars at the post-treatment session.

Standard HIV Counseling, Testing and Referral (Comparison Group)

The comparison group received the standard HIV counseling as outlined by the Pennsylvania State Health Department (HIV Counseling & Training Manual, 2005). Below is the protocol for HIV Counseling, Testing and Referral services (CTR). According to the HIV counseling manual provided by the Pennsylvania State Health Department and used in the Office of Health Promotion and Education for Standard HIV
counseling [see appendix G], six steps were recommended for the HIV prevention counseling:

1) Introduce and orient client to session: The counselor/investigator introduced herself as a health educator, and described the purpose and duration of the session. Also, the confidentiality and objectives of the session were discussed, followed by the signing of Pennsylvania State Health Department’s informed consent form. The counselor then explained the meaning of positive and negative test results and the relevance of the ‘window period’ to HIV testing.

2) Identify client’s personal risk behaviors and circumstances: the client completed the risk assessment form [see appendix H], which provided the counselor/investigator with some idea as to what risk behaviors the client might have engaged in. Using the responses of the client on the risk assessment form as a guide, the counselor went over questions such as, what makes you believe that you might be at risk for HIV; when was the last time that you put yourself at risk for HIV; how often do you engage in such behaviors. She then provided them with basic facts on HIV transmission routes, and how to better protect themselves.

3) Identify safer behavioral goals: clients were assisted to develop safer behavioral goals by completing a risk reduction plan form. The counselor/investigator made efforts to identify specific safer behaviors that the client was willing to adopt [see appendix I].
4) Develop client action plan: The counselor assisted the client to establish a personal plan to reduce his or her risks for HIV. The plan addressed specific behavior identified by the client during the risk assessment phase. The plan is used to guide the posttest counseling session.

5) Make referrals and provide support: When needed, the counselor/investigator provided referral to professional services directed at addressing specific issues the client may have identified. For instance, in cases where the reported behaviors took place more often under the influence of alcohol, or the client was seeking HIV testing due to sexual assault, or the client indicated in any way that he/she was dealing with a serious psychological issue, the counselor/investigator referred such clients to other support services, such as the Counseling and Psychological Services (CAPS).

6) Summarize and close session: The counselor reiterated the importance of reducing HIV risk by adopting safer behaviors, and briefly summarized the issues and plans that have been discussed. An appointment was then made for the posttest, three weeks later when the test result was given.

Following this, the OraSure HIV-1 test was conducted (actual testing), and recruitment for the research study then took place. Using the script approved by the Institutional Review Board at Penn State University [see Appendix C], potential participants were asked if they would like to participate in the study. If yes, participants
in the Standard Counseling Group were given the questionnaires to complete and paid for participation. The pre-counseling session lasted for appropriately twenty minutes.

Three weeks later, during the posttest counseling session, which lasted for about ten minutes, the HIV test result was provided to the client. Since all results were negative, the counselor revisited the safer goals set during pretest counseling, and encouraged the client to adhere to these goals. If any test result had been positive, the counselor would have arranged for a representative from the State Health Department to be present. After the positive test result was given, the health representative would have provided the client with information on HIV resources available, such as HIV specialists and support groups. The representative would also have collected information on partners that the client had had contact with. This was also the protocol approved for posttest counseling by the Pennsylvania State Health Department.

A concise overview of the procedures included:

**Standard HIV Counseling**: divided into two (2) counseling sessions and one follow-up session for completing behavioral survey, opinion guides and conducting interview.

**Pretest counseling session**: provided when client first came in for HIV counseling and testing and lasted for twenty minutes.

- Participant completed the CSBQ and the opinion guide after signing the consent form and was paid five dollars for participation.

**Posttest counseling session**: took place three 3 weeks following the pretest counseling session and lasted for ten (10) minutes.

- Participant was given test results, and if negative, they continued in the study.
• Participant made appointment for the final follow-up session, which took place usually between six to twelve weeks after the pretest counseling session, depending on when the participant was recruited into the study. Participant was also asked if he/she wanted to be included in a ten minute one-on-one semi-structured interview that would be audio-taped.

• Participant was asked to provide email address where reminders were sent as to when to return for the follow-up (post-treatment).

*Follow-up (post-treatment) session:* took place between six to twelve weeks after the pretest session and lasted for twenty minutes if participants only completed follow-up questionnaires, and thirty minutes if consented to be part of interview. Each participant was paid ten dollars at the end of the follow-up session.

**Enhanced HIV Counseling, Testing and Referral (Treatment Group)**

The protocol provided by the Pennsylvania State Health Department as described above was also followed for the treatment group. However, in addition to the twenty minutes of standard counseling, participants in the treatment group received an additional twenty minutes of Enhanced HIV counseling, for a total of forty minutes of counseling. The Enhanced HIV Counseling was made up of three components: skills training (Fisher, et al., 1996), self-monitoring log (Kelly, et al., 1989) and telephone counseling support (Albus et al., 2005).

*Skills training:* Participants were provided with skills training on condom application, accurate information on the effect of alcohol on sexual response and negotiating safer sex
with a sexual partner. Training on condom application was both for the male and female condoms. Using the PEN-3 as a theoretical framework, most of the time for this component was spent on exploring socio-cultural aspects of their behaviors. Some of these behavioral aspects had no direct link to HIV, but were important to participants.

Each participant ‘directed’ the counseling session in that the counselor made sure that the counseling was specific to the needs of each participant. Sexual partners’ expectations of participants were explored and the counselor guided participants to explore the perception or meaning they attached to these expectations, including: whether they are living up to these expectations or not, what effect they have or will have on their relationship, and how they plan on negotiating varying expectations. There were instances in which the counselor presented some participants with specific scenarios, and assisted the participant to devise ways of negotiating them.

This was not a case of role-playing (Fisher, et al., 1996), rather some participants were assisted to identify trigger words or situations, and to come-up with ways to negotiate them. Some participants were also provided with skills on initiating conservations on safer sex and/or monogamy and getting tested for HIV. Following the skills training, the OraSure HIV-1 test was conducted. It should be noted that there were a number of cases in which the time (twenty minutes) allocated for this session was exceeded. On average, additional ten minutes was spent.

**Self-monitoring log:** Each participant was given an envelope containing seven sheets of logs to complete everyday about his/her sexual activities (see Appendix J). Studies have found that keeping such a journal was effective in assisting efforts to reduce HIV risk
behaviors (Kelly, et al., 1989). Each sheet of paper had a log for each day. Instead of having participants keep an unstructured journal (Kelly, et al., 1989), participants were provided with an eight-item log to complete everyday, and drop off at the end of each week at the MRC center. This was based on the belief that providing students with lists of specific behaviors, as contained in the log would enable them to ‘zero-in’ more on specific activities that may contribute to their HIV risk. These items were adopted and modified from the Sexuality and Alcohol log developed by Koch & Karshin (2000). The log was modified to focus more on sexual behaviors. Questions such as “did you engage in sexual behavior today; what type of safer sex methods did you use” were a few items on the log. There were options for participants to choose from for each question.

The purpose of the log was not only to assist participants in monitoring their sexual behaviors, but also, along with help from the counselor/investigator, to examine and explore the patterns in their behaviors. As the counselor/investigator received the logs from each participant, she reviewed them and made notes on issues that would be discussed at the next session in the margins of the logs. It was anticipated that the log would provide insight into patterns in participants’ behaviors. Following explanation on how and when to complete the logs, an appointment was made for the posttest, three weeks later when the HIV test result was given. Participants were then paid five dollars for participating. On average, participants kept the logs for six weeks.

At the posttest counseling session three weeks later, counseling was provided based on responses from the self-monitoring logs participants dropped off at the end of each week. By the time a participant returned for the posttest counseling session, the counselor had received and reviewed at least two weeks (fourteen days) of logs from
him/her. During the session, the test result was given to the participant, and if negative, he/she was invited to continue in the research study. The counselor/investigator then presented the patterns as observed in the logs, and asked the participant what his/her experience had been in maintaining the behaviors and/or application of skills discussed during the pretest session. In cases where the participant had “nothing’ to report on their logs, the counselor revisited some of the issues addressed during the pretest counseling.

The participant was asked to provide a cell-phone number that only him/her had access to and the day and time when he/she could be reached for the telephone counseling session. He/she was told to continue with keeping the logs and dropping them off at the end of each week at the MRC. Participants were asked to provide only their cell-phone numbers, to maintain and protect their confidentiality. All the participants had cell-phones, and the posttest session lasted for twenty minutes, excepting in a few instances when the time was exceeded. Participants were also asked if they wanted to be included in the one-on-one semi-structural interview, and informed that email reminders would be sent to them as to when they should return for the follow-up.

**Telephone Counseling Support:** took place six weeks following the posttest session. As mentioned earlier, the time period varied for each participant based on when he/she was recruited into the research study. Studies (Albus et al., 2005; Lazev, et al., 2004) have shown that telephone counseling has been effective in providing support for maintaining behavioral change. Participants were sent email reminders on the day and time they should be expecting the counseling call. If the day and time earlier scheduled would not work (that is, participant would not be available), then another day and time was arranged
through email. Participants received a call on their cell-phone from the counselor/investigator, and counseling was provided based on the information gathered from the self-monitoring logs (if anything was reported in the logs) completed by each participant and dropped off following the posttest counseling session.

In addition, participants were asked questions, such as, have you experienced any support and/or challenge(s) in adopting your risk reduction behaviors? what was the most supporting experience and/or context in adopting the behaviors? and what was the most challenging experience and/or context in adopting the behaviors? It should be noted, however, that the questions asked and the duration of the call was dependent upon the participants. Instances where a participant had things to discuss or was facing a situation not related to the study, the above questions were never asked. For example, the investigator/counselor spent ten minutes on the phone with a participant who was ill, and yet anxious about missing classes. The ten minutes was spent on encouraging her, and giving her tips on approaching her class professors about her illness.

Participants were informed that only two attempts would be made on contacting them through the telephone, in case they missed the first call. Also, they were informed that if there was a need to leave a voicemail, the message would have only the name of the counselor, and not the purpose of the call to maintain confidentiality.

The telephone counseling session lasted an average of seven minutes minutes. It should be noted that the length, content and duration of the call depended on the participant. There were instances where the counselor did not have to ask the general questions to initiate counseling as some participants had issues to discuss (as seen above), and there were instances where participants had nothing to report or discuss, which
invariably led to the end of the telephone call. When a participant was unavailable, a message with the name of the counselor was left on their voicemail. The message also indicated when a second attempt would be made to contact the participant. Although the duration of the counseling was scheduled for five minutes, on average, it took about seven minutes. All the participants were called, although not all received counseling since several attempts to reach some participants (about twelve) was unsuccessful.

Concise overview of the procedures:

**Enhanced HIV Counseling:** The counseling is divided into three (3) counseling sessions and one follow-up session for completing the behavioral survey, opinion guides and conducting interview.

**Pretest counseling session:** lasted for forty minutes

- Participant completed the CSBQ and the five-item opinion guide after signing the consent form and was paid five dollars for participation.
- Participant was provided with skills training.
- Participant was given self-monitoring logs to complete each week for the duration of the study, and was instructed to drop them off at the end of each week at the MRC.

**Posttest counseling session I:** took place three weeks following the pretest session and lasted for about twenty minutes.

- Participant was given test results, and if negative, continued in the study.
- Participant was provided with counseling based on responses from the self-monitoring logs and further skills training.
• Participant was asked to provide a cell phone number and the day and time when he/she could be reached for the telephone counseling.

• Participant made an appointment for the follow-up session, which took place usually between six to twelve weeks after the pretest counseling session, depending on when the participant was recruited into the study. Participant was also asked if he/she wanted to be included in a ten minute one-on-one semi-structured interview that will be audio-taped.

• Participant was asked to provide email address where reminders were sent as to when to return for the follow-up.

Telephone Counseling Support (posttest counseling session II): took place four to six weeks following the posttest session and on average, lasted for five to seven minutes.

• Participant received a counseling call.

• Participant provided with counseling based on responses from the self-monitoring logs.

Follow-up session (post-treatment): took place between six to twelve weeks after the pretest session and lasted for twenty minutes if participant only completed follow-up questionnaires, and thirty minutes if consented to be part of interview. Each participant was paid ten dollars at the end of the follow-up session.

Follow-up session (post-treatment): All participants received email reminders a week before they returned for the follow-up to complete the surveys. Included in the email reminders was a list of available dates and times for participants to choose from. The follow-up took place the last week of the research study. Participants that agreed to
participate in the one-on-one semi-structural interview were interviewed by the counselor/investigator and audio-taped.

As it has been indicated, the only exclusion criterion for continued participation in this research study was an HIV positive test result. Throughout the duration of this research study, there were no positive test results. Participants were informed that they would receive email reminders as to when to return for the follow-up. Also, participants were asked if they would like to participate in a one-on-one semi-structural interview at the end of the study to further explore their experience in receiving HIV counseling.

**Measures**

Reduction in HIV risk behaviors, level of knowledge about HIV/AIDS among students using the HIV CTR services, the most effective component of the Enhanced HIV Counseling program and socio-cultural factors that prevent and/or enable HIV risk reduction behaviors were the main outcomes of interest. Reduction in HIV sexual risk behavior was measured through number of sexual partners during the last three months, condom use during last sexual encounter and whether the encounter took place under the influence of alcohol. Effective program component and socio-cultural factors were explored through the qualitative data gathered from the interviews and the qualitative questionnaires. In addition, the counselor/investigator kept detailed field notes on interactions, comments by participants and personal reactions and reflections to further provide more insights.

Number of sexual partners was measured through item 1 in section five of the CSBQ. Participants were asked to think back as carefully as possible about the last three
months, and complete the following item: 1) in the past three months, I have had ___ different sexual partners.

Alcohol use during last sexual encounter was measured through item three in section 6. Following the above instruction on last sexual encounter, participants were asked, “Did you use alcohol before or during the encounter?” They had two options, “Yes” or “No.”

Condom use during last sexual encounter was measured through item four in section 6 of the CSBQ. Participants were asked to think back to the most recent time they had sex, and answered the following question: what type of safer sex methods did you used. They had six options to choose from: (a) female condom, b) male condom, c) spermicide, d) dental dam, (e) other_____ and (f) none.

Most effective component of the Enhanced HIV counseling was explored through one-on-one semi-structured interviews at the end of the research. Only participants in the treatment group were asked which component they found most effective, why and how was it effective. In addition, all participants were asked about their overall experience of receiving counseling and testing for HIV, and asked to offer suggestions on how best and what methods could be used to further address the needs of African American college students.

The socio-cultural contexts were explored through responses to the five-item opinion guide and field notes. As described above, the opinion guide had questions on what behaviors put students at risk for HIV/AIDS, and when they were most likely to engage in them. Also, using the PEN-3 model as a guide, participants were asked to describe the positive, neutral and negative perceptions, enablers and nurturers they had.
In addition, the investigator took field-notes on participants’ reactions, concerns and activities. This was done to capture issues that participants might have discussed with the counselor/investigator during counseling, but did not necessarily feel comfortable to write down.

Data Analysis

As stated earlier, this research study used mixed methodologies of both quantitative and qualitative. Strategies from both approaches were employed in data collection, such as surveys, one-on-one interviews and field notes. Using concurrent triangulation, analysis of both types of data collected was conducted, and used to answer and/or explore the research questions posed in this study.

Quantitative Analysis: The Statistical Package for Social Sciences (SPSS) software 14.1 version was used as the analysis tool for the quantitative data gathered in this study, and the conventional 0.05 alpha level of significance was utilized. It should be noted that only section two, and items 1, 3 and 4 from the other sections, as described above were included in this analysis.

Basic frequencies were conducted to see the distribution of participants by gender, race/ethnicity, age, college year and relationship status. Since most of the items in the quantitative data had a nominal scale, Chi-square tests were conducted. Huck (2004) wrote that the chi-square test is conducted “to compare two or more samples on a response variable that is categorical in nature” (pg. 463). It is a non-parametric test that determines whether an observed distribution of frequencies would be expected to occur
by chance (Salkind, 2000). In addition, the independent-samples chi-square test was used in this analysis since the data gathered in the study fulfilled one of the situations enumerated as to when the test can be used: two samples compared on a dichotomous response variable.

Using Chi-square cross-tabs analysis, differences in percentages between groups on number of sexual partners, alcohol and condom use during last sexual encounter were tested. A primary rule in using Chi-square for data analysis is that none of the expected frequencies should be smaller than five. However, due to the small sample size and data sparseness in this study, “the problem of small expected frequencies’ was solved by redefining the response categories, such that two or more of the original categories were collapsed together” (Huck, 2004). In this instance, when conducting the analysis on condom use (safer sex method), categories were redefined and collapsed, and this was determined by the categories that have the most responses. Most participants selected the second option, male condom, followed by the last option, none. Responses were recoded to create two categories. Category one was ‘Yes’ to use of some form of safer sex method, while category two was ‘No’ to no use of any form of safer sex method. Options one through five were assigned the value of 1 for ‘Yes’, and option six was assigned the value of 2 for ‘No’.

Reliability of Knowledge Scale

Cronbach’s alpha was conducted on the knowledge items in section two to access their internal consistency. The knowledge index had a low alpha of .39. A possible explanation for this could be the small number of participants in the study, as previous
studies using the same knowledge index reported that each item had a “statistically significant correlations to the total knowledge score for the scale” (MacNair-Semands & Simono, 1996; Thurman & Franklin, 1990). Both of these studies had one hundred and eight-nine participants and two hundred and ninety-four participants respectively. These participants were college students. Sample size is said to have an effect on Cronbach’s alpha (Huck, 2004).

**Qualitative Analysis:** NVIVO qualitative software package for data management was used in arranging, coding and managing the qualitative data gathered in this study. Audio-taped recording from the interviewed session was transcribed and loaded into NVIVO qualitative data software for analysis. Also, participants’ responses to questions on the opinion guide were typed, converted to rich-text-file, and loaded into NVIVO. Open coding (known as free coding in NVIVO) was used to code ideas and points generated from the loaded data (free codes).

Of the six purposes listed by Richards (2005) for qualitative coding, only four of them applied to the coding done in this study. These were: 1) to reflect on what the coded segments tells the researcher about the category and meanings in the project; 2) to ask questions of how the category relates to other ideas in the data; 3) to make finer categories from different dimensions in the data gathered by the first coding; and to blend or combine categories by finding patterns in the codes. To achieve these, three forms of coding were conducted (Richards, 2005): descriptive coding, topic coding and analytical coding.
Descriptive Coding involved storing of information that describe participants, such as gender, age, college year, race/ethnicity. This is referred to in NVIVO as attributes. Attributes were coded for each participant based on the transcript from that participant. The same was done for the field-notes. Attributes were coded for each case as described in the field notes.

Topic coding involved labeling text according to its subject. Creswell (2003) described this process as “organizing the material into ‘chunks’” by taking text data or paragraphs and/or sentence segments and labeling them with a term, preferably from the actual language used by participants in the study.

Analytical coding involved the creation of categories that expressed new ideas about the data by considering the meanings in context. This comes from “interpretation and reflection on meaning” (Richards, 2005, pg. 94) as patterns and themes emerge.

Field notes taken by the investigator/counselor were typed and analyzed using constant comparative analysis. Similar to the last two types of coding described above, constant comparative analysis involved six steps: reading over and over again the entire set of data; ‘chunking’ the data into small parts; labeling each chunk with a descriptive “code”; comparing each new chunk of data with previous chunks, so that similar chunks will be labeled with the same code; grouping of codes by similarity, and identifying and documenting a theme based on grouping (Leech & Onwuegbuzie, 2006). This is especially used in developing themes from notes taken in the field.
Issues of Data Verification in Qualitative Research: Validity and Reliability

The question of validity and reliability arose out of the need to transfer the rigors of quantitative research into qualitative research, and in some way give credence to this research approach (Creswell, 2003; Morse, et al., 2002; Denzin & Lincoln, 2000). However, since qualitative research is context-specific and purposive sampling is used in participant selection, the issue of replicating (reproducing) the exact study in another context presents a challenge (Creswell, 1994). Lincoln & Guba (1985) proposed the use of the term “trustworthiness” containing four aspects: credibility, transferability, dependability and confirmability as substitutes for reliability and validity.

Commitment to trustworthiness in qualitative research enables the researcher to ensure the necessary rigor, using audit trails of key decisions made during the research process, member checks, confirmation of results with participants, participant brief and debriefing, among others, (Morse, et al., 2002). It is suggested that statements about the investigator’s positions, assumptions, biases, values, factors that influenced selection of participants should be included in the narrative, thereby enhancing any possibility of replicating the study in another setting (Creswell, 1994). Lincoln and Guba stated that, "It is not the naturalist’s task to provide an index of transferability, but it is his or her responsibility to provide the data base that makes transferability judgments possible on the part of potential appliers" (Lincoln & Guba, 1985, p. 316).

Therefore, validity in qualitative research “suggests determining whether the findings are accurate from the standpoint of the researcher, the participant, or the readers of an account” (Creswell, 2003, pg. 195). Richards (205) wrote that two ways of checking validity commonly advocated in qualitative research are ‘triangulation’ and
‘member checking,’ while Creswell (2003) listed six more strategies, in addition to the two above. Triangulation is described as the use of different sorts of data or methods to build a coherent justification of themes (Creswell, 2003; Richards, 2005). Reliability, on the other hand, suggest that the researcher provide a detailed protocol for data collection, such as researcher’s positions – central assumptions, selection of informants, biases and values, et c - so that the procedures of the study can be replicated in another setting (Yin, 1989). Creswell (2003) suggests the use of “rich, thick description” to convey the findings, and to include a clarification of the bias the researcher brings to the study.

In this study, the investigator used triangulation to address the issue of validity and took field-notes of reflective thoughts and/or decisions made during the course of the research. Triangulation of generated codes was conducted to allow the investigator to set perspectives of different people (participants) in relation with each other to see whether they talk about a given experience or subject in similar ways or not (Schostak, 2003), since “real life is composed of different perspectives that does not always coalesce” (Creswell, 2003, pg. 196). In addition, the researcher spent time in the field so as to develop an in-depth understanding of the phenomenon under study, and “can convey detail about the site and the people that lends credibility to the narrative account” (Creswell, 2003, pg. 196). The next chapter addresses the results of the study.
Chapter 4

FINDINGS

The purpose of this study was to examine the effect of the Enhanced HIV counseling program in reducing HIV risk behaviors by increasing condom use, reducing number of sexual partners and alcohol use, as compared to the Standard HIV counseling and testing program (brief counseling) currently offered at the Penn State University Park campus. Standard HIV Voluntary Counseling, Testing & Referral (CTR) services are offered to students at Penn State University Park campus. Of specific focus were the students of the African descent who test negative for HIV using the University services. Using concurrent mixed approaches of behavioral surveys and content-analysis of one-on-one semi-structured interviews, the study specifically 1) compared the effectiveness of the Enhanced HIV Counseling program with the Standard Counseling program in reducing HIV risk behaviors by increasing condoms use, reducing number of sexual partners and alcohol use; 2) If the Enhanced Counseling program is found to be effective, the specific component(s) that is most effective in reducing HIV risk behaviors will be determined. In addition, the socio-cultural factors identified by students that prevent and/or enable them to engage in HIV risk reduction behaviors will be identified.

Research questions for the study were:

1. Is there a difference between pre-treatment and post-treatment in the level of students’ knowledge about HIV/AIDS?

2. Is there a significant difference between the Enhanced HIV counseling as compared to the Standard counseling in effectively increasing condom use (safer sex method), reducing number of sexual partners and alcohol use among students?
3. Which component(s) of the Enhanced HIV Counseling program (Skills training, Self-monitoring log and Telephone counseling support) do students identify as providing them with the most support in initiating and maintaining HIV risk reduction behaviors and which is most effective in increasing condom use, reducing number of sexual partners and alcohol use?

4. What socio-cultural factors do students identify that prevent them from and/or enable them to engage in HIV risk reduction behaviors?

This chapter presented the results of the study from both the quantitative survey analysis, and the qualitative data analysis. The qualitative data analysis was based on the five-item opinion guide, the one-on-one semi-structural interviews and field notes. Using the PEN-3 model, content analysis and constant comparative analysis was used in generating themes from the qualitative data (Creswell, 2003; Leech & Onwuegbuzie, 2006). The quantitative data analysis was based on the College Student Behavioral Questionnaire. It was analyzed using descriptive statistics and independent samples Chi-square test.

The results are organized to respond to each research question. The results of data analysis are presented in five phases: 1) analysis of the demographic questionnaire of participants, 2) analysis of knowledge level between pretest and posttest, 3) analysis of number of sexual partners, condom (safer sex method used), and alcohol use between pretest and posttest, 4) content analysis of semi-structurd interviews, and 5) content analysis of opinion guide and constant comparative analysis of the field notes. A discussion of the implications of the findings will be presented in chapter five.
Quantitative Data Results

Demographic Profile of Participants

As shown in Table 4.1, fifty students participated in the research study. The students were equally (randomly assigned) divided between Standard Counseling (25) and Enhanced Counseling (25), and most were females (64%). A majority (68%) of the participants was African Americans and most described themselves as being single (66%). Only one participant was married. About three-fourths of the students were either in their junior or senior year in college (Junior - 40%; Senior – 36%).

Table 4.1: Frequency and Percentage Distribution of Research Participants by Gender, Race/Ethnicity, Relationship Status, College Year and Program Group

<table>
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<tr>
<th>Characteristic</th>
<th>No. of Students</th>
<th>Percent</th>
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<tbody>
<tr>
<td>Gender</td>
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<tr>
<td>Female</td>
<td>32</td>
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<td>Relationship status</td>
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Program Group

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<td>Enhanced Counseling</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
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<td>100.0</td>
</tr>
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</table>

Mean age: 21.20 (S.D. = 2.5)
Min/Max age: 18 / 30

The mean age for participants was 21.20 (S.D. = 2.5), with a minimum age of 18 and maximum age of 30. In the next section the results from the survey data are presented to answer the first research question regarding the level of knowledge demonstrated by participants about HIV/AIDS. Data were analyzed using frequency, cross-tabulation and independent Chi-square test. Items not answered treated as zero.

**Survey Data Analysis of Participants’ Knowledge about HIV/AIDS**

**Research question 1**: Is there a difference in the level of students’ knowledge about HIV/AIDS between pre-treatment and post-treatment?

Overall, there was an increase in students’ level of knowledge between pre-treatment and post-treatment. There were eleven items on HIV/AIDS knowledge. The items consisted of seven true and six false statements about HIV/AIDS. A nominal scale response (True or False) was used. Data in this section was presented in two ways. Participants’ overall scores were presented first, followed by groups’ scores.

Table 4.2 summarized the distribution of all students’ pre-treatment and post-treatment scores on HIV/AIDS knowledge. Descriptive statistics (e.g., frequencies and percentages) were used in summarizing the scores. As indicated in the table, about three-fourths (76%) of the participants scored above ten points (score range from 0 to 13).
points) at pre-treatment, and a majority (82%) scored above ten points at the post-treatment. Participants had a maximum score of thirteen (26%) and minimum score of nine (8%) at pre-treatment, with a mean of 11.46 ($S.D = 1.26$). At post-treatment, the maximum score was again thirteen (24%), with a minimum score of eight (2%), and a mean of 11.82 ($S.D = 1.09$). Items not answered were treated as incorrect answers.

**Table 4.2 Summary of Scores on HIV/AIDS Knowledge at Pre-treatment & Post-treatment**

<table>
<thead>
<tr>
<th>Scores*</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9**</td>
<td>4</td>
<td>8.0</td>
</tr>
<tr>
<td>10</td>
<td>7</td>
<td>14.0</td>
</tr>
<tr>
<td>11</td>
<td>13</td>
<td>26.0</td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>24.0</td>
</tr>
<tr>
<td>13**</td>
<td>13</td>
<td>26.0</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>100.0</td>
</tr>
<tr>
<td>Posttest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8**</td>
<td>1</td>
<td>2.0</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>2.0</td>
</tr>
<tr>
<td>10</td>
<td>2</td>
<td>4.0</td>
</tr>
<tr>
<td>11</td>
<td>10</td>
<td>20.0</td>
</tr>
<tr>
<td>12</td>
<td>19</td>
<td>38.0</td>
</tr>
<tr>
<td>13**</td>
<td>12</td>
<td>24.0</td>
</tr>
<tr>
<td>Missing</td>
<td>5</td>
<td>10.0</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Score range from 0 to 13, with 13 being the highest knowledge score possible
**Minimum/Maximum scores
Pre-treatment Means: 11.46 [$S.D = 1.26$]
Post-treatment Means: 11.82 [$S.D = 1.09$]
Table 4.3 contained the detailed HIV/AIDS knowledge test statements with the correct answer in bold. Fifty participants completed the survey at pre-treatment, and forty-six participants (92%) completed it at the post-treatment. Participants’ score at pre-treatment and post-treatment for each item were summarized using frequency, and missing data for some items were placed under such items.

### Table 4.3: Participants’ Score on each item on the HIV/AIDS Knowledge at Pre-treatment and Post-treatment

<table>
<thead>
<tr>
<th>Knowledge items</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-treatment</td>
</tr>
<tr>
<td><strong>Item 1</strong>: Most people who have the AIDS virus look unhealthy</td>
<td></td>
</tr>
<tr>
<td>True</td>
<td>7</td>
</tr>
<tr>
<td>False</td>
<td>43</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
</tr>
<tr>
<td><strong>Item 2</strong>: A person can be exposed to the AIDS virus in one sexual contact</td>
<td></td>
</tr>
<tr>
<td>True</td>
<td>48</td>
</tr>
<tr>
<td>False</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
</tr>
<tr>
<td><strong>Item 3</strong>: HIV may be present for 3 months before detection by blood test</td>
<td></td>
</tr>
<tr>
<td>True</td>
<td>48</td>
</tr>
<tr>
<td>False</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
</tr>
<tr>
<td><strong>Item 4</strong>: Most people who have HIV quickly show symptoms of illness</td>
<td></td>
</tr>
<tr>
<td>True</td>
<td>4</td>
</tr>
<tr>
<td>False</td>
<td>46</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
</tr>
<tr>
<td><strong>Item 5</strong>: Persons who are exclusively heterosexual are not at risk for AIDS</td>
<td></td>
</tr>
<tr>
<td>True</td>
<td>1</td>
</tr>
<tr>
<td>False</td>
<td>49</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
</tr>
</tbody>
</table>
Item 6: A negative result on the AIDS virus antibody test can occur even for people who carry the virus

<table>
<thead>
<tr>
<th></th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer</td>
<td>46</td>
<td>4</td>
</tr>
</tbody>
</table>

Item 7: Most present cases of AIDS are due to blood transfusion that took place before 1984

<table>
<thead>
<tr>
<th></th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer</td>
<td>12</td>
<td>13</td>
</tr>
</tbody>
</table>

Item 8: Donating blood carries no risk for the donor

<table>
<thead>
<tr>
<th></th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer</td>
<td>24</td>
<td>22</td>
</tr>
</tbody>
</table>

Item 9: Some cases of AIDS have been linked to social (dry) kissing or sneezing

<table>
<thead>
<tr>
<th></th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer</td>
<td>6</td>
<td>2</td>
</tr>
</tbody>
</table>

Item 10: People who get HIV through needle-sharing activity can transmit the virus during sexual activities

<table>
<thead>
<tr>
<th></th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer</td>
<td>50</td>
<td>0</td>
</tr>
</tbody>
</table>

Item 11: It is possible to become infected with HIV by having sex with members of the opposite sex

<table>
<thead>
<tr>
<th></th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer</td>
<td>49</td>
<td>1</td>
</tr>
</tbody>
</table>

Item 12: Latex condoms are the best protection from HIV when having sex

<table>
<thead>
<tr>
<th></th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer</td>
<td>42</td>
<td>7</td>
</tr>
</tbody>
</table>

Item 13: Females have a greater immunity than men to AIDS

<table>
<thead>
<tr>
<th></th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answer</td>
<td>4</td>
<td>46</td>
</tr>
</tbody>
</table>

*Missing Data

Table 4.4 summarizes the scores for both groups separately. Overall, both groups’ knowledge level about HIV increased slightly between pre-treatment and post-treatment. As shown in the table, participants in the Standard Counseling group had a mean score of
11.42 (\(S.D = 1.17\)) at pre-treatment, and a mean score of 11.83 at post-treatment (\(S.D = .88\)). Participants in the Enhanced Counseling group had a mean score of 11.52 (\(S.D = 1.35\)) at pre-treatment, and 11.77 (\(S.D = 1.3\)) at post-treatment.

**Table 4.4 Differences in Standard Counseling and Enhanced Counseling Group Means on HIV Knowledge at Pre-treatment and Post-treatment**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre-treatment</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td>Standard Counseling</td>
<td>24</td>
<td>11.42</td>
</tr>
<tr>
<td>Enhanced Counseling</td>
<td>25</td>
<td>11.52</td>
</tr>
</tbody>
</table>

**Figure 4.1. Comparison of Knowledge Means by Group**
Research question 2: Is there a significant difference between Enhanced HIV counseling as compared to Standard HIV counseling in effectively increasing condom use (safe sex method), reducing number of sexual partners and alcohol use among students?

Overall, when compared with participants in the Standard Counseling group, more participants in the Enhanced Counseling group reported reducing their number of sexual partners, reducing safer sex method used, and more reported alcohol use during the last sexual encounter.

The researcher hypothesized that there would be a significant difference between participants who received the Enhanced HIV Counseling in comparison to those who received the Standard HIV Counseling as measured through the following variables:

1) Number of sexual partners in the last three months
2) Alcohol use during last sexual encounter
3) Safer sex method used

There were three items in the questionnaire that measured the above variables. Number of sexual partners in the last three months was measured by question one in section five of the CSBQ. Participants were to provide the number of sexual partners they have had in the last three months to the following statement: In the past three months, I have had ________ different sexual partners. Alcohol use during last sexual encounter was measured by question three in section six of the CSBQ. Participants were to ‘think back to the most recent time’ they had sex, and answer ‘Yes’ or ‘No’ to the question: Did you drink alcohol before or during the encounter? Safer sex method used
(condom use) was measured by “What type of safer sex method did you use?” in section six of the CSBQ. They were provided six options to choose from: female condom, male condom, spermicide, dental dam, other and none. Participants’ overall results are presented first, followed by group results.

**Data Analysis of Number of Sexual Partners in the Last Three Months**

Descriptive statistics (frequencies, percentages and cross-tabs) tables were used to summarize the number of sexual partners in the last three months. As explained in chapter three, due to data sparseness, the number of sexual partners was recoded such that participants’ reporting 0 to 1 sexual partner was recoded as “1”, while those reporting 2 or more sexual partners was recoded as “2”.

As indicated in Table 4.5, although four of the fifty participants were missing at post-treatment, the forty-six participants were equally distributed into both groups (Pre-treatment- 25:25; Post-treatment- 23:23). Forty (80%) of the participants reported having a maximum of one sexual partner at pre-treatment, and ten (20%) reported having a minimum of 2 sexual partners at pre-treatment, with a mean of 1.2, and standard deviation of .404. However, 78% of the participants reported a maximum of one sexual partner at post-treatment, while 22% had a minimum of two sexual partners, with a mean of 1.21, and standard deviation of .42.
Table 4.5 Participants’ Number of Sexual Partners in the Last Three Months at Pre-treatment and Post-treatment

<table>
<thead>
<tr>
<th>Sexual Partners (#)</th>
<th>Pre-treatment</th>
<th>Post-treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>0 to 1</td>
<td>40</td>
<td>80</td>
</tr>
<tr>
<td>2 or more</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

Pre-treatment Means: 1.20 (S.D = .404)
Post-treatment means: 1.21 (S.D = .417)

Using a cross-tabulation analysis (Table 4.6), thirty-one participants reported the same number of sexual partners at pre-treatment and post-treatment (no change), while fifteen participants reported an increase and/or decrease in number of sexual partners between pre-treatment and post-treatment. As indicated in Table 4.6, of the thirty-one participants that reported no change, twenty-nine participants (80.6%) reported having 1 sexual partner at pre-treatment and post-treatment (same number- 1:1), while two participants (20%) reported having 2 sexual partners at pre-treatment and post-treatment (2:2).

Of the fifteen participants that reported a change between pre-treatment and post-treatment, seven participants (19.4%) reported a reduction in their number of sexual partners from 2 to 1 sexual partner at post-treatment (decrease - 2:1). The remaining eight participants (80%) reported an increase in the number of their sexual partners from 1 at pre-treatment to 2 sexual partners at post-treatment (increase - 1:2).
The next sections present data on participants’ number of sexual partners in the last three months by the two groups: Standard Counseling and Enhanced Counseling.

Table 4.7 summarizes group reports of number of sexual partners at pre-treatment and post-treatment separately using frequency and percentages. At pre-treatment, twenty-three participants (92%) in the Standard Counseling group reported 0-1 sexual partner, while two participants (8%) reported having 2 or more sexual partners. Seventeen participants (68%) in the Enhanced Counseling group reported having 0-1 sexual partner, while eight participants (32%) reported having 2 or more at pre-treatment.

At post-treatment, seventeen participants (73.9%) in the Standard Counseling group reported having 0-1 sexual partner in the last three months, while six (26.1%) reported having 2 or more sexual partners in the last three months. Also at post-treatment, nineteen participants (82.6%) in the Enhanced Counseling group reported having 0-1 sexual partner, while four participants (17.4%) reported having 2 or more sexual partners in the last three months.
Table 4.7 Number of Sexual Partners in the Last Three Months by Standard Counseling & Enhanced Counseling Groups at Pre-treatment & Post-treatment

<table>
<thead>
<tr>
<th>Groups</th>
<th>Pre-treatment</th>
<th></th>
<th>Post-treatment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Standard Counseling</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Partners (#)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 to 1</td>
<td>23</td>
<td>92.0</td>
<td>17</td>
<td>73.9</td>
</tr>
<tr>
<td>2 or more</td>
<td>2</td>
<td>8.0</td>
<td>6</td>
<td>26.1</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>100.0</td>
<td>23</td>
<td>100.0</td>
</tr>
<tr>
<td>Enhanced Counseling</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Partners (#)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 to 1</td>
<td>17</td>
<td>68.0</td>
<td>19</td>
<td>82.6</td>
</tr>
<tr>
<td>2 or more</td>
<td>8</td>
<td>32.0</td>
<td>4</td>
<td>17.4</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>100.0</td>
<td>23</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.8 summarizes the differences in group reports of number of sexual partners in the last three months at pre-treatment and post-treatment. Using cross-tabs, of the thirty-one participants that reported no change between pre-treatment and post-treatment, seventeen participants were in the Standard Counseling group (comparison group), while fourteen were in the Enhanced Counseling group (treatment group). Sixteen participants (55.2%) in the comparison group reported having 0-1 sexual partner at pre-treatment and post-treatment, while thirteen participants (44.8%) in the treatment group reported the same number (1:1). Only one participant from both group reported having 2 or more sexual partners at pre-treatment and post-treatment (2:2).

Of the fifteen participants that reported a change between pre-treatment and post-treatment, six participants were in the Standard Counseling group, while nine participants
were in the Enhanced Counseling group. Seven of the fifteen participants reported a decrease in the number of sexual partners from 2 to 1 sexual partner (2:1), while eight reported an increase in the number of sexual partners (1:2) between pre-treatment and post-treatment. Of the seven participants that reported a decrease in number of sexual partners from 2 to 1, six (85.7%) were in the Enhanced Counseling group, while only one (14.3%) was in the Standard Counseling group. In addition, of the eight participants that reported an increase in the number of sexual partners from 1 to 2 sexual partners, five (62.5%) were in the comparison group, while three (37.5%) were in the treatment group.

Table 4.8. Comparison of Differences in Number of Sexual Partners in Three Months by Groups at Pre-treatment & Post-treatment

<table>
<thead>
<tr>
<th>Post-treatment - Number of Sex</th>
<th>Pre-treatment - Number of Sex partners</th>
<th>Count</th>
<th>Percentage</th>
<th>Count</th>
<th>Percentage</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00</td>
<td>Standard</td>
<td>16</td>
<td>55.2%</td>
<td>13</td>
<td>44.8%</td>
<td>29</td>
<td>100.0%</td>
</tr>
<tr>
<td>2.00</td>
<td>Enhanced</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.00</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.00</td>
<td>Standard</td>
<td>5</td>
<td>62.5%</td>
<td>3</td>
<td>37.5%</td>
<td>8</td>
<td>100.0%</td>
</tr>
<tr>
<td>2.00</td>
<td>Enhanced</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.00</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.9 summarizes the means and standard deviations of number of sexual partners at pre-treatment and post-treatment for both groups. As indicated in the table and Figure 4.2, participants in Standard Counseling had a mean of 1.08 (S.D = .28) at pre-treatment, and a mean of 1.26 (S.D = .45) at post-treatment while participants in the Enhanced Counseling group had a mean of 1.32 (S.D = .48) at pre-treatment and 1.17 (S.D = .38) at post-treatment. Participants in the Standard Counseling group reported a slightly higher mean at post-treatment in comparison to pre-treatment, while participants
in the Enhanced Counseling group had a slightly lower mean at post-treatment in comparison to pre-treatment.

Table 4.9 Differences in Means & Standard Deviations in Number of Sexual Partners in Three Months by Groups at Pre-treatment and Post-treatment

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre-treatment</th>
<th>Post-treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td>Standard Counseling</td>
<td>25</td>
<td>1.08</td>
</tr>
<tr>
<td>Enhanced Counseling</td>
<td>25</td>
<td>1.32</td>
</tr>
</tbody>
</table>

Skewness value: 1.5
Median: 1.0
Data Analysis of Alcohol Use at Last Sexual Encounter

Participants were encouraged to ‘think back to the most recent time’ they had sex, and answer ‘Yes’ or ‘No’ to the question: Did you drink alcohol before or during the encounter? Participants’ response of ‘Yes’ was assigned the value of 1, while a ‘No’ response was assigned the value of 2.

Table 4.10 summarizes the frequency and percentages of use of alcohol by participants. Of the fifty participants that completed the survey at pre-treatment, thirty-eight (76%) responded ‘No’ to use of alcohol during last sexual encounter. Forty-six participants completed the post-treatment, and thirty-four (68%) said ‘No’ to use of alcohol during last sexual encounter.

Table 4.10 Participants’ Alcohol Use during Last Sexual Encounter at Pre-treatment & Post-treatment

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre-treatment</th>
<th>Post-treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Alcohol Use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>No</td>
<td>38</td>
<td>76</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

Cross-tab’s results of participants’ use of alcohol at pre-treatment and post-treatment are summarized in Table 4.11. Overall, forty-one participants reported no change in their use or non-use of alcohol before or during the last sexual encounter between pre-treatment and post-treatment, while five participants reported a change between pre-treatment and post-treatment. Of the forty-one participants that reported no
change, thirty-two participants (91.4%) reported (No) not using alcohol at pre-treatment and post-treatment (2:2), while nine participants (81.8%) reported (Yes) using alcohol during last sexual encounter at pre-treatment and post-treatment (1:1). Conversely, of the five participants that reported a change between pre-treatment and post-treatment, two participants (18.2%) reported alcohol use at pre-treatment (Yes), and none (No) at post-treatment (1:2), while three participants (8.6%) reported no alcohol use (No) at pre-treatment, but used alcohol (Yes) at post-treatment (2:1).

<table>
<thead>
<tr>
<th></th>
<th>Post-treatment - Alcohol Use before or during sex</th>
<th>Pre-treatment - Alcohol use before or during sex</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes Count Percentage</td>
<td>Yes Count Percentage</td>
</tr>
<tr>
<td>Yes</td>
<td>9 81.8%</td>
<td>11 100.0%</td>
</tr>
<tr>
<td>No</td>
<td>3 8.6%</td>
<td>35 100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>12 24.2%</td>
<td>46 100.0%</td>
</tr>
</tbody>
</table>

Using frequencies and percentages, Table 4:12 summarized group reports of alcohol use before or during the last sexual encounter at pre-treatment and post-treatment. Twenty participants (80%) in the Standard Counseling group reported non-use of alcohol before or during the last sexual encounter, while five participants (20%) reported using alcohol at the last sexual encounter at pre-treatment. On the other hand, eighteen participants (72%) in the Enhanced Counseling group reported not using alcohol at the last sexual encounter, while seven participants (28%) reported using alcohol at the last sexual encounter at pre-treatment.
At post-treatment, eighteen participants (78.3%) of the comparison group reported not using alcohol during last sexual encounter, while five (21.7%) reported using alcohol. Also at post-treatment, sixteen participants (69.6%) in the treatment group reported not using alcohol at last sexual encounter, while seven (30.4%) reported using alcohol at last sexual encounter.

| Table 4.12 Alcohol Use at Last Sexual Encounter by Standard Counseling & Enhanced Counseling Groups at Pre-treatment & Post-treatment |
|---|---|---|---|
| Groups            | Pre-treatment | Post-treatment |
|                  | Frequency | Percent | Frequency | Percent |
| Standard Counseling |         |         |           |         |
| Alcohol Used      |         |         |           |         |
| Yes               | 5       | 20.0    | 5         | 21.7    |
| No                | 20      | 80.0    | 18        | 78.3    |
| Total             | 25      | 100.0   | 23        | 100.0   |
| Enhanced Counseling |       |         |           |         |
| Alcohol Used      |         |         |           |         |
| Yes               | 7       | 28.0    | 7         | 30.4    |
| No                | 18      | 72.0    | 16        | 69.6    |
| Total             | 25      | 100.0   | 23        | 100.0   |

Using Cross-tabs analysis, Table 4.13 summarizes the differences in groups’ reports of alcohol use at last sexual encounter at pre-treatment and post-treatment. Of the forty-one participants that reported no change in their use or non-use of alcohol before or during last sexual encounter between pre-treatment and post-treatment, twenty-one were in the Standard Counseling group, while twenty were in the Enhanced Counseling group.
Seventeen participants (53.1%) in the comparison group reported non-use of alcohol at last sexual encounter between pre-treatment and post-treatment, while fifteen participants (46.9%) in the treatment group reported non-use of alcohol at pre-treatment and post-treatment (2:2). Four participants (44.5%) in the comparison group and five (55.6%) in the treatment group reported using alcohol during last sexual encounter at pre-treatment and post-treatment respectively (1:1).

Two of the five participants that reported change between pre-treatment and post-treatment were in the Standard Counseling group, while three were in the Enhanced Counseling group. In addition, of the five participants that reported change, two reported using alcohol during last sexual encounter at pre-treatment, but non use of alcohol at post-treatment (1:2), while three participants reported non use of alcohol at pre-treatment, but reported alcohol use during last sexual encounter at post-treatment (2:1). Two of the participants (66.7%) that reported ‘No’ to alcohol use at pre-treatment, but ‘Yes” to alcohol use at post-treatment were in the Enhanced Counseling group, while only one participant (33.3%) that reported the same was in the comparison group. Only one participant from both group reported using alcohol during last sexual encounter at pre-treatment, but no use at post-treatment.
Table 4.13. Comparison of Differences in Alcohol Use at Last Sexual Encounter by Groups at Pre-treatment & Post-treatment

<table>
<thead>
<tr>
<th></th>
<th>Groups</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standard</td>
<td>Enhanced</td>
<td>Total</td>
</tr>
<tr>
<td>Post-treatment -</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-treatment -</td>
<td>Yes Count</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Alcohol Used</td>
<td>44.4%</td>
<td>55.6%</td>
<td>100.0%</td>
</tr>
<tr>
<td>No</td>
<td>Count</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>33.3%</td>
<td>66.7%</td>
<td>100.0%</td>
</tr>
<tr>
<td>No</td>
<td>Pre-treatment -</td>
<td>Yes Count</td>
<td>1</td>
</tr>
<tr>
<td>Alcohol Used</td>
<td>50.0%</td>
<td>50.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>53.1%</td>
<td>46.9%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Data Analysis of Safer Sex Method Used

Safer sex method used (condom use) was measured by question four in section six, “What type of safer sex method did you use?” and provided six options for participants to chose from: female condom, male condom, spermicide, dental dam, other and none. Due to sparseness in data, as explained in chapter three, the categories were redefined and collapsed into just two categories: ‘Yes’ to the use of safer sex method, and ‘No’ to non-use of safer sex method. The value of 1 was assigned to ‘Yes’ and value of 0 was assigned to ‘No’.

Table 4.14 summarizes participants’ use of safer sex method. Fifty participants completed the survey at pre-treatment, with forty-seven participants (94%) reporting the use of safer sex method. Forty-six participants completed it at post-treatment, and forty-one (82%) reported using safer sex method. The means at pre-treatment was .94 (S.D = .24), and post-treatment means was .89 (S.D = .31).
Table 4.14 Use of Safer Sex Method by Participants at Pre-treatment & Post-treatment

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre-treatment</th>
<th>Post-treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Safe sex method was used</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>47</td>
<td>94.0</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>6.0</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

Pretest Means: .940 (S.D = .239)
Posttest Means: .891(S.D = .314)

Overall, forty-two participants reported no change in their use or non-use of safer sex method, while only four participants reported a change. Using cross-tabulation, as indicated in Table 4.15, forty participants (97.6%) reported using safer sex method at both pre-treatment and post-treatment, while only two participants (40%) reported not using safer sex method at both pre-treatment and post-treatment. Three participants (60%) reported “yes” to using safer sex method at pre-treatment, and “no” at post-treatment, while only one participant (2.4%) said “no” to using safer sex method at pre-treatment and “yes” at post-treatment.

Table 4.15 Comparison of Safer Sex Method Used by Participants at Pre-treatment & Post-treatment

<table>
<thead>
<tr>
<th>Pre-treatment - Safer Sex Method used</th>
<th>NO</th>
<th>YES</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Count</td>
<td>Percentage</td>
<td></td>
</tr>
<tr>
<td>Pre-treatment - Safer Sex Method used</td>
<td>NO</td>
<td>2</td>
<td>40.0%</td>
</tr>
<tr>
<td></td>
<td>YES</td>
<td>3</td>
<td>60.0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>Count</td>
<td>1</td>
<td>2.4%</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>40</td>
<td>97.6%</td>
</tr>
</tbody>
</table>
Groups’ report of use of safer sex method at pre-treatment and post-treatment are presented in table 4.16. At pretest, twenty-four participants (96%) in the Standard Counseling group reported using safer sex method, while only one participant (4%) reported non-use of safer sex method. Also, twenty-three participants (92%) in the Enhanced Counseling group reported use of safer sex method, while two participants (8%) reported non-use.

Twenty-two participants (95.7%) in the comparison group reported use of safer sex method at post-treatment, while only one participant (4.3%) reported non-use of safer sex method. In the treatment group, nineteen participants (82.6%) reported use of safer sex method, while four participants (17.4%) reported non-use at post-treatment.

Table 4.16 Use of Safe Sex Method by Standard Counseling & Enhanced Counseling Groups at Pre-treatment & Post-treatment

<table>
<thead>
<tr>
<th>Groups</th>
<th>Pre-treatment</th>
<th>Post-treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Standard Counseling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safe Sex Method Used</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>24</td>
<td>96.0</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>4.0</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>100.0</td>
</tr>
<tr>
<td>Enhanced Counseling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safe Sex Method Used</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>23</td>
<td>92.0</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>8.0</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 4.17 summarizes cross-tabs’ results on safer sex method by both groups at pre-treatment and post-treatment. Of the forty-two participants that reported no change in the use or non-use of safer sex method between pre-treatment and post-treatment, twenty-three were in the Standard Counseling group, while nineteen participants were in the Enhanced Counseling group. Twenty-two participants (55%) in the comparison group reported “yes” to using safer sex method at pre-treatment and post-treatment, and eighteen participants (45%) also reported ‘yes’ to using safer sex in the treatment group at both times. Only one participant in both group reported ‘no’ to use of safer sex method at pre-treatment and post-treatment.

All the four participants that reported change in the use or non-use of safe sex method were in the Enhanced Counseling group. Three participants from the four that reported change, reported ‘yes’ to using safer sex method at pre-treatment and ‘no’ at post-treatment, while one reported ‘no’ to using safer sex method at pre-treatment and ‘yes’ at post-treatment.

Table 4.17 Comparison of Safer Sex Method Used by Groups at Pre-treatment & Post-treatment

<table>
<thead>
<tr>
<th>Post-treatment - Safer sex method</th>
<th>Groups</th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Standard</td>
<td>Enhanced</td>
<td></td>
</tr>
<tr>
<td>NO Pre-treatment - Safer sex method used</td>
<td>NO Count</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>50.0%</td>
<td>50.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>YES Count</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>YES Pre-treatment - Safer sex method used</td>
<td>NO Count</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>YES Count</td>
<td>22</td>
<td>18</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Percentage</td>
<td>55.0%</td>
<td>45.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Although the above quantitative results were not significant, it should be noted that three female participants in the research study ended the abusive relationships they
were involved in by the end of the study. This is one of the advantages of qualitative research, in that it can produce positive life changing results that could never be captured in quantitative findings.

**Qualitative Data Results**

**Content Analysis of Semi-Structural Interviews**

*Research question 3:* Which component(s) of the Enhanced HIV Counseling program (Skills training, Self-monitoring log and Telephone counseling support) do students identify as providing them with the most helpful in initiating and maintaining HIV risk reduction behaviors?

The purpose of this section is to determine which component of the Enhanced HIV counseling students found most helpful in supporting their effort to change HIV risk behaviors and/or initiate HIV risk reduction behaviors using the qualitative data from the semi-structured interviews. Creswell (2003) outlined six steps used in content analysis; however, only five steps were relevant and used in this research. These were: organizing and preparing the data for analysis by transcribing the interviews; getting a general sense of the data by reading through it; coding of chunks of text (sentences or paragraphs) and labeling these with a phrase and/or clause based on the actual words of the participant; using the codes to create a smaller number of themes and categories, and finally, making an interpretation or meaning of the data. Grounded theory was used as the paradigm in guiding the data analysis.

Twenty-two participants were interviewed and audio-taped by the counselor/investigator during the post-treatment session. Participants in the Enhanced
Counseling Group were asked specific questions relating to the component of the program they found most helpful to them. These were: Which component(s) of the Enhanced Counseling do you personally feel was helpful to you? In what way was this helpful? (only asked if the participant did not explain); and what do you think of the counseling service you received?

On the other hand, participants in the Standard Counseling group were asked a general question about their perception of the counseling and if it was effective to them in any way, i.e., “what do you think of the counseling service you received?” This was designed to ensure the fidelity of the study, in making sure that only the participants in the Enhanced Counseling group received the treatment, and only information was provided to participants in the Standard Counseling group. Of the twenty-two participants that were interviewed, twelve were in the Enhanced Counseling group and ten were in Standard Counseling group. Fifteen were females and seven were males. Fifteen of the participants were African Americans, three were Hispanics, two were Caucasian, and two were Asian Pacific Islanders.

Following the coding of the interview transcripts, three main categories were created in accordance with the goal of the research question. These were: Skill training was most effective, Self-monitoring log was most effective and Telephone counseling was most effective. Each of these main categories had sub-categories used in describing and/or explaining what was meant. If needed, participants were asked follow-up questions to describe the manner in which they found the component effective personally and/or their experience in participating in the research.
Category 1: Skills Training was most effective

As explained in Chapter three, participants were provided with skills training on condom application (for both male and female condoms), accurate information on the effect of alcohol on sexual response and negotiating safer sex with sexual partner. However, most of the time was spent on negotiating safer sex with sexual partner and this was based on participants’ description of the type of sexual contact and/or sexual partner they have. Five of the twelve participants (#s 12, 20, 22, 24 & 32) in the Enhanced HIV counseling identified the skills training component of the program as most effective in supporting their efforts to change and/or reduce HIV risk behaviors. In addition to these five, other participants also described ways in which the skills training were supportive or helpful.

A major sub-theme that emerged under this category is initiating safer sex discussion. Some participants described the component as having being effective in assisting them to initiate safer sex conversation with their partners, which they would not have done before:

“Talking about the skills training... Negotiating. Yeah...I actually didn’t think I could negotiate safe sex in a peaceful way that works and I don’t know, it just put me at ease than I was before. I still have apprehensions about it.” [Interview 5 - pp #20, Paragraphs 4-7]

“Probably the most relevant was the first initial counseling and discussion of the behaviors that we checked off on the initial sheet, and when we talked about what those behaviors might mean, for my sexual practices and safety regarding HIV contraction, particularly the discussion about oral sex without using any sort dental dam or condom
usage, which then prompted me to have a discussion with my partner about that practice.” [Interview 6 – pp# 32, Paragraph 4]

“Because I was able to...you were able to ask me questions and I was able to respond. And it helped me to think, 'okay, what behavior can I change to not put myself at risk for HIV or any form of STDs or something like that.” [Interview 11 - pp#24, Paragraphs 6-7]

“Yes, yes. It made me become more aware of it, and became more comfortable. We haven’t talked about it yet, but as soon as we see each other. I feel better. Before when I was sort of afraid to approach him, but now I feel a lot better. So, I won’t have any difficulty discussing my feelings and encouraging him to do the same thing.” [Interview 49 – pp# 26, Paragraphs 4-5]

Another sub-theme is having open discussion about relationships with partners. Some participants described the process as making them more open to talk about their relationship in general. It allowed them to have deeper conversations on issues that were vaguely discussed and thinking back to past behaviors that might had exposed to HIV. One participant described the diagram used during the process as an eye opener on how easily it is to contract HIV and spread it.

“Hhm, to be more open. Like talk about things that were vaguely discussed, but that I would be able to put..., huh, make it moreso a deeper discussion.” [Interview 2 – pp# 49, Paragraphs 6-7]

“It helped me to be able to talk about things more, so that when you think about it and talk about it, you face the issues and you don’t have to worry about it. So, that’s it right there.” [Interview 20 – pp# 22, Paragraphs 6-7]
“Actually made me think about some of the sexual activities I’ve had in the past. Well, not really much. But, was some, it kind of make me think. Now, I’m starting to realize that I can only, you know, have 100% confidence in myself, and even though, I have been with my boyfriend for years, but still, I am, you know, the goddess of my own life. [laughs]. So, we’ve being using condoms.” [Interview 9 - pp # 002, Paragraphs 16-17]

“The first one that you mentioned, skills training. I guess you can say, like, it really opened up my eyes as far as how you can possibly contract HIV. Like when you did the whole diagram with the guy and the girl, the girl and the two guys. You know like, how it like led back and forth to each other. You know, that stuff, and even here today, like just talk about oral sex and what not. I felt that I got more out of that than filling out the logs. You know, I was just like I didn’t have sex today and filled the log, you know.” [Interview 16 – pp# 12, Paragraphs 2-3]

Category 2: Self-monitoring logs was most effective

Similar to the skills training, five (#s 6, 26, 28, 30 & 38) of the twelve participants interviewed in the Enhanced Counseling group identified the Self-monitoring log as the *most* effective component in supporting their efforts to reduce HIV risk behaviors. In addition to these five, other participants also described ways in which the self-monitoring logs were supportive to their efforts.

A major sub-theme under this category was being more conscious of daily behaviors. Some participants described the logs as being helpful in assisting them to see their daily activities. It helped them to notice things they did not realize they did before, and made them conscious of even their small actions. The logs were described as assisting them to internalize and understand their own behaviors, and as a reflective tool.
on which they can go back and examine their behaviors. A participant described the process of seeing her own behaviors on paper as ‘hitting home.’

“To me, I think the log, keeping the log because that’s where I can see...that enabled me to see okay that what I’m doing on a daily basis for several weeks. So that showed some patterns of when I was having sex, what were the things that led to me having sex, and therefore, I felt like, yes, it told me more than any of the other parts. When you do the logs you start to internalize that and see it for your own behaviors in your life, on a daily basis how that works…” [Interview 18 – pp #30, Paragraphs 4-5, 9]

“Yes, because it makes you think of your day-to-day activities, and what you’re doing, and you know you are aware of your sexual behavior, which I think is important. So, on a scale of 1 to 10, the self-monitoring log was much more on the higher part of the scale. Yeah. About a 9 or 10.” [Interview 10 – pp #28, Paragraphs 4-7]

“Hum… definitely the self-monitoring log. Because seeing what I’ve done written in paper really hit me. It was definitely the log.”[Interview 4 – pp #26, Paragraphs 2-3]

“I think the daily logs. Because I realized what I was doing everyday. I had to pay attention to myself and I didn’t …sometimes when you do things, you know, if you take the time to write down what you are doing you don’t notice that you don’t do anything or that you are doing something. So that helped me a lot.” [Interview 22 - pp #006, Paragraphs 2-3]

“Hm, I’ll say the self-monitoring log. It just made you think more about what was going on, and what you are doing, and made you more conscious of just small actions that you take... Because I really like this process of reflecting on my own behavior, and doing the log allows me to do that…” [Interview 7- pp #38, Paragraphs 2-3, 18]

Another sub-theme was reflection on relationship. Some participants said it allowed them to examine what type of relationship they have with their partner, and if
they or their partner was pressuring and/or forcing them into having sex. Exploring the type of relationship they have with their partners by completing the logs had prompted discussions with their partners.

{In what way was the log helpful for you?}” Well, it made me see that ...some...most of the time, not all, but most of the time, my partner pressures me into having sex when I’m not either that interested or I couldn’t be bothered, but...” [Interview 2 – pp #49, Paragraphs 4-5]

“And also, I think the self-monitoring logs were extremely beneficial because I think I get to fill it out with my partner, [unclear] he’s wondering what I was filling out and I want him to be very aware of what I was filling out as well to make sure that, even though in my perception, in my answers, last night as I was filling out the final couple, you know, I asked him, I just have being assuming that I have never in any way forced him to have intercourse with me [unclear], but I’ve never asked him that. I was making that assumption. So I asked him. I would not have done that without the logs.” [Interview 6 - pp #32, Paragraph 4]

Although this was not a comparative study, a sub-theme that emerged was that the logs did not apply. It is of interest to note that of the seven participants that were African Americans interviewed in the Enhanced Counseling group, four of them preferred the skills training. In fact, one of the participants reduced his rating of the counseling program because of the self-monitoring logs, while another participant complained that the questions of the logs were confusing and did not apply to her:

“[Finally, what would you say, of the counseling that we offer, how would you rate it?] On like a ten? [Yeah.] I will give it a seven, for the fact that, even though like, I thought it was really great you know; but I kinda feel that, as far as like the filling of the logs, that didn’t do...I guess I didn’t get as much out of that as I thought I was going to get. So,
instead of it being a seven, it really should be an eight. It was really good, other than that.” [Interview #16 - pp 12, Paragraphs 10-13]

“What about the self-monitoring log, it wasn’t helpful in any way?] The self-monitoring log was kind of...some questions were kind of confusing, so I may have put the wrong answer, when I’ve being thinking of something else, so maybe for next time you all can change the wording of the questions, because some of the questions did not apply to me.” [Interview #11 - pp24, Paragraphs 14-15

Category 3: Telephone Counseling was most effective

The theme that emerged under this category is interactive support. Of the entire twelve participants that were interviewed from the Enhanced Counseling group, only one participant (#002) identified the telephone counseling support as the most effective component in assisting to change behaviors. Though she described ways in which the other two components were effective, she selected the telephone counseling because she appreciated having someone to talk to right then and there:

“I think the telephone counseling was effective...just because you have another person there, another voice. It’s kind of interactions, you ask questions and you’ll get a response, quick response. Self-monitoring did help, but the response is based solely on me. The telephone counseling. Is a person there, I mean you can actually...with the self monitoring log, I’m basically monitoring myself, and you know, what I do at the moment, but with the telephone counseling, you actually get to talk to a person about [unclear] and stuff like that. So I think the telephone counseling...” [Interview 9 - pp #002, Paragraphs 2-3]

Although the question asked participants to identify one component most effective to them personally, one participant selected two components: the skills training and self-monitoring logs. She described the skills training as providing her with the tools
needed to talk about safer sex with her partner, while the logs assisted her to examine her relationship with her boyfriend. Both were described as being effective in their own ways.

“I think both... talking about safe sex and the log were both helpful in their own ways. {In what way was the log helpful for you?} Well, it made me see that ... some ... most of the time, not all, but most of the time, my partner pressures me into having sex when I'm not either that interested or I couldn’t be bothered, but... for the skills training, to be more open. Like talk about things that were vaguely discussed, but that I would be able to put... huh, make it more so a deeper discussion.” [Interview # 2 - pp 49, Paragraphs 4-5]

To summarize, of the twelve participants interviewed from the Enhanced Counseling group, five selected and described the skills training component of the treatment to be the most effective to them personally, while another five selected the self-monitoring log of to be most effective to them personally in reducing HIV risk behaviors. Only one participant selected the telephone-counseling component and one participant selected both the skills training and self-monitoring log because they were supportive “in their own way.” Under the skills training was effective category, initiating safer sex conversation and open discussion about relationship were two sub-themes that emerged. On the other hand, three sub-themes emerged under the self-monitoring log was effective category. These were being more conscious of daily activities, reflection on relationship and the logs did not apply. Interactive support was the sub-theme that emerged under the telephone counseling was effective category. It should be noted that although some participants selected a component as the most effective, they still described other component (e.g., the logs and/or the skills training) to be of assistance to them.
As explained in chapter two, the domains of cultural empowerment and relationships and expectations are used in a cross-tabulation as ‘diagnostic tool’ in determining issues to be addressed during intervention, while the third domain, cultural identity is used to determine the point of intervention entry. However, since the ‘point of intervention entry’ was already identified as the ‘person’ in this study, the model was used to guide the exploration of socio-cultural issues during counseling and used to organize themes that emerged during content analysis of the opinion guides and constant comparative analysis of the field notes. Participants’ pre- and post-treatment opinion guides were matched using their identity code-links.

Themes that emerged from content analysis of both the pre- and post-treatment of five-item opinion guides are presented below. These themes were arranged by a 3 x 3 table, cross-tabulating the Relationships and Expectations domain – perceptions, enablers and nurturers, - with the Cultural Empowerment domain – positive, existential and negative. It should be noted that some themes occurred under both the positive and negative cells of the domains therefore they were counted as one. Only one theme of existential perception emerged. Phrases and comments were subsequently used to explain each theme.
### Table 4.18 Cultural Empowerment & Relationships/Expectations

<table>
<thead>
<tr>
<th>Domains</th>
<th>Positive</th>
<th>Existential</th>
<th>Negative</th>
</tr>
</thead>
</table>
| **Perceptions** | Self-esteem and self-confidence  
Healthy future  
Preventing pregnancy  
Personal Values and beliefs  
Knowledge & attitude about HIV transmission and safer sex | Non-penetrative sex   | Lack of self-confidence  
Unsafe sex is emotionally better  
No pleasure with condom use |
| **Enablers**   | Condom availability  
Free condoms                                             |                        | Non-availability of condoms  
Cost of buying condoms  
Cost & use of dental dams  
Shyness in buying condoms |
| **Nurturers**  | Sexual partner  
Friends  
Family members  
Campus free condoms programs                               |                        | Sexual partner  
Friends  
Family members |

**Positive Perceptions**

A large number of the participants wrote about valuing themselves, their lives and looking forward to a healthy future as a motivation for them to change their behaviors. Sometimes, this led to sexual abstinence. In addition, some participants wrote about their confidence in asking a sexual partner about their sexual history and insisting on condom use. Others wrote about the values they hold, and they were raised as preventing them from being involved in ‘nonsense things.’

**Self-esteem and Self-confidence**

“I made the decision to honor myself a lot more. I’ve never been promiscuous, however, I have had a sexual encounter in which I regret. Therefore, I’ve made the
choice to regain control of my life and cut sex out of the picture for a while and concern myself with myself.” - {Participant #001}

“Having safe sex and being aware of the HIV virus boasts up my self-confidence, and self-esteem because I am focused on my health as well as my partner’s health” - {Participant #008}

“I am 100% confident in my ability to ask my partner to use a condom” - {Participant #002}

“My self-esteem because I know that I am going to go far in life and I want to have good health while I do this.” - {Participant #005}

“My self-confidence and my strong sense of self keep me from doing nonsense things” - {Participant #029}

“My self-confidence and esteem has increased and I have gained some communication skills I don’t have before.” {Participant #020}

“I don’t have sex without a condom, and ask if the mates have been tested” - {Participant #006}

“I have high self-esteem and I want to grow and be successful live a long healthy life.” – {Participant #033}

“My self-confidence, my attitude. The way I was brought up plays a role.”- {Participant #047}

“Self-esteem, self confidence, respect for self.” {Participant #013}

“I’m not afraid to ask about my partners past sexual history.” {Participant #023}

“More confident to discuss safer sex with my partner.” {Participant #040}

“I felt safer as I tried abstinence for a while.” {Participant #048}

Healthy Future

“Thinking of the long term, have to care about yourself” - {Participant #007}

“I have high self-esteem and I want to grow and be successful live a long healthy life.” – {Participant #033}

“My self-esteem because I know that I am going to go far in life and I want to have good health while I do this.” - {Participant #005}

“I believe in always being 100% healthy…. ” {Participant #023}
“My self preservation causes me to use protection...” {Participant #029}

Personal Values and Beliefs

“My attitude. I don’t want to fooled around with so I have to respect myself.”
{Participant #006}

“I see life as a beautiful thing that God gave us so we should take care of it.”
{Participant #009}

“My faith in God is the only and best influence in my life.” {Participant #042}

“The morals and integrity that I hold for myself” - {Participant #023}

“My self-confidence, my attitude. The way I was brought up plays a role.”- {Participant #047}

“To me it’s about how much I value myself and my life.” {Participant #023}

“I believe you should not have one-night stands even though I have low self-esteem I don’t use sex to enhance it.” {Participant #028}

In addition, some participants wrote that more knowledge and awareness about HIV/AIDS influenced their sexual behaviors. For some, preventing pregnancy was a motivating factor in using protection, thereby reducing their anxiety following sexual intercourse:

Knowledge & attitude about HIV and Safer sex

“My attitude is either I use protection to keep myself from risk or don’t have sex at all.”
{Participant #011}

“New attitudes about safer sex and the fear of STDs.” {Participant #050}

“My beliefs has never been to wait for marriage, my attitudes is that I respect myself too much to be used or sleep around, ... I’m pickier and more aware after becoming more knowledgeable”- {Participant #021}

“I have come to the realization that I do not need to engage in sex for a few months or longer” - {Participant #016}
“My attitude and knowledge about this epidemic motivate me to change my behavior.”  
{Participant #009}

“The fact that I think HIV can be passed easily from one person to another. The fact that you can get HIV from oral will make me think twice the next time”  
{Participant #012}

“Researching the area, knowing about HIV/AIDS.”  
{Participant #037}

“I learn more about the disease”  
{Participant #009}

“Things that I learn about STDs and HIV/AIDS”  
{Participant #014}

“Attitudes about being safe.”  
{Participant #022}

“Learning more about HIV/AIDS has made me more aware of the issue.”  
{Participant #039}

“The stigma with HIV/AIDS so I’ll practice safer sex and pick partners carefully.”  
{Participant #049}

**Preventing Pregnancy**

“My main concern for using protection is to prevent pregnancy and I believe sex isn’t worth bringing in another human being into this world at this time”  
{Participant #017}

“I feel more safe and less worried about the consequences when I have used protection”  
{Participant #001}

“When I think about becoming pregnant.”  
{Participant #024}

**Existential Perceptions**

Engaging in non-penetrative sex was the existential perception one participant wrote about, both at pre-and-post-treatment. This type of sexual act she believed had no bearing on her risk for HIV. For most of the participants, this section was left uncompleted.

“Continue rubbing on each other”  
{Participant #035}
Negative Perceptions

Some of the themes listed under positive perceptions also came under negative perceptions. Some participants wrote about lack of confidence to insist on condom use with their sexual partners, and felt anxious in discussing condom use. Unprotected sex is described as being both physically and emotionally better, and use of condoms consistently, especially with the same sexual partner, is said to be awkward, and leads to less feeling of pleasure. Type of sexual act also seems to be a factor in whether a condom would be used. Condom use during oral sex is considered unnecessary.

Lack of Self-confidence

“Anxiety about telling my boyfriend that we need to use condoms and buying condoms” – {Participant #020}

Unsafe sex emotionally better

“Personal preference (unprotected sex makes sex emotionally and physically better)” – {Participant #019}

“Feeling kind of lost is what sex means to me. Feeling hurt when things don’t turn out a certain way.” - {Participant #021}

No pleasure with Condom Use

“I don’t care to use condoms with oral sex” – {Participant #017}

“Should I sacrifice the convenience of not having to wear one? Sometimes I feel as though it would be awkward to consistently wear condoms with my partner” – {Participant #030}

“Lost of pleasure when using condoms.” – {Participant #022}

“Less feeling of pleasure with condom use.” – {Participant #013}

“Loss of some pleasure when using condoms.” – {Participant #011}

“Condoms always taste nasty.” - {Participant #037}
Positive & Negative Enablers

Condom availability and free condoms were major factors in determining participants’ engagement in safer sex. Many wrote that if a condom is available, they were more likely to engage in safer sex by using it. Money was not considered a challenge since most said they had access to free condoms. Having access to free condoms mean that they were more likely to readily have one available when engaging in sexual intercourse:

Condom Availability (Positive Enabler)

“The availability of condoms helps as well” – {Participant #032}

“Condom availability, if there is a condom available at the time of sexual activity, we use one” - {Participant #002}

“I guess if there is condom around, I’m more likely to engage in the behavior. I would say coming around condoms everywhere I went influenced my effort to change the behavior.” {Participant #003}

“Condom availability helped a lot.” {Participant #036}

“Condom availability at all times” - {Participant #007}

“Should I chose to have sex, I do have condoms available” - {Participant #016}

“I keep a supply of condoms so limited supply is never an issue” - {Participant #017}

“Condom is very necessary in order to have safe sex.” {Participant 009}

“In my environment condoms especially free condoms are always available.” {Participant 011}

By the same token, unavailability of condoms was what many participants wrote as a negative enabler in preventing them from engaging in HIV risk-reduction behavior. Some wrote about the cost of buying condoms, and made arrangements to split the cost
with their sexual partner. Also, the cost of buying a dental dam for oral sex and the needed skills to use it properly was a negative enabler for some participants. In addition, some wrote about working on their shyness when purchasing condoms:

**Non-availability of Condoms (Negative Enabler)**

“If the condoms are not available at the time, we won’t use them.” – *Participant #002*

“They should put more condoms available for people, sometimes people can’t afford or have access to them” – *Participant #009*

“Sometimes no condoms are available.” – *Participant #046*

**Cost of buying Condoms & Using Dental dams**

“Money was an issue in the beginning, but my girlfriend and I decided that we would always pay an equal amount for the condoms.” – *Participant #047*

“Having money to buy dental dams, etc and even the ability to use these things” – *Participant #08*

“Purchasing condoms though can be a money issue” – *Participant #015*

“Money does play a factor in it because most places charge you to get tested ad you need money to buy condoms.” – *Participant #023*

**Shyness in buying Condoms**

“I’ll feel funny buying condoms alone so I would work through it.” – *Participant #049*

**Positive and Negative Nurturers**

Most of the themes listed as positive nurturers of HIV-risk reduction behaviors also emerged as negative nurturers of the behaviors. Many participants wrote about their sexual partners as either being willing or unwilling to engage in safer sex. Some described their sexual partner as being open and willing to discuss, while others wrote that their partner was not open to the idea.
Sexual Partner (Positive Nurturer)

“My boyfriend was open to being monogamous and using protection” – {Participant #019}

“My partner and I both believe in safe sex, so we keep condoms” – {Participant #017}

“My “boyfriend” eagerness about condom use” – {Participant #014}

“Current partner insists on condoms making it easy to stick to it” – {Participant #044}

“…My partner [is] also helpful.” - {positive nurturer}

“We [my partner and I] both have no problem with using condoms more often than not.” {Participant #017}

Sexual Partner (Negative Nurturer)

“My partner thinks I don’t trust him, it is more costly to use condoms than not to.” - {Participant #020}

“I don’t get as much support when it comes to practicing safe oral sex. He didn’t like the idea of changing or cutting back on oral sex” – {Participant #019}

“Anxiety about telling my boyfriend that we need to use condoms” – {Participant #022}

“I believe my partner is faithful to me. I am not confident enough to be assertive with my partner” – {Participant #020}

Friends and peers were described as either being supportive in assisting them to engage in safer sex or they (the friends) themselves engage in HIV risk behaviors. Some described their friends as helping them ‘to stay true to theirselves’ by making sure they use protection. Friends’ use of condoms is described as having a positive impact on sexual behaviors. Some participants wrote that their friends provided them with condoms when needed, and just the thought of having a friend to confide in made a difference. A participant wrote that she experiences no pressure for sex because her “friends were virgins.” Only one participant wrote that some of his friends engage in
HIV risk behaviors, such that, sometimes he did not feel that engaging in oral sex without protection is risky.

**Friends (Positive Nurturer)**

“Most of my friends always use condoms so in a sense it has a positive impact on me trying to have a positive sex life.” – {Participant #047}

“My friends don’t engage in sex with multiple partners and it has had a positive influence on me.” - {Participant #045}

“Most of my friend are virgins and have no real peer pressure on the subject unless to stay safe and away from sex.” - {Participant #021}

“My friends encourage abstinence and safe sex” – {Participant #016}

“My friends have a system now to carry condoms around everywhere we go.” {Participant #003}

“Me and my friends all share the same view when it comes to safe sex.” {Participant #011}

“My friends are very supportive of my boyfriend and they also promote safe sex, so I always have condoms in the apartment.” - {Participant #034}

“Good friends that I could disclose personal information and confide in them as well. One-on-one conversations with best friends” - {Participant #036}

“Friends and peers tell me condom use is important, if I needed a condom, they would give it to me.” - {Participant #033}

“My friends wear condoms and support condom use. Friends/peers and buddies all promote safe sex.” – {Participant #039}

“My friends push the attitude of safe sex and monogamy with a safe partner.” - {Participant #050}

“My best friend never had unprotected sex before and that in many ways aspire me to do the same in the future.” {Participant #001}

**Friends (Negative Nurturer)**

“Some of my friends in Brazil engage in such risky behaviors that at times I feel like having oral sex with my partner without protection is not risky at all.” – {Participant #030}
“I don’t really involve my friends in my sexual life, but I have 2 good friends that encourage me to take care of myself, but this does not include practicing safe sex because they don’t either.” {Participant #020}

“Some of my other friends make this hard, heavy on alcohol or drugs and with a different mind frame, peer pressure all around.” {Participant #021}

Some participant wrote about their parents’ role in giving them needed guidance through values they instilled in them while young, and in providing them with support now. Contrarily, fear of retribution if their parents should know they were sexually active or have contracted HIV was also listed as a negative nurturer.

Parents (Positive Nurturer)

“My mother...reinforce my beliefs.” – {Participant #033}

“The way I was brought up plays a role...” – {Participant #014}

“My mother always preach to me about sex.” {Participant #024}

“My parents...are positive influences on using protection.” {Participant #029}

“My mom talks to me about protection.” {Participant #040}

Parents (Negative Nurturer)

“I don’t know how I would tell my mother if I had HIV/AIDS...” – {Participant #019}

The availability of free condoms on campus was described as been supportive in engaging in safer sex. Campus health programs providing free condoms to students made a participant write that “it’s nice not to need the embarrassment of buying them,” and one wrote that “condoms have become more available” since he came to Penn State campus.
Campus Free Condoms Programs (Positive Nurturer)

“Condoms are all over campus and given for free, nice to not need the embarrassment feeling for buying them.” – Participant #049

“Condom availability increases since I came to Penn State” – Participant #048

“Television and programs around the school giving out free condoms.” – Participant #047

“The school provides free condoms so if I did have sex here or anytime soon, there will be no excuse” – Participant 001

“Free condoms at school.” – Participant #022

“Condoms are available from clinics [on campus] and they are free.” – Participant #024

“Condoms are available everywhere on a college campus for free.” – Participant #044

“Free condoms at health centers [on campus].” – Participant #042

In summary, participants wrote that positive and negative perception of self-esteem and confidence had an impact on their efforts in engaging in HIV risk reduction behaviors. Increase in knowledge and awareness about HIV/AIDS; ‘hope of a healthy future’ and preventing pregnancy were described as positive factors in their efforts to change. Lessen pleasure due to condom use and awkwardness in using condoms in a committed sexual relationship with partners was described as negative factors in engaging in safer sex. Condom availability or lack thereof was both a positive and negative enabler in using safer sex, and most importantly, the cost of buying condoms. The cost and use of dental dams for oral sex was described as a negative enabler. Sexual partners, friends and parents were both positive and negative nurturers of HIV risk
reduction behaviors. Programs providing free and easy access to condoms on campus were applauded as positive nurturers of HIV risk reduction behaviors.

**Constant Comparative Analysis of Field-Notes using the PEN-3 Model**

The skills training session in this intervention was not limited to providing skills and information. As explained in chapter three, the use of the PEN-3 model (Airhihenbuwa, 1989) as a theoretical framework enabled the counselor/investigator to guide participants in exploring socio-cultural aspects of their behaviors. These behavioral aspects were pertinent to participants, although, they may not have obvious link to HIV risk behaviors. Constant comparative analysis was used in developing themes from the field-notes taken during the course of the intervention. The Cultural identity and Relationships/Expectations domains of the PEN-3 model were used in arranging the themes. The themes that emerged were: 1) what it means to be a young, black man; 2) sexual satisfaction; and 3) perception of beauty or body image.

**Cultural identity: What it means to be a young, Black man:**

Participants talked about the challenges they experienced as they try to “make something” of themselves. One participant talked about growing up in a neighborhood in South Jersey where none of his friends are going to college, but just hanging out on the streets “hustling,” and he too can make more money on the streets. But he wants to go to college to make something of himself. His decision to go to college alienated him, and his only support has been his grandmother:
“I mean, if not for my grandma, I don’t know where I’ll be. I mean, I don’t really know my father, and I don’t talk to my mom any more. It’s a long story...” 

{Participant #42}

His feeling of frustration is further obvious when he talked about how people respond to him since he’s moved to a small community:

“It’s like, ‘people just look at me and say ‘men, he’s wasting his time going to college. I feel as if, you know, sometimes, I feel I’m screwed either way. It’s like people look at me and see a young black man that will amount to nothing.”

{Participant #42}

The uncertainty about his future after college and the “money” he could be making now seems to create feelings of self-conflict:

“I’m more likely to make more money on the streets of South Jersey, and I’m here trying to make something of myself. And you know, I’m not even sure I’ll have a job or something when I’m done.” {Participant #42}

Participants also described their frustrations with the social expectation about what it means to be a man. One participant described his friends’ reaction to his lack of having many girls like they do, and talked about just losing his virginity, which he felt he took too long doing:

“... it’s not like I’ve been sleeping around or anything like that, like some of my friends. They make fun of me for, you know, ...I was a virgin until 2004 when I had sex with some girl. She’s not a virgin or anything like that, but I was. And after that, I had sex with another girl. So, really, I’ve had sex with only two partners, until some of my friends who just like to have sex with girls just for fun. I mean, it’s not like I have a problem with them doing it, although, sometimes it makes me feel as if you know...” {Participant #12}
The manner in which the girls also respond to his friends also seem to be a source of irritation since the girls were aware that these ‘guys’ have other girls besides them. He felt that this might be contributing to why they think he ‘is not a man or man enough’:

“...I mean, the girls know they are players and they still go out with them and stuff. It’s like since I don’t do that I must not be a man or something, because you’re suppose to have a lot of girls, and I don’t.” {Participant #12}

**Relationships and Expectations: Sexual Satisfaction**

Some participants described their frustration in their relationship due to lack of sexual satisfaction. A participant talked about her boyfriend not satisfying her sexually, and hooking up with guys in the clubs when she is upset with him.

“My boyfriend doesn’t satisfy me sexually. He doesn’t like to wear condoms because by the time he wants to put it on, he just goes down. He can’t hold it for long, so he doesn’t like condoms at all. And I think, maybe that’s why I hook up with guys I pick up in the bars, especially when I’m angry with him”

A participant talked about never having had an orgasm and can’t have sex unless she’s had alcohol:

“I feel like I just have sex for the sake of having sex because I’ve never had an orgasm. What does that feel like? Like when my friends are talking, I just pretend as if I have, just so that I can have a story to tell. But I actually have never had an orgasm.”

**Relationships and Expectations: perception of beauty or body image**

Some participants talked about feeling uncomfortable with their bodies. A participant talked about having unprotected sex with her boyfriend despite the fact that
she has genital herpes. Though she loves him, she feels that it will be unfair if she says no and insist that he uses condoms, because he loves her just the way she is:

“You know I don’t think I will have a problem if I insist that my boyfriend use a condom. But, I don’t think it’s fair on him, since I have herpes and I have outbreaks from time to time, and he still loves me and don’t feel the need to wear a condom to protect himself. I mean, if he’s willing to do that, why shouldn’t I have sex with him without protection? ... I really don’t feel comfortable with my body. I don’t think I have a nice body like the other girls, and I have to do what I can to keep my boyfriend.”

Another participant talked about only having sex under the influence of alcohol because she’s uncomfortable with her body and engages in one-night-stand sexual contact with guys she “hook-up” with in clubs/bars:

“I don’t think I can have sex without drinking. I don’t feel comfortable with my body. And I think, maybe that’s why I keep hooking up with guys I pick up in the bars, just one night stands, nothing serious.”

**Conclusion**

In conclusion, the quantitative findings showed that participants increased in knowledge about HIV/AIDS at post-treatment when compared with pre-treatment, although it was not a statistically significant change. Also, participants who received the Enhanced HIV counseling reported a reduction in their number of sexual partners, and safer sex method used, and more of them reported using alcohol during last sexual encounter in comparison to those who received the Standard counseling. These findings were also not statistically significant.
Qualitative data from the audio-taped interviews revealed that participants were equally divided in their selection of the skills training and self-monitoring logs as components of the Enhanced HIV counseling that they found to be most helpful to them personally. They described these components has been effective in assisting them to initiate discussions about safe sex with their partners, become more aware of their daily activities and reflect more generally about their relationships. Also, one participant selected the telephone counseling due to its interactive support, and one participant selected both the skills training and self-monitoring logs as helpful to her.

In addition, using the 3x3 table of the PEN-3 model, a number of themes emerged from the opinion guides, and these were arranged under seven of the cells in the model: positive perceptions; existential perceptions; negative perceptions; positive enablers, negative enablers, positive nurturers and negative nurturers. It should be noted that some similar themes were presented under both the positive and negative cells.

Through the use of the Pen-3 model as a guide, the field-notes revealed that participants experienced socio-cultural issues that may not have direct link to HIV risk behaviors, such as what it means to be a young Black man, sexual satisfaction and perception of beauty or body image.
Chapter 5

SUMMARY, DISCUSSION AND RECOMMENDATIONS

The purpose of this study was to examine the effect of the Enhanced HIV counseling program in reducing HIV risk behaviors by increasing condom use, reducing number of sexual partners and alcohol use, as compared to the Standard HIV counseling and testing program currently offered at the Penn State University Park campus.

Standard HIV Voluntary Counseling, Testing & Referral (CTR) services were offered to students at Penn State University Park campus. Of specific focus were the students of the African descent who used the services and tested negative for HIV.

Using a concurrent mixed approaches of behavioral surveys and content-analysis of one-on-one semi-structural interviews, the study specifically: 1) compared the effectiveness of the Enhanced HIV Counseling program with the Standard HIV Counseling program to determine which of the two was most effective in increasing condom use, reducing number of sexual partners and alcohol use; 2) If the Enhanced Counseling program was found to be effective, to determine which component(s) – skills training, self-monitoring logs and telephone counseling - was most effective in reducing HIV risk behaviors; and 3) Using the PEN-3 model, the study explored socio-cultural factors identified by students that prevent and/or enable them to engage in HIV risk reduction behaviors. The specific research questions examined in this study were:

1. Is there a difference between pretest and posttest in the level of students’ knowledge about HIV/AIDS?
2. Is there a significant difference between the Enhanced HIV counseling as compared to the Standard counseling in effectively increasing condom use (safer sex method), reducing number of sexual partners and alcohol use among students?

3. Which component(s) of the Enhanced HIV Counseling program (skills training, self-monitoring log and telephone counseling support) did students identified as providing them with the most support in initiating and maintaining HIV risk reduction behaviors by increasing condom use, reducing number of sexual partners and alcohol use?

4. What socio-cultural factors do students identify that prevent them from and/or enable them to engage in HIV risk reduction behaviors?

This chapter presents the summary, discussion and implications of the findings, and offer recommendations for future researches. Summary of the findings are presented first, followed by the discussion and implications of the findings, and recommendations. The quantitative findings were discussed first followed by findings from the qualitative methodology. However, where necessary, findings from the qualitative research were used to provide more insight and/or explanation to the quantitative findings.

**Summary of Findings**

- There was an increase in participants’ level of knowledge about HIV/AIDS between pretest and posttest.
• There was no statistically significant difference between the Enhanced HIV counseling and Standard HIV counseling in reducing number of sexual partners, alcohol use and increasing safer sex method.

• An equal number of participants’ selected skills training and self-monitoring logs as effective components of the Enhanced HIV counseling. Only one participant selected the telephone counseling, and one participant selected both the skills training and self-monitoring logs.

• Using the PEN-3 model, cultural identity, sexual satisfaction and perception of body image were socio-cultural issues that enable and/or prevent participants from engaging in HIV risk reduction behaviors.

DISCUSSION

The first research question was to examine if there was a difference between pre-treatment and post-treatment in the level of students’ knowledge about HIV/AIDS. Results showed that there was an increase in students’ knowledge at post-treatment compared to pre-treatment, even though it was not statistically significant. This is similar to findings from other studies testing students’ knowledge about HIV/AIDS that showed that students demonstrated higher level of knowledge in comparison to other populations (Latman & Latman, 1995; Brown, 2000, Opt & Loffredo, 2004). In addition, however, participants’ demonstrated a misconception about HIV disease transmission in their answer to item 8 on ‘donating blood carries no risk for the donor’ at both pre-treatment and post-treatment. Fifty-two percent of the 50 participants at pre-treatment chose “false” the wrong answer to the question, while 44% of the 46 participants at post-
treatment still chose the same option. It should be noted, however, that previous studies had revealed that this question maybe about a distrust of health providers than knowledge about HIV mode of transmission. This possibility was not explored in this study.

Retention of some misconceptions about HIV transmission routes among students have led to the description of their knowledge about HIV/AIDS as problematic (Siegel, et al., 1999; Lewis, et al., 1997; McGuire, et al., 1992). Although the misconception in this instance seem inconsequential to students’ HIV risk behaviors, it still provides insight into certain ideas that students may have and that may contribute to their engaging in HIV risk behaviors.

The second research question was to test if there is a difference between pre-treatment and post-treatment in HIV risk reduction behaviors engaged in by participants who received the Enhanced HIV counseling program and those who received the Standard HIV counseling program. HIV risk reduction behaviors were measured through reduction in number of sexual partners in the last three months, reduction in alcohol use during last sexual encounter, and increase in safer sex method used at last sexual encounter.

Participants in the Enhanced HIV counseling program reported reduction in their number of sexual partners. The intervention did not, however, increase participants’ use of safer sex method and neither did it reduce their alcohol use during last sexual encounter. The reduction in the number of sexual partners by participants in the treatment group is of note since six of the seven participants that reported a decrease in number of sexual partners at post-treatment were in this group, with 82.6% reporting having 0 to 1 sexual partner at post-treatment, in comparison to only 68% at pre-
treatment. This finding is similar to what Jaworski & Carey (2001) reported for participants that received a one-time session of the IMB-based intervention. Although unlike the one-time session, this intervention had specific components that were implemented at different phases or sessions.

Participants in the Enhanced HIV counseling group did not improve in their use of safer sex method and alcohol during last sexual encounter. This may be due to the type of relationship and contexts within which they behaved. Safer sex method, such as condom use is not warranted. They may have rejected the use of safe sex method if in a committed relationship and/or a monogamous relationship, such that initiating safe sex method may be interpreted as unnecessary. The duration and time in a committed relationship seem to have also been a factor in what relational context condom use is thought to be necessary. Findings from the qualitative research showed that participants do not insist on condom use if they had been in the relationship for a relatively long time. According to one participant, “I’ve had the same boyfriend for 5 years now. We plan to get married after school, so we don’t use condoms all the time.” Also, if the sexual partner is uncomfortable or not open to the idea of condom use, participants were less likely to use condom consistently, as one participant said: “My boyfriend does not like to wear condoms because he loses his erection. He wants me to go on birth control pills instead of him wearing a condom.”

There was also the question of interpersonal trust in the relationship. Condom use in a committed or monogamous relationship, especially one in which partners intended to get married, is believed to undermine the feeling of trust between partners. A participant explains that her boyfriend does not trust her now, and he has actually insisted that she
gets tested for HIV. Therefore asking him to use condoms will not go well with him at this time. Since this participant was already dealing with the issue of trust in her relationship, asking for condom to be used was considered to be untimely. These results complement findings by Sadovszky, et al., (2003), Foreman, (2003), Jaworski & Cary (2001) and Bazargan, et al., (2000) among many others. Participants in these various studies, especially female participants, were less likely to use condoms when involved in a committed relationship; when there is a perceived decreased in sexual pleasure due to condom use, and/or when they perceived that their sexual partner may not be open to the idea. Misovich, et al., (1996) found that individuals in committed relationships were more likely to engage in unprotected sex compared to those in casual sexual encounters, thereby making committed relationship a source of considerable risk for HIV infection.

Alcohol use as a precursor for sexual risk behaviors among college students has been reported in a number of studies (Robert & Kennedy, 2006; Gultete & Lyons, 2005; Apostolopoulos, et al., 2002; Fierros-Gonzalez & Brown, 2002; Kokotailo, et al., 1998; McNair, et al., 1998). Alcohol use usually decreased the likelihood of engaging in safer sex. Although the qualitative findings did not explored which type of sexual contact was alcohol likely to be a factor, some participants reported that if their boyfriends use alcohol, then they were most likely to use alcohol also. However, one participant did report that she used alcohol, especially when engaging in casual or one-night stands since firstly she does not currently have a boyfriend, and secondly, she is uncomfortable with her body. Alcohol, she said, allowed her to relax and let go of her worries. This result is corroborated by McNair, et al., (1998) findings that college females with high level of self-esteem report lower alcohol consumption, which was associated with greater condom
use. This participant, though, did report condom use under the influence of alcohol, while those who reported not using condoms were those in a relationship as explained above.

The third research question asked participants in the treatment group what their experience was in receiving the Enhanced HIV counseling program. The Enhanced HIV counseling program was made up of three components: skills training (Hawa, et al., 1998), self-monitoring log (Kelly, et al., 1989) and telephone counseling support (Albus et al., 2005). Based on the three components in the program, participants described what their experience was with the component they found most helpful to them personally in changing their behaviors, and clear themes emerged for each component. As explained in the result section, the skills training did not dwell solely on condom application and negotiation of safer sex, since some participants felt that they were comfortable in their experience of applying condoms and/or negotiating its use. Instead, the skills training provided participants with the opportunity to explore ‘other’ factors that may not be directly linked to HIV risk behaviors.

**Skills Training**

Participants described their experience of receiving the skills training as reducing their anxiety in negotiating safer sex, making them more comfortable and better in discussing safer sex: “it just put me at ease than I was before;” “Before when I was sort of afraid to approach him, but now I feel a lot better.” The reduction in their anxiety may explain why participants also described the experience as increasing their confidence in themselves and prompting them to have a discussion with their sexual partner,
“...it made me think. Now, I’m starting to realize that I can only, you know, have 100% confidence in myself, and even though I have been with my boyfriend for years, but still, I am you know, the goddess of my own life. So, we’ve being using condoms.”

Participants also described the experience has an ‘eye-opener’ in that it increased their awareness level and contributed to their willingness and readiness to take appropriate actions. Other studies (Tulloch, et al., 2000; Bazargan, et al., 2000; Fisher, et al., 1996; Kelly, et al., 1990; Kelly, et al., 1989) have reached similar conclusions in the effectiveness of providing information and skills training to students. This acts as motivation to take appropriate actions increasing their self-efficacy, and invariably their self-confidence. However, we found no study that has actually explored participants’ interpretation of the meanings of such experience, especially as a result of receiving and implementing such interventions. Exploring recipients’ experiences of such interventions may provide key insight into areas in which more effort is needed. For instance, the participant that described her experience as putting her at ease also stated that she still has apprehensions about negotiating safer sex with her boyfriend. This shows that more is needed in effecting a sustainable change for this participant. However, effecting such a change is meaningless without a full understanding of the context that will nurture such a change.

In addition, the skills training provided in this intervention were somewhat different from those in the studies referenced above. The skills training session in this intervention went beyond providing skills and information. Rather it allowed participants to explore socio-cultural factors that may be contributing to their risk for HIV, though these factors may not have a direct link to HIV. While participants did talk about the value of having more information, especially ‘trigger words’ and ‘scenarios’ that
provided them with some insight on how to negotiate safer sex, it appears that having the opportunity to talk about their feelings and concern, particularly within socio-cultural contexts was of much value to them. Socio-cultural aspects of their values and behaviors will be discussed later.

**Self-monitoring Logs**

The use of journals, usually, unstructured journals in forms of diaries, is believed to provide a better sense about the context within which behaviors took place, and better understanding of the flow of behaviors and their interrelatedness (Stopka, et al., 2004). Participants described their experience of completing the self-monitoring logs daily as being reflective or allowing them to contemplate seriously the behaviors that increase their risk for HIV infection. It enabled them to express feelings about themselves that they may not have being aware of (feeling of “being hit”), and see how these feelings affect their own behaviors: “…showed me patterns of when I was having sex, what were the things that led to me having sex....” Discovering ‘what led to sex’ enabled a participant to realize that her sexual partner pressured her into having sex, when she was not in the mood nor wanted to have sex.

The idea of discovering “what led to having sex” can be described as the capturing of the unintended and unplanned event. Having information on such events is relevant in effectively moving individuals along behavioral change spectrum, especially students who engage in behaviors that may put them at risk for HIV. The intervention provided findings similar to those from studies where diaries have been used as a self-management tool in which participants completed structured self-report surveys daily (Kelly, et al., 1990; Kelly, et al., 1989). In addition, the idea of capturing unintended and
unplanned events was also reported by Stopka, et al., (2004). In their studies, they found that diary keeping (unstructured journal) on drug use might have had a potential intervention effect, in that several participants in their study noted their desire to quit using drugs, and three actually enrolled in drug treatment program, though the purpose of the study was to highlight activities related to syringe acquisition, use and discard.

**Telephone Counseling Support**

The interactive nature of the telephone counseling was one factor that a participant noted as being very helpful to her. This was the only participant that found the experience from this component beneficial. While other studies (Albus et al., 2005; Chiou et al., 2004; Lazev, et al., 2004) have shown that telephone counseling serve as reminders, especially for medical regimen adherence, telephone counseling in this instance, provided more of a support, although not in form of reminders, to participants. This one participant described the experience as providing her with “*quick response...about stuff like that.*” For this participant, the availability of a counselor and easy access to counseling was of significance to her. Although in this instance, the participant received a call, the availability and easy access to a counselor could be described as being similar to services provided by information and counseling help-lines. However, since the intent of many of these help-lines is to provide information, some callers may not feel comfortable to say much about themselves and a possible opportunity for support may be missed. In addition, a review of studies (Vassilev, et al., 2005; Knight, et al., 2005; Neumann, 1996; Knox, et al., 1981) profiling the demographic of callers to HIV/AIDS help-lines, found that they were mostly above twenty-five years
of age and already infected with HIV/AIDS. Therefore, the significance of the call may also be attributed to the feeling of “someone was reaching out” before an unwanted event took place, as she said, “it’s nice to have someone in your corner.”

As mentioned earlier, the skills training session also allowed participants to explore other factors, refer to in this study as socio-cultural factors that may contribute or protect them from HIV risk. As explained in Chapter four, a participant may describe a situation that may not necessarily deal with HIV. However, using the PEN-3 model (Airhihenbuwa, 1999) as a theoretical framework, the counselor/investigator was able to guide participants to examine areas in which this situation(s) may have a bearing on their behaviors. The model was also used in organizing themes that emerged during constant comparative analysis of the field-notes. The themes were: 1) what it means to be a young, black man; 2) sexual satisfaction; and 3) perception of beauty or body image. Cultural identity and Relationships/Expectations domains were found to be very relevant to the themes and will be used in discussing them. The two domains overlapped in the discussion of these themes.

**Cultural identity**

Cultural identity has been defined and/or described in many ways, and no one definition/description can be said to readily capture what this concept really means. However, for the purpose of this discussion, I will use the description by Airhihenbuwa (1995, taken from Diop, 1991 & Basch, 1990), that “cultural identity is based primarily on shared historical, linguistic, and psychological lineage, …the shared set of socially transmitted perceptions…as it relates to achieving life’s goals” (pg. 5).
According to the PEN-3 model, cultural identity is explored through the person, extended family and neighborhood. ‘Person’ in this instance refers to “the degree in which they (i.e., the person) may be dealing with notion of double consciousness” (Airhihenbuwa & Webster, 2004, pg. 9, *italics mine*), and how empowered they are to make informed health decisions appropriate to their roles in their families and communities (Airhihenbuwa, 1995). ‘Extended family’ refers to roles played by family members, relatives and ‘extended kin’ in health decisions, and ‘Neighborhood’ refers to role of friends, acquaintances, peers, community members, in making health decisions and invariably influencing health behaviors.

The sense of ‘shared historical, linguistic and psychological lineage’ by a person, extended family and neighborhood could be said to represent cultural values. Cultural values is an important aspect of accrued knowledge needed to interpret and respond to environmental experiences concerning one’s own status within a family, community or neighborhood and larger society (Swanson, et al., 1998). Cultural experiences are born from socio-political-economic contexts, interpreted through the lens of cultural values, which in turn, dictates the meaning attached to such experiences. Invariably, this is used in organizing one’s behaviors, thoughts and actions, which then enhances, compromise, or impedes one’s cultural identity.

Cultural experiences of racial/ethnic minorities groups within the American society have led to the development of what some called ‘biculturalism’ in which individuals are expected to demonstrate “competence both in the larger society and within their own ethnic group” (Swanson, et al., 1998, pg. 28). In fact, to zero in on the specific nature of the cultural experiences and cultural identity of African Americans
within the larger social, political and economic context of the American society, W.E. B. Du Bois (1903) coined the term “double consciousness” to describe the dual status of being both Black and American. Using the same term, Airhihenbuwa & Webster (2004) wrote about the challenge of “embracing multiple identities (hybridity) experienced by men and women in different cultures” (pg. 8). The fact that cultural identity is influenced by cultural values, which in turn has a profound effect on health decisions and behaviors, is evidenced by research and prevention programs, which in the last few years have explored this relationship or association (Binson, et al., 1993; Durbin, et al., 1993; Leigh, et al., 1993; Peterson, et al., 1993; Ford, K., 1996; Gilmore, et al., 1996; MMWR, 1998; Santelli, et al., 1998; Lauman & Youm, 1999; MMWR, 2002).

African American college students tend to struggle with the duality of their developing identities – being a young American and being black - (Bazargan, et al., 2000) especially when attending primarily white institutions (McLean, 1994). It, however, becomes a ‘triple’ struggle when gender becomes part of the mix, in Spencer (1997) described as, “the quandary of being American, Black and male” (pg. 818).

Historically, in Western societies, social expectation of gender roles dictates that a well-adjusted adolescent male should be independent and assertive, thereby proving his future ability as a prospective family provider (Swanson, et al., 1998). Whitehead (1997) wrote that, “…attribute of a male’s sexual attractiveness in America is his economic capacity.” This is internalized by males and “is important to their definitions of themselves as men, and their sense of self” (pg. 419). However, economic power is also intertwined with sexual prowess, among other things, thereby supporting the ideal notion of masculinity. Male sexual prowess is often characterized by subordination of females.
to males, who have access to more females, and specific females. Whitehead (1997) argued that this is a “fragmented” masculinity because the historical, political and economic context creates barriers that made it impossible for African Americans to achieve the status of an ‘ideal’ man, thus undermining their masculine identity.

The denial of socio-political and economic power to Black men have further perpetuate the social perception of them as being irresponsible, as echoed in a participant’s words, “I feel as if, you know, sometimes, I feel I’m screwed either way. It’s like people look at me and see a young black man that will amount to nothing.” This feeling of ‘amounting to nothing’ is further exacerbated by friends who make fun of their friends, and provide no support for them as shown in the statement, “when I told them [friends] that I’m going to college, they laughed and told me what do I expect to become?”

By the same token, there is also the social expectation that as a Black man, especially one with no economic power, the sexual arena becomes his field, and in some instances, the only field where he is expected to express his manhood. He is expected to prove that he is a man, someone with virility, that can play the field, and “keep going and going like the energizer bunny” as described by a participant, “It’s like since I don’t do that [sleep around with lots of girls] then I must not be a man or something, because you’re suppose to have a lot of girls, and I don’t.” Evidence of this perception or social expectation of sexual prowess is collaborated by researches that showed that African American young males tend to have multiple sex partners in comparison to other groups (Durbin, et al., 1993; Peterson et al., 1993). Gilmore, et al., (1996) reported that multiple sex partners is a primary belief in sexual decision making of young black adolescent male in terms of “what it means to be a man.” Wolfe (2003) wrote,
“The consensus of the opinion on these sexual behaviors with African American males is that they represent a variation of an overcompensating hyper-masculinity, which is uniquely rooted in historical and social circumstances of the American society. The crux of these circumstances revolves around the effects of racism and the ways it has made it more difficult for African American males to achieve a masculine self-identity through the conventional routes of work and the assumption of family responsibilities” (pg. 848)

The conflict experienced by the male participants in this study complements what Whitehead (1997) described as “masculine balance” – a balance between what is described as “respectable behavior” of economically providing for one’s family and “reputation behavior” of demonstration of sexual prowess (pg. 419). In this instance, however, for these participants who are still in college and have no family responsibilities yet, their “masculinity balance” becomes living up to social expectation of ‘handling their business’ (demonstration of sexual prowess) while making sure they do not jeopardize their ‘respectable future behavior’ by becoming infected with HIV. Bazargan, et al., (2000) concluded that they have “one foot in their communities and another in the world of academia” (pg. 392) in that these young men also represent potential future leaders of their various communities.

Resolution of these conflicts is central to reducing HIV risk behaviors among this group. Although it was outside of the scope of this study to explore exactly what effect these perceptions may have on HIV risk behaviors, studies have shown that higher levels of cultural identity (or ethnic identity) are associated with higher self-esteem, lower drug and sexual risk behaviors, and less behavioral problems overall among African American youths (Belgrave, et al., 2000; Brook, et a., 1998, & Phinney, 1995, referred to in Corneille, et al., 2005). In addition, it is safe to say that having a space to raise these
concerns during a routine HIV counseling and testing may assist them to connect the link between these issues and their HIV risk behaviors.

**Relationships and Expectations: Sexual Satisfaction**

The Relationships and Expectations domain within the PEN-3 model explores the role played by culture in defining a person’s function and their expectations in family and community relationship (Airhihenbuwa & Webster, 2004). As explained in chapter two, the domain explored these relationships and expectations through perceptions, enablers and nurturers, since “the construction and interpretation of behavior is usually based on the interaction between the perception we have about the behavior, the resources and institutional forces that enable or disenable actions, and the influence of family, kin and friends in nurturing the behavior” (Airhihenbuwa & Webster, 2004, pg. 7). As seen from the discussion of cultural identity above, *perception* of what it means to be young black man as defined by social expectation is *enabled* and *nurtured* by socio-political and economic institutions, along with friends, family and community members, and influences relationships between black men and women (Whitehead, 1997).

The influence and effect of sexual prowess on sexual relationship, an aspect of masculinity is captured by the second theme that emerged from the analysis: *sexual satisfaction*. Sexual satisfaction is described as the ability to achieve orgasm, and is said to contribute to the quality of life of partners in a relationship, especially, the female partner (www.allaboutBlackHealth.com). Sexual satisfaction in premarital and marital relationship has been linked to quality of life, quality of relationship, relationship satisfaction, and subsequent love and commitment in the relationship (Sprecher, 2002;

The perception that the male’s virility is very important to the sustainability and fidelity in a relationship or lack thereof, and tied in with sexual satisfaction is evident in a female participant’s words. She described her relationship as being frustrating because “her boyfriend doesn’t satisfy her sexually.” This is similar to Sprecher’s (2002) findings in a study examining sexual satisfaction in premarital sex. It was found that sexual satisfaction was associated with relationship stability, relationship satisfaction and love and commitment between both males and females in the study. Although this participant loves her partner, she finds herself “picking up” guys that she hardly knew from bars, especially when she had a disagreement with her boyfriend. This is of concern since multiple sexual partners is one of the many factors contributing to HIV rates among college students. As of yet, we found no research that has explored the link between sexual satisfaction and HIV risk behaviors. However, participants’ linking their behavior of “hooking-up” (one-time sexual encounter) with someone in a bar or club, due to feeling unsatisfied sexually, points to a possible link between sexual satisfaction and HIV risk behavior.
**Relationships and Expectations: Perception of beauty or body image**

The final theme that emerged from the analysis was “perception of beauty or body image. According to the website of the Office of Health Education, University of Pennsylvania (2006), body image is described as “an individual’s perception of his or her physical appearance.” It is based on what a person thinks when he or she sees his/her image in a mirror, and it is greatly influenced and shaped by experiences (Winkler & Rhodes, 2005). Furthermore, Paquette & Raine (2004) wrote that, “body image was not so much influenced by the nature of others' comments but interpretation of their meaning,” or the meaning attached to other’s comment.

Derenne & Beresin (2006) explored the historical context of body image, and wrote that body image development is determined by various factors such as politics and mass media. However, they concluded that, “throughout history, the ideal of beauty has been difficult to achieve and has been shaped by social context’” (pg. 260), alluding to its transient nature, since social context on which the image or ideal is based is not static. For instance, a documentary by the Arts and Entertainment (A&E) television network explored the ever-changing standards in beauty or body image by American entertainment industry. It was said that by today’s standard in the entertainment industry, a woman like Marilyn Monroe, who was considered beautiful, with the “perfect” body statistics in the late fifties and early sixties, and who enjoyed great success as an actress, would be below threshold of beautiful in today’s world of entertainment. She would be considered too fat and asked to loss some weight to achieve the ‘right’ body image.

In addition, studies have also examined the effect of body image on various health behaviors, such as eating disorders (Derenne & Beresin, 2006; Jansen, et al., 2006; Toro,
et al., 2006; Willamson, et al., 2005; Heffner, et al., 2003); obesity (Talpade, 2006; Davidson & Knafl, 2006; Talamayan, et al., 2006; Black, et al., 2006; Olvera, Suminski & Power, 2005); smoking (Croghan, et al., 2006; McKee, et al., 2006; Clark, et al., 2005; Carson, et al., 2005) and even addiction to plastic surgery (Fuller & Anderson, 2006; von Soest, et al., 2006; Hodgkinson, 2005; Ferraro, Rossano & D’Andrea, 2005; Glaser & Kaminar, 2005; Sarwer, et al., 2005). These studies all concluded that socio-cultural context had effect on body image perception, and this in turn had a serious effect on influencing health behaviors.

Findings from this study also support the conclusions of the studies reviewed above. Participants were more willing to engage in HIV risk behavior due to low perception of their body image. One participant said, “I don’t think I can have sex without drinking. I don’t feel comfortable with my body. And I think, maybe that’s why I keep hooking up with guys I pick up in the bars, just one night stands, nothing serious.”

In addition, the effect of relationship and expectation of being there for someone you love no matter what, even if it entails putting yourself in harm’s way is echoed in a participant’s description of her sexual partner, “I don’t think I will have a problem if I insist that my boyfriend use a condom. But, I don’t think it’s fair on him, since I have herpes and I have outbreaks from time to time. He knows, but he still loves me and don’t feel the need to wear a condom to protect himself. I mean, if he’s willing to do that, why shouldn’t I have sex with him without protection?

It is obvious that the participant is aware of the implication in engaging in unprotected intercourse with the presence of a sexually transmitted infection. However, there is an apparent ‘self-conflict’ between knowing and doing what is right, especially
when such decision involves someone else. Her boyfriend’s insistence on not using a
condom is his way of showing her that he loves her the way she is, which seems to make
sense, more so, since the participant also said that she is uncomfortable with her body.
Couples’ counseling for HIV may be of help in this instance, and has been found to be
effective (Farquahar, et al., 2004) in initiating and increasing safer sex in relationship.
However, having couple’s counseling presents a challenge for unmarried and not-
engaged-to-be-married partners. More research is needed in exploring ways in which
dating couples can be included in HIV counseling.

This study had a number of implications that may have a bearing on where, who
and how HIV counseling and testing is conducted. These implications are presented next

Study implications

The first implication is the question of “where” HIV counseling and testing
services is offered. A principal revision in the Centers for Disease Control and
Prevention’s guidelines (1999) for providing HIV counseling and testing is the selection
of location where the services where to be provided. The need to match the type of
setting to the population that is targeted is further emphasized by Rauner & Brandeau
(2001) as a key issue of AIDS policy if we are to successfully reduce HIV transmission
rates and disparities in access to care and treatment. The decision to conduct this study at
the Multicultural Research Center had a positive impact on the participation of a
relatively high number of minority students – be it African Americans, Hispanics or
Asian Pacific Islanders – that came in to seek HIV counseling and testing.
The Multicultural Resource Center is directly located across from the University Health services building, where the Office of Health Promotion and Education is located. Of the 169 students that used the HIV counseling and testing services on campus during the Spring semester of 2006, 56 were African Americans, 25 were Asian Pacific Islanders and 13 were Hispanics. It is of note that 45 of the African American students, 15 of the Asian Pacific Islanders and 5 of the Hispanic students used the off-site testing location at the Multicultural Resource Center. The relatively higher service utilization by African American students and others is due to the study being conducted at a location that meets the need of the targeted population as emphasized in the Centers for Disease Control and Prevention’s (1999) guidelines referred to above. This is further supported by the numbers from the previous years (fall/spring 2003/2004) in which only 31 (about fifteen per semester) African American students sought HIV counseling and testing on campus out of the 233 students that did.

Participants described getting tested at the Multicultural resource Center as being convenient (since it’s located right in the middle of campus by their description, even though the same is true of the health services center) and “comfortable because no one knows why you are here.” In fact, some said they would not have gotten tested for HIV if the service was not offered at the MRC:

“I think the very reason why I got tested was because they had it here [Multicultural Resource Center] for free, so it’s more convenient because I’m always on campus, as opposed to going to the clinic and worrying about everybody looking at you to see, you know, what you might think you have and everything like that. So, I think it was more of a benefit and it’s very, very confidential.” [Interview #11 – Participant 24]
Also, the fact the service was free motivated some to seek HIV testing, although it should be noted that the service has always been free to all students. So in this instance, it may be due to lack of awareness that the service is available and free. As explained in chapter three, the second off-site location chosen to increase access to African American students was the Paul-Robeson Cultural Center. However, no students came in to seek testing, even though many of them use the center as a place to hang out between classes. It became clear that the center does not offer the same sense of privacy and confidentiality to students as the MRC. It was impossible for any student to stop by the office space designated for HIV counseling and testing without ‘others’ knowing why they were there. Moreover, there was the sense that the Paul Robeson Cultural Center was “home away from home” for many students, and is not considered an appropriate location to be tested for a disease that is highly stigmatized. In fact, an African American female participant offered a suggestion that during an awareness campaign, testing location should not be revealed, but rather an email address should be provided where students can find out the location of counseling and testing site. Interested students could then email to find out about the location rather than everyone knowing about the location.

The implication of “who” and “how” HIV counseling and testing is offered should also be considered when implementing HIV counseling and testing for African American college students in a primarily White university. Evidence from studies (Malat & van Ryn, 2005; LaVeist & Carrol, 2002; LaVeist & Nuru-Jeter, 2002; Cooper-Parick, et al., 1999) has shown that race, and sometimes, gender concordance, has an effect on patients’ satisfaction with the use of the healthcare system, especially in relationship with
physician. In an NIDA funded HIV Post-test counseling project, called EachOneTeachOne, Striley, et al., (2006) reported that 89% of the male participants in the study preferred a gender match, 23% of the 39 race-counsellor concordant respondents expressed a preference for a race matched counselor.

Efforts should be made, as much as possible to make college-based HIV counseling and testing programs a race-concordant program, even though gender-matching may be a challenge. Race-concordance is currently not addressed, since a number of these programs use peer counselors/educators, and many at times, African American students are rarely if ever part of it. However, if efforts are directed at actively recruiting them, making them feel that they too have a ‘stake’ in the university community, and a ‘voice’ that can be heard and listened to, encouraging them to volunteer as peer educators/counselors for their peers, it is possible to get them more involved (Crawley, 2001). I was surprised to discover, as some of the African American students in the study informed me, that they came to get tested, participated in the study, because of what I said during the awareness campaign. Specifically, I appealed to the historical legacy of African American forebears, who shared one identity, one goal and fought courageously, side by side to lay a foundation on which this country is based. I added that it is our turn to do the same, to lay a foundation that the next generation can be proud of. They said it made them feel needed and appreciated, and not looked down upon.

“How” HIV counseling and testing is offered goes into the demeanor of the counselor offering the service and the duration or length of the service itself. I employed the Rogerian client-centered therapy in counseling students. A primary core of the
Rogerian Client-centered therapy is the non-judgmental and un-alienating demeanor of the counselor. When a counselor is perceived by the client as being non-judgmental or un-shocked by what it is being said, it leads and/or encourage trustworthiness in the relationship (Crawley, 2001). They [the clients] are more willing to share information that may have more bearing on their behaviors, further enabling the counselor to see area(s) in which more support is needed. As seen in this study, participants’ willingness, including the male participants, to share details that may not have obvious link to HIV risk behaviors, but central to their identity is critical to assisting them to move along the behavioral change continuum. It should be noted that although the research study only lasted a few weeks, which was quite short, the level of trustworthiness between the counselor/investigator and the participants was high, specifically those in the Enhanced Counseling group. This was particularly true at the posttest counseling sessions, as evident in some of the information they shared. This high level of trustworthiness led them to become more open and honest at post-treatment as compared to their survey reports at pre-treatment. Some participants asked jokingly if they can review their pre-treatment behavioral surveys so they might remember to align their responses. Non-verbal cues, such as, their body language (sitting casually and placing their book bags on the floor in the counseling room) showed how relaxed they were, validating their level of honesty in answering questions.

In addition, it is imperative that HIV counseling and testing programs include elements from cultural models that can provide guidelines to counselors to further assist non-Caucasian students, especially, African Americans seeking HIV counseling and testing. Using elements from cultural models enables the exploration of socio-cultural
contexts of behaviors and brings to the fore issues that may not, on the surface have a bearing on HIV behaviors, but does have an effect on the health decisions and behaviors of the individual.

The second aspect of “how” deals with the duration or length of the counseling. Although the protocol dictates a timeline of twenty to thirty minutes in HIV counseling, it is obvious, as experienced in this study that this may not always be the case, especially when dealing with students. Even though the Enhanced HIV pretest counseling was scheduled to last for forty minutes, it lasted more than that. One fact that I found fascinating about college students is that as a group that is extremely conscious about time, the “most time-constraint group, having so much to do in so little time,” once they open up, time constraints is the least of their concern. They actually talk about their feelings, especially behaviors, and counselors should be accommodating of their needs. This fact was even more pronounced when effort to reach many participants on the phone for the telephone-counseling phase of the research was unsuccessful.

It is often believed that HIV counseling and testing is a ‘one-shot’ intervention, in which you get people in and try as much as possible to effect some change within the allocated time frame. In order to make this one-time shot intervention even more effective, then efforts should be made to accommodate flexibility in time for college students, a group that is already “plagued by ambiguous socio-cultural expectations, and yet still expected to determine their place in the world” (Swanson, et al., 1998, pg.18, italics mine).
Conclusion

In conclusion, there are socio-cultural factors that enable or hinder college students, especially African Americans, from engaging in HIV risk reduction behaviors. Understanding these factors may increase the effectiveness of HIV prevention and intervention programs for this population. The issue of trustworthiness is very important in providing effective counseling service to students. At post-treatment, information shared by participants validates their honesty and level of trustworthiness in their relationship with the counselor/investigator. Also, the flexibility of time and location of the study increased the level of convenience and comfort, thereby increasing the utilization of the services provided. In addition, including tenets from cultural models in HIV counseling and testing can further increase the efficacy of these services to minority populations, thereby reducing the rates of HIV/AIDS among them.

HIV counseling and testing presents opportunity to provide counseling services to students that goes beyond HIV. This means that if engaging in HIV risky behaviors is what motivates students to seek counseling which they do need, then efforts should be made to address other issues they may have that may not necessarily be linked to HIV. This is indeed very important as it increases students’ feeling of connectedness to the university, which can lead to better academic performance, and possibly success in life after college. Students that experienced a sense of connectedness to the university while in school are more likely to become part of the alumi-base of the university and give back to the institution.
Study Limitations

This study had several limitations that must be addressed:

Sample: The sample used in this study was small and limited only to students seeking HIV counseling and testing, and limited to the setting of the Multicultural Resource Center and institution in which the study took place. Therefore, the findings may not be generalizable to other college students in other institutions. In addition, findings were based on participants’ self-report of their HIV risk behaviors.

Length of study: Not all the participants could be accommodated for the three months pre-post-treatment interval planned for the study. Due to time constraints, some participated in the study for only six weeks.

Investigator/counselor: The personality of the investigator/counselor may have played a role in participants’ willingness and readiness to participate in the study. Although all participants volunteered and consented to participate in the study, their rapport with the investigator/counselor may have contributed to their openness.

Skills training session: The “fluid” or “adaptable” nature of this session demanded that the investigator/counselor be ‘thinking on her feet.’

Telephone Counseling: It was impossible to reach a number of the participants, although reminders were sent to them ahead of time.

Self-monitoring logs: the investment of time and effort by participants to complete the logs daily and return them at the end of each week may have contributed to the low completing rates, especially among male participants. Some male participants completed just one sheet of paper for the whole week, instead of daily completion of each sheet. In addition, there is no guarantee or way of telling that participants actually completed the
logs daily. They might have completed the logs on their way to the drop off location. Also, many participants felt that the log was of no use to them because they did not engage in any sexual behavior during the course of the study, and therefore did not complete them.

*Questionnaires:* Since the same measurements instruments were used at both the pretreatment and post-treatment, it is possible for participants to have retained a residual memory of what the questions were, and to answer accordingly. In addition, some participants described the option of “never” to questions in section five of the College Student Behavioral Questionnaire as being ambiguous. They said it could be inferred that it refers to both those who engage in the said behavior with or without using protection and those who did not engage in the behavior at all. An option like “N/A” would be more appropriate to clarify this in the future. Question on number of sexual partner in the last three months also included months in which the participants were not in the study. Future study should limit the recall period to one month.

*Qualitative Opinion guide:* The opinion guide seems confusing, in that some of the participants answered the questions in a third person voice instead of providing answers about their own behaviors. Also, a number of the participants did not understand the meaning of the positive, neutral and negative factors.

**Recommendations**

- Further studies is needed to test the effectiveness of the Enhanced HIV counseling, especially in exploring socio-cultural context of HIV behaviors among African American college students.
• Use of a larger sample size is recommended for future studies. Power analysis showed that to expect a medium effect (Cohen d =.5) with power of .8 would require a minimum total of 126 participants in the study [Lee A Becker's effect size calculator http://web.uccs.edu/lbecker/Psy590/escalc3.htm and G Power http://wwwpsycho.uni-duesseldorf.de/aap/projects/gpower]. In addition, more time should be allowed between the pre- and post-treatment follow-up, to effectively measured the difference between treatment and follow-up.

• It is recommended that questions on number of sexual partners should be based on last month sexual activity as opposed to last three months.

• The possible link between sexual satisfaction and HIV risk behaviors should be further explored.

• Further research is needed to test the effectiveness of the telephone counseling component among college students.

• More research is needed to investigate the effect of multicultural location for HIV counseling and testing on the HIV-testing behaviors of African American college students.

• Future research on HIV counseling and testing should address other non-HIV issues. Since HIV/AIDS has implications for questions of identity and relationships, it provides opportunity to address other issues. As indicated in the conclusion, a student who has been offered the opportunity to explore their on a range of behavioral issues is more likely to have a sense of connectedness while in school, and is more likely to result in a committed alumnus.
Personal Reflection

Six years ago (2000) when I volunteered to train and serve as an HIV peer counselor and Cross-cultural peer educator at the Office of Health Education and Promotion, I had no idea that at some point, I would have the opportunity and privilege to design and implement a program on HIV counseling and testing, geared towards the needs of African American students. During those early years of counseling, I had wondered why I never see any, if at all, maybe one or two, African American students come in and get tested for HIV. I mean, of all the programs offered at the Office of Health Promotion and Education, this was one program that was never or rarely used. As an African immigrant, when I see all the statistics on HIV/AIDS among African Americans, I have always felt they should be the first in line to be offered services. I never understood why services seem to be available but students would not use them. It’s like saying to the students, “the ball is in your court, so play the game.” The question is, “whose court?”

The more research I do as I pursue my doctorate degree, the more I learned that the context and identity influenced the meaning and understanding of why an African American student may or may not use health services. Following the completion of this study, I came to realized even more than ever before that something have to be in place for African American students to access the services provided for them, as seen from the implications of this research. Bill Cosby, a famous American comedian of African descent, and educator once said that, “the difference between someone choosing to eat a poorly prepared meal on a silver plate, over a well prepared meal on a garbage-bin cover is because of the presentation of the meal.”
My perception as a counselor/investigator has been shaped by my knowledge and personal experiences of what it means to be a black person living in America. I do say to friends and family that “I did not know I had a color, or that I was black until I arrive on the shores of America.” However, my experiences still paled in comparison to experiences of African Americans. As I have said to students when I give class presentations about factors in African Americans’ health that “I don’t know what it means to be an African American.” I can only read about it in books, watch documentaries, and/or listen as friends and acquaintances tell me their stories.

These stories came to my aid many times during the course of conducting this study. I should say it might have had a bearing on why I found it relatively comfortable to guide my African American participants in the study in exploring the socio-cultural and political context of their behaviors. This, however, did not mean that I experienced any difficulty with other participants that were not African Americans. Rather, issues relating to socio-cultural identity of African Americans are not exactly something that can be easily broached in conversation, especially one between an HIV counselor and a student just seeking counseling and testing.

I remembered a specific occasion in which I spent half the time in counseling relating to a male participant the beauty, passion, courage and resilience in the blood that flows in his veins as a young, black man, after he explained the confusion he feels about himself. I remembered saying to him that anytime he feels that all odds are against him and he wants to throw in the towel, he should remember that “it’s not easy to be black, but it is good to be black.” This occasion stuck in my mind because the day before I had watched a six-part special documentary series on *Tracing our roots – the genealogy of*
African Americans on the Public Broadcasting Service (PBS). Hearing the narrator’s voice relate the challenges experienced by African Americans during slavery, the heroic acts of courage and hope, and the gradual, yet painful and sometimes death-dealing life after slavery became a source of counseling material for me.

The need to be ready at all times, to recall things said or heard was indeed very challenging, and called for me to be “adaptable” and learn to become both a student, friend, teacher, mentor - whatever was needed to address the concerns of the participants. For instance, in addressing the concern of a participant that talked about her boyfriend’s lost of erection anytime he tried to use a condom, I had to become a teacher and provided information on assisting the boyfriend to maintain erection. I gave her tips on how a good ‘foreplay’ on her part could help the boyfriend. The tips were taken from an article by a sex therapist doctor featured in *Essence* magazine. When I was told not to announce the location of the study in the future, I became a student that was educated about the college culture’s value of “friends with benefits.”

I believe my understanding of the contexts and awareness of the issues involved in being a minority in America, a minority in a predominantly White university, and a college student enhanced my handling of many of the challenges and decisions made during the course of this research. At the same time, due to these previous experiences, I brought certain biases to the study. Although every effort was made to remain ‘relatively objective’, these biases might have influenced the way I view, understood and interpreted the qualitative data collected in this study.

In the end, I completed this study with a deeper appreciation for the role of race and culture in health behavior research. I have gained tremendously personally and
professionally from the experiences in this research. I like to think that this experience made me a better researcher.


American College Health Association-National College Health Assessment: Reference Group Executive Summary Fall 2004. Baltimore: American College Health Association, 2005


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National Association of Cognitive Behavioral Therapists (http://www.nacbt.org/whatiscbt.htm)


Sexual Satisfaction ([www.allaboutBlackHealth.com](http://www.allaboutBlackHealth.com))


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Informed Consent

Title of Project: **Effect of Enhanced HIV counseling on students testing negative for HIV**

**Principal Investigator:** Titilayo A. Okoror  
Office Address: 139 East Health & Human Development Building, University Park, PA 16802  
Mailing Address: 315 East Health & Human Development Building, University Park, PA 16802  
Phone #: 814-865-2007  
Email: tao122@psu.edu

**Advisor:** Professor Collins O. Airhihenbuwa  
Office Address: 304 East Health & Human Development Building, University Park, PA 16802  
Mailing Address: 315 East Health & Human Development Building, University Park, PA 16802  
Phone #: 814-865-1382  
Email: aou@psu.edu

**Purpose of Study:** The purpose of this research is to examine the effect of Enhanced HIV risk reduction counseling on students testing negative for HIV/AIDS in comparison to the HIV counseling and testing currently conducted at the University HIV Voluntary Counseling, Testing and Referral center for Penn State students. A major focus is to assist you to identify factors that may put you at risk for HIV, and to determine which component(s) of the Enhanced HIV counseling you found effective in assisting you to reduce your risk.

**Procedures to be followed:** If you agree to participate in this research, you will be invited to receive the Standard HIV counseling or Enhanced HIV counseling. This will be done by chance (random assignment).  
**Standard HIV Counseling:** has two (2) counseling sessions, a third session for completing behavioral surveys and a possible fourth session of one-on-one semi-structured interview.
- Pretest counseling session: 20 minutes
- Complete two behavioral questionnaires during the pretest counseling session (15 minutes)
- Posttest counseling session: 10 minutes (3 weeks following pretest session)
- Complete two behavioral questionnaires 12 weeks following pretest session (15 minutes)
- Randomly selected to participate in a 15 minutes one-one semi-structured interview that will be audio-taped (12 weeks from their enrollment in the study)

**Enhanced HIV counseling:** have three (3) counseling sessions, a fourth session for completing behavioral surveys and a possible fifth session of one-on-one semi-structured interview.

- Pretest counseling session: 40 minutes (20 minutes of usual counseling & 20 minutes of enhanced counseling)
- Complete two (2) behavioral questionnaires during the pretest counseling session (15 minutes)
- Keep and complete a daily self-monitor behavioral log for 9 weeks (5 minutes each)
- Posttest counseling session (3 weeks following pretest session): 20 minutes (10 minutes of usual counseling & 10 minutes of enhanced counseling)
- Participate in a follow-up telephone support counseling: 5 minutes (6 weeks following the posttest session)
- Complete two behavioral questionnaires 12 weeks following pretest session (15 minutes)
- Randomly selected to participate in a 15 minutes one-on-one semi-structured interview session that will be audiotaped (12 weeks into the study)

**Discomforts & Risks:** The greatest risk for you in this study is your link to the research study. In addition, some of the questions and dialogue that follow are quite personal and may cause discomfort disclosing this information to someone who is a stranger. All your information will be kept confidential and only code numbers will be used to minimize the risk.
**Benefits:** You might learn more about yourself by participating in this study. You might have a better understanding of situations that may expose you to HIV risk and learn ways to negotiate such situations. You might also realize that you are more in control of your choices as you develop necessary skills and gain more confidence in making them.

This research will provide a better understanding of how to assist students to identify situations that put them at risk for HIV, and more importantly, assist them to develop skills to negotiate such situations. This information could help plan programs and make students health services better. In addition, the research promotes students’ health by providing them with tools to enable them engage in behaviors that will reduce their HIV risk and also it will empower them to make informed decision on their health management.

**Duration/Time:** A total of two hours (2hours) over a three months (3 months) period will be required for complete participation in this research. If you received the Standard counseling, the time you will spend in this research will be approximately 90 minutes (1hr 30 minutes) over a three (3) months period. If you receive the Enhanced counseling, the time you will spend in this research will be approximately 120 minutes (2hours) over a three (3) month period.

**Statement of Confidentiality:** Only code numbers associated with your name will be used on information collected, and the data including the audio-tapes will be stored and secured at the principal investigator’s project office in a locked file cabinet that only the principal investigator will have access to. All your data will be destroyed if you become ineligible to continue in this study. The Office for Research Protections and the Social Science Institutional Review Board may review records related to this project. In the event of a publication or presentation resulting from the research, no personally identifiable information will be shared.
HIPAA

Health information about you will be collected because you are a part of this research study. By signing this form, you are allowing the people and groups that are listed in the next paragraph to use your health information, but only to use it within this research. You are also allowing these groups to share your health information with other specific groups for their use within this research study. Your information will only be used as explained in this consent form or when required by law.

The research team may use the following sources of health information:

- HIV test results
- Sexual history

However, there may be other health information that is not listed here. Your health information may be used or shared with other specific people or groups in connection with this research study. Research records that identify you will be kept confidential as required by law. You will not be identified by name, social security number, address, phone number or any other direct personal identifier in research records given to someone outside of The Pennsylvania State University (PSU), except when required by law if a court subpoenas the records. For records shared outside of PSU, you will be assigned a code number. The list that matches your name with the code number will be kept in a locked file in Titilayo A. Okoror’s office.

Representatives of the following people/groups are allowed to use and share your health information with other specific groups in connection with this research study:

- The principal investigator, Titilayo A. Okoror
- The faculty advisor, Prof. Collins O. Airhihenbuwa
- The Institutional Review Board,
- The Office for Research Protection

The people or groups listed in the above paragraph may share your health information with the following persons and organizations outside PSU for their use in connection with this research study:

- The Office of Human Research Protections in the U. S. Department of Health and Human Services
Once your health information has been disclosed to anyone outside of this study, the information may no longer be protected under this authorization.

Your permission for the use and sharing of your health information will expire upon completion of the research study.

The research-related therapy cannot be provided unless you allow the use and sharing of your protected health information that is collected during your participation in this research study. You are free to withdraw your permission for the use and sharing of your health information, but you must do this in writing as indicated in the PSU Privacy Notice. If you do decide to withdraw, we ask that you contact Titilayo A. Okoror [PI] in writing and let [him/her] know that you are withdrawing from the research study. Her mailing address is 315 East Health and Human Development bldg, University Park, PA 16802.

If you revoke (withdraw) your permission, we will no longer use or share medical information about you for the reasons covered by your written authorization, except when the law allows us to continue using your information. We are unable to take back anything we have already done or shared with your permission.

Right to Ask Questions: You can ask questions about this research. Please contact Titilayo A. Okoror at 814-865-2007 with questions. Significant new findings developed during the course of the research which may relate to the your willingness to continue in the study will provided. If you have questions about your rights as a research participant, contact The Pennsylvania State University’s Office for Research Protections at (814) 865-1775.

Compensations: You will receive a total of fifteen dollars ($15) for completing this research. You will receive five dollars ($5) at the first session and ten dollars ($10) at the end of the research.
Voluntary Participation: Your decision to be in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer.

You must be 18 years of age or older to consent to take part in this research study. If you agree to take part in this research study, you can choose whether or not you want to sign below. If you choose not to sign, please check the agree box and it implies your consent to participate. Please keep a copy of this form for your records.

Disclaimer: If during the course of this research you test positive for HIV, you will no longer be eligible to continue in this research study. You will receive the standard care as outlined by the Pennsylvania Department of Health

☐ Yes, I agree to participate

_________________________________________  ________________________
Participant’s signature  Date
(Your choice)

_________________________________________  ________________________
Signature (Person obtaining consent)  Date
Worried about HIV — The virus that causes AIDS? Free Testing is available on campus

* FREE CONFIDENTIAL HIV TESTING FOR PSU STUDENTS ONLY

Contact Titi Okoror at 863-2297 or email her at tao122@psu.edu for appointment Mondays, Wednesdays and Thursdays From 12 — 4PM Walk-ins Welcome

THE MULTICULTURAL RESOURCE CENTER LOCATED IN 220 GRANGE BLDG.

*Student names are not required to be tested. You will be assigned a number. Results do not become part of your health record.
Worried About HIV? The virus that causes AIDS?

*FREE CONFIDENTIAL HIV TESTING - IS AVAILABLE ON CAMPUS (PSU STUDENTS ONLY) IN

Paul Robeson Center
Tuesdays—10:00am—1:00pm

Multicultural Resource Center
(220 Grange Building)
Mondays, Wednesday and Thursdays From 11:00am—5:00pm

(Walk-ins—WELCOME)

*Names are not required and results will not become part of your health record. Numbers will be assigned to individuals tested.*
FREE

*CONFIDENTIAL HIV TESTING

***No needles (oral test) - Results in 3 weeks*** @ LBGT Center
Tuesdays from 2:00-5:00pm (Walk-ins-Welcome)

OR
Call 863-6538 FOR AN APPOINTMENT
Monday thru Friday 8:00am—5:00pm

*Results do not become part of your medical record*

FOR MORE INFORMATION VISIT
www.sa.psu.edu/uhs/ohpe/hivtesting.cfm

*The Office of Health Promotion and Education in the University Health Service administers the HIV Orasure Test. This Confidential Site is funded by the Pennsylvania Department of Health and does not require student names in order to be tested. You will be assigned a number. Positive results are reported to the Pennsylvania Department of Health without names included.
Recruiting Script after HIV counseling

We have an on-going research study on HIV counseling. The goal of the study is to assist students to develop skills in identifying situation that increases their risk for HIV, and most importantly, to assist them in negotiating such situations. Participation is completely voluntary and you will be financially compensated for your time in the study.

If you are interested, I can give you more information.
Detailed Information Sheet

**Standard HIV Counseling:** This session is divided into two (2) counseling sessions and one posttest session for completing behavioral questionnaires. *The only exclusion criterion from continuing in the research is if you test positive for HIV.*

**Pretest counseling session:** This is the counseling you would have received when you came in for HIV counseling and testing and last for 20 minutes.

- You will be given two (2) surveys to complete. The first survey has 58 questions on your skills, knowledge about HIV/AIDS and sexual history and provides options to choose from. The second survey has 5 questions on behaviors that you think expose you to HIV, challenges you may experience in changing the behaviors and cues that may support your effort to change, and blank spaces for you to write your responses. It takes about 15 minutes to complete them.

**Posttest counseling session I:** This session takes place 3 weeks following the pretest session and last for ten (10) minutes.

- You will be provided with your test results.
- You will be asked to make an appointment for the next posttest session where you will be asked to complete two (2) follow-up behavioral surveys, and this takes place 9 weeks after the posttest counseling session.
- You will be asked if you want to be included in fifteen (15) minutes one-on-one semi-structured interview that will be audiotaped on areas that you think this study has benefited you, and to offer suggestions on how to improve it.
- You will be asked to provide a cell-phone number where you can be reached if you agree to participate in the one-one semi-structured interview.

**Posttest session II:** This session takes place 9 weeks following the first posttest session (that is 12 weeks following the pretest session) and lasts for 15 minutes.

- You will be asked to complete two (2) behavioral surveys, similar to the ones you completed during the pretest, and it takes about 15 minutes to complete them.

**Enhanced HIV Counseling:** The counseling is divided into three (3) counseling sessions and one posttest session for completing behavioral survey. *The only exclusion criterion from continuing in the research is if you test positive for HIV.*
Pretest counseling session: last for 40 minutes (it includes the first 20 minutes of the Standard HIV counseling)

- You will be given two (2) surveys to complete which takes about 5 minutes. The first survey has 58 questions on your skills, knowledge about HIV/AIDS and sexual history and provides options to choose from. The second survey has 5 questions on behaviors that you think expose you to HIV; challenges you may experience in changing the behaviors; and cues that may support your effort to change, and blank spaces for you to write your responses.
- You will be assisted in evaluating and developing your communicating skills in addressing safe sex issues with your partner. You will be provided with accurate information on the effect of alcohol on sexual response and proper condom application.
- You will be provided with a self-monitor behavioral log to complete daily and to drop off in the project office or mailed back to the Project office in the enclosed addressed envelope at the end of every week.
- You will be asked to keep the behavioral log for nine (9) weeks.

Posttest counseling session I: This session takes place 3 weeks following the pretest session and last for twenty (20) minutes.

- You will be provided with your test results.
- Based on responses from the self-monitor behavioral log you dropped off, you will be provided with counseling.
- You will be assisted to evaluate situations that put you at most risk for HIV infection and assisted to access other means of reducing your risk or negotiating those situations.
- You will be asked to provide a cell phone number that only you have access to and the time of day where you can be reached for the next counseling session.

Posttest counseling session II: is a telephone counseling support, which takes place six (6) weeks following the first posttest session and lasts for five (5) minutes.
• Based on the cell phone number you provided, you will receive a five (5) minutes telephone counseling support at the time of day you gave during your last visit.
• Based on responses from the self-monitor behavioral log you dropped off, you will be provided with counseling.
• You will be asked three (3) questions regarding possible challenges you may be experiencing in achieving your set behavioral goals, if and how you are able to negotiate possible situations that put you at risk, and area(s) in which you feel you need more assistance.
• You will then be asked if you want to be included in fifteen (15) minutes one-on-one semi-structured interview that will be audiotaped on areas that you think this study has benefited you, and to offer suggestions on how to improve it.
• You will receive another phone call (same time and day you provided) if for some reason it was not possible to reach you the first time. Please note that there will be no message left on your voice mail if you do not pick up.

**Posttest session III:** This session takes place 3 weeks following the second posttest session and lasts for 15 minutes.
• You will be asked to complete two (2) behavioral surveys similar to the ones you completed during the pretest.
SECTION ONE
1. Your age ______
2. What year in college are you?
   - □ a. Freshman (0-23 hours completed)
   - □ b. Sophomore (24-53 hours completed)
   - □ c. Junior (54-83 hours completed)
   - □ d. Senior (84 or more hours completed)
   - □ e. Graduate/Professional student
   - □ f. Other
3. Which of the following best describes your racial background? Check ONE:
   - □ a. White (non-Hispanic)
   - □ b. Hispanic
   - □ c. African American (non-Hispanic)
   - □ d. African American (Hispanic)
   - □ e. American Indian or Alaskan Native
   - □ f. Asian or Pacific Islander
   - □ g. Other (Please describe)
4. What is your relationship status?
   - □ a. Single
   - □ b. Married
   - □ c. Separated or divorced
   - □ d. Partner
   - □ e. Widowed
5. What is your gender?
   - □ a. Female
   - □ b. Male

SECTION TWO
This is a true/false test. Please circle your answers and do not skip any questions.
TRUE/FALSE 1. Most people who have the AIDS virus look unhealthy
TRUE/FALSE 2. A person can be exposed to the AIDS virus in one sexual contact
TRUE/FALSE 3. HIV may be present for 3 or more months before detection by blood test
TRUE/FALSE 4. Most people who have HIV quickly show symptoms of illness
TRUE/FALSE 5. Persons who are exclusively heterosexual are not at risk for AIDS
TRUE/FALSE 6. A negative result on the AIDS virus antibody test can occur even for people who carry the virus
TRUE/FALSE 7. Most present cases of AIDS are due to blood transfusions that took place before 1984
TRUE/FALSE 8. Donating blood carries no risk for the donor
TRUE/FALSE 9. Some cases of AIDS have been linked to social (dry) kissing or sneezing
TRUE/FALSE 10. People who get HIV through needle-sharing activity can transmit the virus during sexual activities

TRUE/FALSE 11. It is possible to become infected with HIV by having sex with members of the opposite sex

TRUE/FALSE 12. Latex condoms are the best protection from HIV when having sex

TRUE/FALSE 13. Females have a greater immunity than men to AIDS

SECTION THREE

1. Has your behavior changed in the last year in response to hearing about the AIDS epidemic?
   □ yes    □ no    □ unsure

2. To what extent do you feel susceptible to contracting the AIDS virus?
   □ very great □ great □ some □ little □ none □ unsure

3. How effective is using condoms in preventing AIDS infection?
   □ very effective □ somewhat effective □ not effective □ unsure

4. Which of the following best describes your relationship status at this time? Check only ONE
   □ a. Not in a primary (exclusive) relationship
   □ b. In a primary relationship of LESS THAN FOUR MONTHS
   □ c. In a primary relationship of FOUR MONTHS TO ONE YEAR
   □ d. In a primary relationship of MORE THAN ONE YEAR
   □ e. In several relationships, with more than one involved sexually
   □ f. In several relationships, with only one being sexual

5. If you are currently in a relationship, describe how sex is handled in your relationship. (By “sex” we mean any kind of activity where you become sexually aroused with orgasm being the goal.) Check only ONE.
   □ a. Neither of us has sex with other people    □ c. Only I have sex with other people
   □ b. Only s/he has sex with other people    □ d. We both have sex with other people

6. Which of the following best describes your sexual BEHAVIOR OR ACTIVITIES?
   □ a. Exclusively heterosexual
   □ b. Primarily heterosexual, but some homosexual activity
   □ c. Equally homosexual and heterosexual
   □ d. Primarily homosexual, but with some heterosexual activity
   □ e. Exclusively homosexual

7. Total number of sexual partners in your life: _________

8. My age at first intercourse: _______ (Or check here □ if you have not experienced intercourse)
9. TRUE FALSE I have been tested for the AIDS virus
10. TRUE FALSE N/A My partner(s) has/have been tested for the AIDS virus
11. TRUE FALSE I am nor currently having sex
12. TRUE FALSE I am somewhat at risk for getting the AIDS virus
13. TRUE FALSE I could not possibly get the AIDS virus with my current behavior
14. TRUE FALSE I could get the AIDS virus but it is unlikely

SECTION FOUR
For the following questions, please use this scale:

1-strognly agree 3-undecided 5-strongly disagree
2-agree 4-disagree 6-not applicable (N/A)

____ I would not feel confident suggesting using condoms with a new partner because I would be afraid he or she would think I have a sexually transmitted disease
____ I would not feel confident suggesting using condoms with a new partner because I would be afraid he or she would think they had a sexually transmitted disease
____ I feel confident I could purchase condoms without feeling embarrassed
____ I feel confident I could use a condom during intercourse without reducing my sexual sensations
____ I feel confident I could use a condom successfully
____ I feel confident in my ability to put condom on myself or my partner
____ I feel confident in my own ability or my partner’s ability to maintain an erection while using a condom
____ I feel confident in my ability to persuade a partner to accept using a condom when we have intercourse
____ I feel confident in my ability to discuss condom usage with any partner I might have

SECTION FIVE
For the next section, please think back as carefully as possible about the past 3 months. Please answer the following questions about your behavior in the past 3 months.

1. In the past 3 months, I have had ______ different sexual partners
2. My usual type of sexual contact has been:
   □ a. one-night-only contact □ c. many times, always with the same partner
   □ b. many times, usually with the same partner □ d. no sexual contact

3. How often have you consented to have intercourse without using a condom because of embarrassment? _____ times

4. How often has intoxication led to sexual intercourse that would not have occurred without substance use? □ never □ once □ 2-5 times □ more than 5 times

5. I use condoms:
   □ a. every time I have genital, anal or oral intercourse
   □ b. never
   □ c. never, because my partner and I have both been tested
   □ d. usually, but sometimes we do not
   □ e. sometimes, but usually we do not

(Remember, please respond about your experience in the past three (3) months.

I have had: (Check your answer)

<table>
<thead>
<tr>
<th>1. Genital intercourse with a condom</th>
<th>NEVER</th>
<th>OCCASIONALY</th>
<th>FREQUENTLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Genital intercourse without a condom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Anal intercourse with a condom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Anal intercourse without a condom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Oral intercourse with condom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Oral intercourse without a condom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Body rubbing, no penetration</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. In the past 3 months, I … (Check all that apply to you)
   □ became more selective about my partners
   □ began to use condoms for the first time
   □ learned more about HIV/AIDS
   □ got into a discussion about safe sex with a potential partner

SECTION SIX

For this section, please think back to the most recent time you had sex with a new sexual partner:

1. How expected was this sexual encounter with your new partner?
   □ a. very unexpected □ d. expected
   □ b. unexpected □ e. very expected
   □ c. unsure

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2. How long had you known this partner before you had sex?
   - □ a. 0-4 weeks
   - □ b. 1-2 months
   - □ c. 3-6 months
   - □ d. greater than six months

3. Did you drink alcohol before or during the encounter? □ yes □ no
   If yes, did you consume enough to feel the effects? □ yes □ no

4. What type of safer sex method did you use?
   - □ a. Female condom
   - □ b. Male condom
   - □ c. Spermicide
   - □ d. Dental dam
   - □ e. Other ______________
   - □ f. None
Qualitative Behavioral Opinion Guide

Please use the space below to provide answers to the following questions.

1). What behavior(s) do you think put you at risk for HIV infection?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2). When you are most likely to engage in this behavior(s)?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

3). How often do you find yourself in the situation(s) that lead to you engaging in the behavior(s)?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

4). What did you experience in your efforts to change the behavior(s)
Positive: __________________________________________________________________
Neutral: __________________________________________________________________
Negative: __________________________________________________________________

5). What factors in your environment influence your effort to change the behavior(s)
Perceptions (include beliefs, attitudes, self-esteem, self-confidence, skills, etc.)
________________________________________________________________________
________________________________________________________________________

Enablers (include condom availability, money, etc.)
________________________________________________________________________
________________________________________________________________________

Nurturers (include, friends/peers/buddies, etc.)
________________________________________________________________________
Protocols

Step 1. Introduce and Orient Client to Session

Introduce yourself as a health counselor. Describe the purpose of the session, the expected duration, and what you hope to achieve in the session. Seek consensus from the client as to the objectives of the session and agreement to maintain this focus throughout the session.

During the session, be polite, professional, and display respect, empathy, and sincerity to the client. Become involved and invested in the process and convey an appropriate sense of concern and urgency about the client’s HIV risk behaviors. Seek to deal with the client’s concerns.

Suggested open-ended introductory questions:

- Why did you come to the clinic today?
- What would you like to know before you leave here today?
- What have you heard about AIDS?
- How do you think the virus is passed from one person to another?
- How did you decide to take the HIV test today?

Step 2. Identify Client’s Personal Risk Behavior(s) and Circumstances

With the client, identify the specific behaviors that place him or her at risk for HIV. Focus the client on specific behaviors, situations, and partner encounters that contribute to his or her risks. Attempt to build from the problem (symptoms, referral, etc.) and reasons that brought the client to the clinic. Establish an atmosphere that conveys a collaborative and creative exploration of the relevant issues.

Suggested open-ended risk assessment questions:

- What makes you believe that you might be at risk for HIV? What are you doing in your life that might be putting you at risk for HIV?
- Tell me about the exposure incident that brought you to the clinic today (when was the last time you had unprotected sex? shared needles?)
- If you were infected, how do you think you may have been infected?
- Have you been tested before? If so, when and why?
- What were the results?
- How many different people do you have sex with? How often?
- What is your experience with shooting up drugs? How often do you do this?
- When was the last time that you put yourself at risk for HIV?
- What was happening then?
- When do you have sex without a condom?
- What are the riskiest things that you are doing?
- What are the situations in which you are most likely to be putting yourself at risk for HIV?
- How often do you use drugs or alcohol? How does this influence your HIV risk behaviors?
Step 3. Identify Safer Goal Behaviors

Reinforce the client’s previous HIV risk-reduction efforts.

Identify specific safer goal behaviors that the client is willing to try to adopt

*Suggested open-ended questions to explore client HIV risk-reduction attempts and safer goal behaviors:*

- Is there a specific time that you remember where you were able to practice safer sex (use needles safely)? What did you do? What made it possible for you to do it? How was that for you?
- What are you presently doing to protect yourself?
- What would you like to do to reduce your risk of HIV?

*Suggested statements reinforcing positive change already made:*

- It’s great that you are here!
- You’ve taken the first step; you’re doing a great job; keep it up!
- The fact that you are concerned about HIV is important.
- It is important that you recognize that you’ve really been thinking about reducing your HIV risk.
- Look at how much you’ve already done to protect yourself (be specific).

Step 4. Develop a Personalized Action Plan

Help the client establish a personal plan to reduce his/her risks of HIV. The plan should be realistic, yet challenging, and should address the specific behaviors identified by the client during the risk assessment phase of the session. It should incorporate the clients’ previous attempts, perceived personal barriers, and perceived personal benefits to reducing HIV risk.

Discuss existing barriers to adopting the new behavior and what benefits there are. Identify concrete, incremental steps the client can start to take to achieve his/her goal. Discuss how the client will put the plan into operation, using specific and concrete steps. Establish a back-up plan. Confirm that this plan is personalized and acceptable to the client. Solicit questions and reinforce the client’s initiative in agreeing to try to negotiate a risk-reduction plan.

*Suggested open-ended questions to explore client HIV risk-reduction attempts and questions to explore personal barriers and benefits to adopting safer behaviors:*

- Is there a specific time that you remember when you were able to practice safer sex (use needles safely)? What did you do? What made it possible for you? How was that for you?
- What are you presently doing to protect yourself?
- What would you like to do to reduce your risk of HIV?
- What do you see as advantages or good things about adopting _____ (the safer behavior)?
- What do you see as disadvantages or bad things about adopting _____ (the safer behavior)?
What makes it easy (what situations make it easier for you) to _____ (the safer behavior)?
What makes it difficult (what situations make it difficult for you) _____ (the safer behavior)?
Who (individuals or groups) would approve or support you in adopting _______ (the safer behavior)?
Who (individuals or groups) would disapprove or object to you adopting _______ (the safer behavior)?

Suggested open-ended questions to use when assisting the client to develop a personal risk-reduction plan:

- What one thing can you do to reduce your risk right now?
- What can you do that would work for you?
- What could you do differently?
- How would your sexual practices (drug-use practices) have to change for you to stay safe?
- Now that you have identified some steps you could take, how can you go about making this happen?
- What could you do to make it easier to take these steps?
- Who would help to support you in taking these steps?
- When do you think you will have the opportunity to first try this (behavior, discussion, etc.)?
- How realistic is this plan for you?
- What will be the most difficult part of this for you?
- Who can help you?
- What might be good about changing this?
- What will you need to do differently?
- How will things be better for you if you...?
- How will your life be easier or safer if you change...?
- How would your drug practices have to change to stay safe?

Suggested statements supporting and reinforcing the client:

- You have really done something good for yourself in putting this plan into place.
- You’ve taken very positive steps today to help meet some important personal goals.

Step 5. Make Referrals and Provide Support

Identify client peer and community support for HIV risk reduction, as well as provide referral to professional services directed at addressing specific issues the patient may have identified.

- What do you see as advantages or good things about adopting _____ (the safer behavior)?
- What do you see as disadvantages or bad things about adopting _____ (the safer behavior)?
- What makes it easy (what situations make it easier for you) to _____ (the safer behavior)?
- What makes it difficult (what situations make it difficult for you) _____ (the safer behavior)?
- Who (individuals or groups) would approve or support you in adopting _______ (the safer behavior)?
Who (individuals or groups) would disapprove or object to you adopting ________ (the safer behavior)?

Suggested open-ended questions to use when assisting the client to develop a personal risk-reduction plan:

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- How would your drug practices have to change to stay safe!

Suggested statements supporting and reinforcing the client:

- You have really done something good for yourself in putting this plan into place.
- You’ve taken very positive steps today to help meet some important personal goals.
Risk Assessment

Please fill out this confidential questionnaire. We will talk about your answers and discuss any questions you may have. We will discuss ways to prevent infection by HIV. Please answer honestly to help provide you with the best possible care and information. (Fill in your answers.)

Marking Instructions
- Use a No. 2 pencil only.
- Do not use ink, ballpoint, or felt tip pens.
- Make solid marks that fill the oval completely.
- Erase cleanly any marks you wish to change.
- Make no stray marks on this form.

INCORRECT MARKS ☒ ☒ ☒ ☒ CORRECT MARK ☐

Since 1978:

1. Have you ever received a transfusion of blood or blood products? ☐ Yes ☐ No ☐ Not Sure
2. Have you been exposed to HIV in a health care or other job setting? ☐ Yes ☐ No ☐ Not Sure
3. Have you possibly been exposed to HIV as a result of sexual assault? ☐ Yes ☐ No ☐ Not Sure
4. Have you injected or received an injection with a needle and syringe of a non-prescription drug or substance (including steroids)? ☐ Yes ☐ No ☐ Not Sure
5. Have you engaged in sexual activity while using non-injectable drugs such as cocaine, LSD or marijuana? ☐ Yes ☐ No ☐ Not Sure
6. Have you engaged in sexual activity while using non-injectable drugs such as alcohol? ☐ Yes ☐ No ☐ Not Sure
7. Have you had anal or vaginal intercourse with:
   a. a person who uses injectable drugs? ☐ Yes ☐ No ☐ Not Sure
   b. a person who has sex with a man? ☐ Yes ☐ No ☐ Not Sure
   c. a person who tested positive for HIV infection or a person diagnosed with AIDS? ☐ Yes ☐ No ☐ Not Sure
   d. a person who had sex with a person who uses injectable drugs? ☐ Yes ☐ No ☐ Not Sure
   e. a person who has another risk of HIV infection (for example: a blood recipient, person with hemophilia, etc.)? ☐ Yes ☐ No ☐ Not Sure
8. How many sexual partners have you had in the last 6 months?
   □ none □ 1-5 □ 6-13 □ more than 16
   Is this a typical number of partners for you? ☐ Yes ☐ No ☐ Not Sure
9. Have you given or received money or drugs for sexual services? ☐ Yes ☐ No ☐ Not Sure
10. Is there a possibility that you may be pregnant? ☐ Yes ☐ No ☐ Not Sure

11. Do you use condoms and/or dental dams during oral sex? □ Always □ Sometimes □ Never □ N/A
    Do you use condoms during vaginal intercourse? □ Always □ Sometimes □ Never □ N/A
    Do you use condoms during anal intercourse? □ Always □ Sometimes □ Never □ N/A

12. What other means of contraception/safer sex have you used?

13. How long ago was your most recent risk of HIV transmission?
    □ never □ 3 months ago □ 6 months ago □ 6 or more months ago

14. Have you ever had a sexually transmissible infection/disease listed below?
    □ Herpes □ Chlamydia □ Gonorrhea □ Genital warts
    □ Syphilis □ Hepatitis □ Trichomoniasis □ Other

15. The people you’ve had sex with were:
    □ Men □ Women □ Both □ Haven’t had sex

16. Have you ever been tested for HIV? □ Yes □ No □ When?

17. Do your concerns about money affect your decisions about health care? □ Yes □ No

Demographics

18. Sex
   □ Male □ Female

19. Status
   □ First-year □ Sophomore □ Junior □ Senior □ Graduate

20. Race/Ethnicity
    □ African-American/Black
    □ Hispanic/Latino(a)/Puerto Rican
    □ White
    □ American Indian/Alaskan Native
    □ International/Non-Immigrant
    □ Asian/Pacific Islander
    □ Multiracial
    □ Other

21. Age
RISK REDUCTION PLAN

1. CLIENT INITIALS OR ID#: _________________________
   DATE: _________________________
   COUNSELOR INITIALS: _________________________

2. CURRENT RISK BEHAVIOR(S):
   _________________________
   _________________________
   _________________________

3. SAFER GOAL BEHAVIOR(S):
   > PREVIOUS SUCCESSES
   _________________________
   _________________________
   _________________________
   > SAFER GOAL BEHAVIOR(S):
   _________________________
   _________________________
   _________________________

4. PERSONAL ACTION PLAN:
   > BARRIERS: BENEFITS:
   _________________________
   _________________________
   _________________________
   > ACTION STEPS:
   _________________________
   _________________________
   _________________________

5. REFERRALS:
   _________________________
   _________________________
   _________________________

RETURN APPOINTMENT: _________________________
## Self-Monitoring Log

Circle the answers that apply to you
Please do not write your name or any other identifying information on the sheet

### 1. Did you engage in a sexual behavior today with a partner? (Choose only one)
1. Yes
2. No

If you answered "YES", please answer the following:

- **Gender of Partner:**
  - 1. Male
  - 2. Female

Have you had sex with this person before?
1. Yes
2. No

### 2. Did you feel pressured to engage in a sexual behavior today? (Choose only one)
1. No
2. Yes, by my friend(s)
3. Yes, by my peer(s)
4. Yes, by my partner
5. Yes, by __________

Did you pressure anyone to have sex with you?
1. Yes
2. No

### 3. How long have you known this person? (Choose only one)
1. Just met
2. Few days
3. Few weeks
4. 2-6 months
5. 6-12 months
6. 1-2 years
7. 2-5 years
8. More than 5 years

### 4. What is the nature of your relationship? (Choose only one)
1. Just met
2. Casual
3. Dating
4. Boyfriend/girlfriend
5. Fiancé/Spouse
6. Other __________

### 5. What type of sexual behaviors did you engage in today? (Choose all that apply)
1. Vaginal/Perineal intercourse
2. Oral sex
3. Anal Sex
4. Other __________

### 6. What type(s) of safer sex methods did you use? (Choose all that apply)
1. Male condom
2. Female condom
3. Spерmicide
4. Dental dam
5. Other __________
6. None

Who initiated use?
1. You
2. Partner
3. N/A

### 7. What are your reason(s) for not using safer sex methods? (Choose all that apply)
1. I didn’t need to
2. I didn’t want to
3. He/She didn’t want to
4. We didn’t think about it
5. We had sex in the heat of the moment
6. We didn’t have one
7. We were high on alcohol and/or drugs
8. I didn’t want him/her to think I didn’t trust him/her

### 8. Were either you or your partner under the influence of alcohol or other drugs when you had sex?

<table>
<thead>
<tr>
<th>YOU: Alcohol</th>
<th>Other Drugs</th>
<th>Partner: Alcohol</th>
<th>Other Drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Yes</td>
<td>1. Yes</td>
<td>1. Yes</td>
<td>1. Yes</td>
</tr>
<tr>
<td>2. No</td>
<td>2. No</td>
<td>2. No</td>
<td>2. No</td>
</tr>
</tbody>
</table>
Titilayo Ainegbesua Okoror
127 East Hamilton Ave, Apt 28
State College, Pennsylvania 16801
Email tao122@psu.edu

EDUCATION

2006 Ph.D., Department of Biobehavioral Health, Penn State University
2001 B.A., English, Pennsylvania State University

Dissertation Title Effect of Enhanced HIV Counseling on Students Testing Negative for HIV/AIDS

PROFESSIONAL EXPERIENCE

2003 To Present Served as research assistant, instructor, guest lecturer at several classes, volunteered for several non-governmental organization, and was President of The African Students’ Association at Pennsylvania State University for the 2004/2005 academic year.

PUBLICATIONS


GRANTS

Student Level Funding, The Pennsylvania State University Africana Research Center, #OKOROSSS, Effect of HIV Risk Reduction Telephone Counseling on Students Testing Negative for HIV, $1,000, 2004-2005, Principal Investigator: Titilayo A. Okoror

AWARDS/HONORS

College of Liberal Arts Superior Academic Achievement Award for Spring & Fall Semesters 2000, and Spring Semester 2001, Pennsylvania State University
United States Achievement Academy All-American Scholar Award
The National Collegiate Society of Scholars Award
Golden Key National Honors Society Award

PRESENTATIONS & LECTURES

Poster Presentation, Effect of Enhanced HIV Counseling on Students testing Negative for HIV/AIDS at the 2005 Annual Conference of the American Public Health Association, Philadelphia, 2005
