PERCEPTIONS OF AFRICAN AMERICAN WOMEN WITH HIV/AIDS: THE INFLUENCE OF KNOWLEDGE AND ATTITUDES

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Tamara N. Godfrey, M.Ed.

*****

The Ohio State University
2007

Doctoral Examination Committee:

Dr. Don M. Dell, Adviser

Dr. Pamela S. Highlen

Dr. Tracy L. Tylka

Approved by

____________________________________

Adviser
Graduate Program in Psychology
ABSTRACT

In the United States, African Americans account for over half of all HIV/AIDS diagnosis among women and account for almost half of the AIDS cases diagnosed. Despite a decrease in infection cases reported, African Americans still have the highest infection rate for any racial/ethnic group. One explanation for the increased infection rate among African Americans is HIV-related stigma which has been suggested to delay testing among the general population and negatively impact those infected with the virus.

HIV-related stigma incorporates stigmas associated with the illness as well as stigmas associated with groups that have been linked with HIV including gay and bisexual men, sex workers, and intravenous drug users. HIV-related stigma has led to the isolation of many groups based on their association with HIV/AIDS. It has been suggested that mode of transmission, knowledge of HIV, interaction with HIV positive individuals, and attitudes towards HIV influence perceptions of those infected.

Weiner’s theory of attribution has been applied to various illnesses including HIV and can be used to understand how people form perceptions. Weiner’s theory suggests that when individuals encounter a negative event, they go through an assessment of the event to determine the cause. During this process of establishing causation, individuals form three attributions. Individuals assess the situation to: a) determine if the outcome was under the person’s control; b) if they are responsible for the outcome; and c) if the
individual is to blame for the outcome. Assigning blame to the individual then leads to anger, lack of pity, and decreased helping behavior.

Two hundred college students (100 males and 100 females) taking Introductory Psychology were recruited to participate in this study examining the influence of HIV-related attitudes, attitudes towards women with HIV, HIV-related knowledge, and protective behaviors self-efficacy on the attributions made about an African American woman with HIV described in two separate vignettes. The mode of transmission was varied in each vignette to determine if the mode of transmission, active or passive, influenced the attributions of control, responsibility, and blame made by individuals about the HIV positive woman.

The results of this study suggest that students are knowledgeable of HIV and of methods to protect themselves from contracting the illness. Students reported positive attitudes towards HIV/AIDS, but expressed moderate attitudes toward women with HIV/AIDS. Mode of transmission was found to influence attributions of control, responsibility and blame, with more negative attributions being made about the person who contracted HIV through an active mode of transmission. However, impression management was found to influence students’ attributions of the individual infected through an active route of transmission, resulting in students reporting less assignment of blame, control, and responsibility to the individual infected through an active mode of transmission. Implications and directions for future research are noted.
In loving memory of my sister.
ACKNOWLEDGMENTS

I would like to thank my adviser, Don Dell, for his guidance and support throughout this process. I am grateful for your commitment to helping me complete my doctoral training.

I would also like to thank the members of my dissertation committee, Pamela Highlen and Tracy Tylka, for their input during the development of my dissertation research.

I wish to thank my parents, Robert and Elsie Godfrey and the rest of my family for their prayers and being pillars of support throughout my academic career.

Finally I wish to thank my friends for being my therapists, think tank, and sounding board.
VITA

October 8, 1978…………………………………………..Born, Atlanta, Georgia

2000………………………………………………..B.A. Psychology, Spelman College

2002………………………………………………..M.Ed. Guidance and Counseling
University of Georgia

2003-2006…………………………………………..Graduate Teaching Associate
The Ohio State University

PUBLICATIONS


FIELD OF STUDY

Major Field: Psychology
Studies in Counseling Psychology
TABLE OF CONTENTS

Abstract ........................................................................................................................................ ii
Dedication ...................................................................................................................................... iv
Acknowledgments ......................................................................................................................... v
Vita ................................................................................................................................................ vi
List of Tables ................................................................................................................................ x
List of Figures ................................................................................................................................. xii

Chapters:

1. Introduction .............................................................................................................................. 1
2. Review of the Literature ........................................................................................................ 13
   2.1 Attributions .......................................................................................................................... 13
   2.2 Attributions of Illness ........................................................................................................... 15
   2.3 Attributions of Controllability over HIV Infection .............................................................. 16
   2.4 Attributions of Responsibility for Contracting HIV .......................................................... 17
   2.5 Attributions of Blame for Contracting HIV ....................................................................... 18
   2.6 Attitudes Toward and Knowledge of HIV ......................................................................... 20
       2.6.1 HIV Attitudes and Knowledge in the 1980s ................................................................. 22
       2.6.2 HIV Attitudes and Knowledge in the 1990s and 2000 ............................................. 24
3. Methodology ........................................................................................................................... 32
   3.1 Participants ........................................................................................................................... 32
   3.2 Measures .............................................................................................................................. 32
       3.2.1 Demographic Questionnaire ....................................................................................... 33
3.2.2 Self-Efficacy Instrument for Protective Sexual Behaviors (SEPSB).................................................................33
3.2.3 Attitudes Toward Women with HIV/AIDS Scale (ATWAS).................................................................34
3.2.4 Attitudes Toward AIDS Scale (ATAS).................................................................................................35
3.2.5 Balanced Inventory of Desirable Responding-6 (BIDR-6).................................................................36
3.2.6 Vignettes..............................................................................................................................................37
3.3 Procedure..............................................................................................................................................39

4. Results.....................................................................................................................................................41
4.1 Demographics......................................................................................................................................41
4.2 Test for Order Effects..........................................................................................................................42
4.3 Correlation Analyses of the Study’s Variables.................................................................................43
4.4 Socially Desirable Responding.............................................................................................................55
4.5 Personal Contact.................................................................................................................................56
4.6 Attitudes towards Individuals with HIV/AIDS and Women with HIV/AIDS.........................................56
4.7 HIV-related Knowledge.......................................................................................................................58
4.8 Knowledge of Protective Behaviors and Ability to Engage in Protective Behaviors.........................63
4.9 Attributions of Control, Responsibility, and Blame.............................................................................63

5. Discussion...............................................................................................................................................76
5.1 Summary of Findings............................................................................................................................76
  5.1.1 Knowledge........................................................................................................................................77
  5.1.2 Attitudes............................................................................................................................................78
  5.1.3 Personal Contact..............................................................................................................................80
  5.1.4 Attributions......................................................................................................................................81
5.2 Limitations..........................................................................................................................................83
5.3 Implications.........................................................................................................................................85
5.4 Directions for Future Research............................................................................................................86

Appendices
A. Demographic Questionnaire..................................................................................................................89
B. Self-Efficacy Instrument for Protective Behaviors (SEPSB)...................................................................92
C. Attitudes Toward Women with AIDS Scale (ATWAS).......................................................................95
D. Attitudes Toward AIDS Scale (ATAS).................................................................................................98
E. Balanced Inventory of Desirable Responding-6 (BIDR-6).................................................................102
F. Vignette A............................................................................................................................................104
G. Vignette B............................................................................................................................................106
H. Research Experience Program Site Text..............................................................................................108
I. Introductory Statement..........................................................................................................................110

(continued)
LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Independent Samples t-Test for Order Effect on Study’s Variables……………43</td>
</tr>
<tr>
<td>4.2</td>
<td>Correlations Among Variables in College Students…………………………48</td>
</tr>
<tr>
<td>4.3</td>
<td>Correlations Among Variables in Male and Female College Students………50</td>
</tr>
<tr>
<td>4.4</td>
<td>Correlations among Variables in White and Non-White College Students…………………………………………………………52</td>
</tr>
<tr>
<td>4.5</td>
<td>Descriptive Statistics for the Attitudes towards AIDS Scale-Attitudes and Knowledge Subscales, Attitudes towards Women with AIDS Scale, Self-Efficacy for Protective Sexual Behaviors Scale, Attributions of Control Responsibility and Blame scores for Vignettes A and B, and the Balanced Inventory of Desired Responding-6…………………………59</td>
</tr>
<tr>
<td>4.6</td>
<td>Descriptive Statistics and Gender Comparisons for the Attitudes towards AIDS Scale-Attitudes and Knowledge Subscales (ATAS), Attitudes towards Women with AIDS Scale (ATWAS), Self-Efficacy for Protective Sexual Behaviors Scale (SEPSB), Attributions of Control Responsibility and Blame scores for Vignettes A…………………………………………………………61</td>
</tr>
<tr>
<td>4.7</td>
<td>Means, Standard Deviations, and Univariate F’s for Study’s Variables……….62</td>
</tr>
<tr>
<td>4.8</td>
<td>Paired Samples t-Test Comparison of Attributions of Control, Responsibility, and Blame scores for Vignettes A (sexual assault) and Vignettes B (intravenous drug use)…………………………………………………………64</td>
</tr>
<tr>
<td>4.9</td>
<td>Summary of the Multiple Regression Analysis for Variables Predicting the Relationship between Control, Responsibility, and Blame in the Sexual Assault Scenario…………………………………………………………66</td>
</tr>
</tbody>
</table>
4.10 Summary of the Multiple Regression Analysis for Variables Predicting the Relationship between Control, Responsibility, and Blame in the Intravenous Drug Use Scenario

4.11 Summary of the Hierarchical Multiple Regression Analysis for Variables Predicting Attributions of Blame in the Sexual Assault Scenario

4.12 Summary of the Hierarchical Multiple Regression Analysis for Variables Predicting Control in the Sexual Assault Scenario

4.13 Summary of the Hierarchical Multiple Regression Analysis for Variables Predicting Responsibility in the Sexual Assault Scenario

4.14 Summary of the Hierarchical Multiple Regression Analysis for Variables Predicting Attributions of Blame in the Intravenous Drug Use Scenario

4.15 Summary of the Hierarchical Multiple Regression Analysis for Variables Predicting Attributions of Control in the Intravenous Drug Use Scenario

4.16 Summary of the Hierarchical Multiple Regression Analysis for Variables Predicting Attributions of Responsibility in the Intravenous Drug Use Scenario
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Relationship Among The Study’s Variables</td>
<td>12</td>
</tr>
<tr>
<td>2.1</td>
<td>Relationship Among The Study’s Variables</td>
<td>31</td>
</tr>
</tbody>
</table>
Human Immunodeficiency Virus (HIV), a member of the retrovirus family, is the virus that causes Autoimmunodeficiency Syndrome (AIDS) (National Institute of Allergy and Infectious Diseases [NIAID], 2005). Two types of HIV, HIV-1 and HIV-2, have been identified with HIV-1 being the primary source of infection worldwide (NIAID, 2005). HIV attacks and destroys CD4+ T cells in the blood which interrupts the normal functioning of the immune system. When an individual’s CD4+ T cell count drops below 200 and/or the person develops certain opportunistic infections, HIV has progressed to AIDS (Centers for Disease Control [CDC], 2003; NIAD, 2005).

Due to advances in research, valuable information about the transmission, treatment, and prevention of HIV and AIDS have been discovered. For example, over the course of the epidemic in the United States, routes of transmission have decreased. Saliva, casual contact, and insect bites have been disproved as routes of transmission. The screening and heating treatment of blood products has reduced transmission via blood transfusions. The infection of newborns during pregnancy and birth has been almost totally eliminated in the United States (NIAID, 2005). Currently, HIV is primarily transmitted through unprotected sexual contact or sharing needles or syringes with an infected individual.
Initially, there were no treatments for HIV and related opportunistic infections and cancers. Today researchers have developed several methods for testing for HIV antibodies including ELISA and Western Blot. Three classes of drugs have been developed to treat HIV at various stages of the virus’ life cycle. Nucleoside reverse transcriptase inhibitors, prevent the virus from making copies of itself at an early stage (NIAID, 2005). Protease inhibitors, prevent the virus from replicating after the virus has progressed to later stages of its life cycle (NIAID, 2005). Fusion inhibitors, the newest class, prevent HIV from entering and infecting immune cells. Fusion inhibitors reduce blood levels of HIV and may be effective against HIV that has become resistant to treatment. As no HIV vaccine has been developed, preventive methods involve avoiding risky behaviors such as sharing needles, having sex without male latex or female polyurethane condoms, and acquiring knowledge about HIV.

It is estimated that 39.4 million people around the world are living with HIV/AIDS (Inciardi & Williams, 2005). Despite efforts to curtail the spread of HIV, rates of infection are steadily rising among the poor, people of color, and individuals under 30 worldwide. The feminization of HIV/AIDS is evident in the increasing rate of infection among the world’s women.

Reports from the World Health Organization (WHO) and the United Nations Program on HIV/AIDS (UNAIDS) suggest that sub-Saharan Africa continues to be the most impacted region with more than three-fourths of all women and two-thirds of all people living with HIV/AIDS. In Eastern, Western, and Northern Africa rates vary. However, the rate of infection among sex workers and pregnant women suggests that HIV is being transmitted through heterosexual contact and intravenous drug use (Inciardi
Likewise in Latin America and the Caribbean, as well as Asia and the Pacific Rim, HIV is disproportionately affecting the countries poor and its women. Explanations for increasing rates among these groups include intravenous drug use, heterosexual transmission, and the sex trade. In Eastern Europe and Central Asia, a similar trend is noted with HIV/AIDS being more prevalent among females. For example, in St. Petersburg, Russia, there has been a one hundred percent increase in HIV among pregnant women from 1998 to 2002 (Inciardi & Williams, 2005). Similarly, in Ukraine, 60% of individuals infected are women under the age of 25 (Inciardi & Williams, 2005). In Western Europe, HIV infection rates among women are increasing. The increase in infection rates among women rose 122% from 1997 to 2002 with a majority of the infected being immigrants from Sub-Saharan Africa and the English-speaking Caribbean (Inciardi & Williams, 2005).

Transmission rates within the United States reflect trends similar to those reported worldwide. Estimated cases among those exposed through heterosexual contact have increased each year from 1999 through 2004. Further analysis of estimated HIV/AIDS cases in the United States reveals that rates of infection increased among Whites, Asian/Pacific Islanders, and American Indian/Alaska Native and decreased among Blacks and Hispanics from 2000 to 2004 (CDC, 2005). Yet, African Americans still comprised 50 percent of HIV/AIDS cases diagnosed in 2004 while representing only 12 percent of the population (CDC, 2005). More specifically, African Americans accounted for 68.8% of HIV/AIDS diagnosis among women and 44.5% among men from 2001-2004 (CDC, 2004). The estimated rate of AIDS cases among the U.S. population has increased since 2001 averaging 14.1 per 100,000 cases. When examining African Americans, the rate is
notably higher with 56.4 AIDS cases per 100,000 (CDC, 2005). Although there has been
a significant decrease in the HIV/AIDS diagnosis rate among African American females,
it is still estimated that the infection rate among Black females is 19 times that among
White females (CDC, 2004).

HIV-related stigma in the African American community has been suggested as
one explanation for the trend of increased infection among African Americans. Several
issues that have led to the stigma in the Black community and in turn lack of mobility in
developing a response to combat the illness in the Black community include: (a) mistrust
developed from situations such as the Tuskegee syphilis experiments; (b) homophobia;
(c) the scientific community and governments attempt to trace the first cases of HIV to
Africa and the stigma placed on the Black community as being the start of the epidemic;
(d) the impact of drugs on the Black community; and (e) the imposing of Eurocentric
solutions on the Black community as a means of prevention and increasing HIV antibody
testing (Roberts & Miller, 2004; Dalton, 1989; Quinby, 1993). It has been suggested
that these misconceptions and stigmas associated with HIV/AIDS and the healthcare
system has led to reduced rates of HIV testing and participation in prevention programs
in the Black community (Daniels & Wimberly, 2004).

The observed trends in HIV infection suggest that the world’s poor, the
disadvantaged, and the young are being infected at alarming rates. Although men who
have sex with men (MSM) and patterns of intravenous drug use have been suggested to
influence the increase in HIV infection rates, it still remains that HIV is becoming
increasingly feminized. One among many explanations for the continued rise of HIV
infection is stigmatized beliefs held by the general public. As a result of the stigmas related to HIV, people delay HIV testing, are less willing to help those infected with HIV, and are less willing to reveal their seropositive status to others.

Any attribute of a group that makes it appear devalued (Crocker, Major, & Steele, 1998) and that is held by a large group of people (Schneider, 2004) can lead to the development of a stigma. According to Goffman (1963), certain illnesses are associated with stigma, and it is membership to a given group that in turn leads to an identity that separates group members from the larger population. Thus association with a stigmatized group can result in diminished social status, being discredited by others, and isolation.

Numerous factors have been suggested to influence the development of stigmas. Generally speaking, all stigmas vary along several dimensions: 1) whether the condition can be easily hidden (concealability); 2) does the condition improve, worsen over time, appear suddenly, or gradually (time course); 3) is the person rendered unattractive by the stigma (aesthetic value); 4) is the person viewed as responsible for the condition (stigma origin); 5) does the condition present a direct or indirect threat to others; 6) does the condition disrupt interpersonal interactions; and 7) is the stigma related to a mental or physical condition (Schneider, 2004). When focusing on illness related stigma, the nature of the illness influences the type of stigma that is associated with the illness. Illness related stigmas are influenced by: (a) whether the individual is blamed for the manifestation of the illness; (b) if the illness has serious consequences for others; (c) whether there are physical manifestations; and (d) whether it leads to a decrease in competence (Conrad, 1986; Fife & Wright, 2000; Jones, Farina, Hastorf, Markus, Mella,
& Scott, 1984; Weitz, 1991). When examining the HIV/AIDS epidemic, the general stigma and illness-related stigma factors suggested above to influence stigma are readily apparent when focusing on HIV/AIDS related stigma.

AIDS related stigma, defined as “all unfavorable attitudes, beliefs, behaviors, and policies directed at persons perceived to be infected with HIV, whether or not they actually are infected and regardless of whether or not they manifest symptoms of AIDS (Herek, 1990, p. 116)”, leads to the isolation of several social groups by the general public. For example, HIV/AIDS related stigma is multidimensional and incorporates negative beliefs toward groups such as gay and bisexual men, sex workers, intravenous drug users and their sexual partners, and sexually promiscuous individuals (Brown, MacIntyre, & Trujiollo, 2003; Herek & Glunt, 1988; McDonell, 1993; Reidpath & Chan, 2005). Since its introduction to the U.S. population in the late 1970’s and early 1980’s, HIV has been associated with considerable fear and strong reactions from the public.

The public’s fear and strong reaction to HIV is not unique. Historically several illness have fostered similar reactions. Herek (1990) suggests that the public’s reaction to cholera outbreaks in the mid 1800’s mirrors the reactions of the U.S. populations to AIDS in the 1980’s. During the cholera epidemic of 1832, the scientific community and the general public lacked knowledge of the causes of cholera and of effective treatments (Herek, 1990). Likewise, during the 1980’s, HIV was a relatively new illness in the U.S. and the general public as well as the scientific community lacked knowledge of the illness and of treatment. In both cases, the lack of understanding of the illness led to the isolation and stereotyping of certain groups.
Explanations for why certain groups were prone to cholera and HIV tended to focus on internal traits (Herek, 1990). In the case of the cholera outbreak, prostitutes and their customers, the poor, Blacks, and immigrants were isolated and stereotyped (Herek, 1990). The possession of weakened systems due to excessive sexual activity, laziness, intemperance, and ignorance were attributed as cause for the development of cholera (Herek, 1990). As the knowledge of the causes of cholera and treatment grew, the public reaction to the illness decreased, leading to better treatment of those infected (Herek, 1990).

Similarly in the AIDS epidemic, several groups have been isolated and stereotyped. Early in the AIDS epidemic, homosexuals, sex workers, and intravenous drug users were targets of animosity and fear. HIV/AIDS related stigmas are derived from fear of illness, death, and contagion (Brown, MacIntyre, & Trujillo, 2003; Herek & Glunt, 1988).

At the onset of the epidemic, AIDS was characterized as an illness that affected homosexuals and intravenous drug users. Since the illness was not well understood the public fear of contagion led to the isolation of many social groups associated with homosexuals and intravenous drug use including Blacks and the poor. Homosexuality and drug use threaten the moral fiber of society so members of these groups attract additional anger that is not associated with HIV/AIDS (Weiner, 1993).

Another explanation for the public’s reaction to HIV is due to the fact that HIV is an illness that can not be detected by the naked eye. Because HIV poses a personal threat and has serious consequences including death, it can elicit both fear and empathy (Weiner, 1993). Despite being contagious, physical manifestations and decreased
functioning are often not apparent until the illness has progressed to AIDS which could take many years. Physical symptoms of HIV such as shingles, rashes, HIV wasting syndrome, and Kaposi’s sarcoma can physically mar the bodies of the infected, while dementia (HIV encephalopathy) and memory loss can affect their mental status as well as their ability to maintain a normal level of functioning (National Center for Infections Diseases Division of HIV/AIDS, 1993).

Additionally, the modes of transmission have decreased as HIV has become better understood. Today primary modes of transmission are unprotected sex with an infected partner and intravenous drug use. Due to advances in science, transmission via blood transfusion has been eliminated in the United States. Since accidental (passive) modes and transmission have been almost eradicated in the U.S., most infections today are the result of one’s behavior (sharing needles with infected person, having unprotected sex with an infected partner). Thus, individuals may be more likely to be blamed for contracting HIV.

HIV-related stigma can be caused by additional factors, including lack of knowledge and lack of interaction with HIV infected individuals. Increasing personal contact with HIV infected individuals and increasing knowledge of HIV transmission reduce the levels of stigma expressed. Acquiring knowledge of HIV/AIDS leads to greater comfort around those infected with HIV/AIDS and decreases the likelihood that people will avoid contact with an infected person (Ficarrotto, Grade, Bliwise, & Irish, 1990; Shapiro, 2005). Direct contact with an HIV infected individual leads to improved perceptions of HIV and persons infected with HIV/AIDS. Direct contact with infected individuals, has been found to lead to decreased endorsement of coercive AIDS policies,
decreased blame of infected individuals, decreased social distancing, and increase in knowledge obtained via lectures (Herek & Capitano, 1997; Scollay, Doucett, Perry, & Winterbottom, 1992).

Various approaches have been applied to the study of HIV-related stigma and reactions towards those with HIV/AIDS. Although originally created as a model of achievement motivation, Weiner’s attributional model has been applied to various illnesses including HIV/AIDS. Weiner’s attribution theory centers on the process individuals use to determine causation of negative events (Cobb & De Chabert, 2002). An individual’s perception of causation influences subsequent behavior and affect (Weiner, 1993). According to Weiner, when individuals encounter a negative or unexpected event they assess the event to determine if the event was controllable. Perceived control may lead to the individual being held responsible for the outcome of the event (Weiner, 1993). Moreover, internal characteristics of the individual will be attributed as the cause of the event (Cobb & De Chabert, 2002; Weiner, Perry, & Magnusson, 1988). An assignment of controllability and responsibility can lead to negative affect (i.e., anger, lack of pity, rejection) and blaming the individual, whereas assignment of uncontrollable cause leads to sympathy and pity (Weiner, 1982; Weiner, Cobb & De Chabert, 2002). Weiner suggests that as the modes of transmission of HIV have decreased and have shifted from both controllable and uncontrollable modes to primarily controllable modes individuals are becoming less tolerant of persons who acquire HIV through “preventable” methods (Weiner, 1993). Thus, perceptions of controllability may lead to individuals being less sympathetic towards HIV infected persons.
In addition to perceptions of blame, responsibility, and controllability, individual traits have been suggested to influence attributions. For example, individuals’ attitudes, beliefs, and values have been suggested to influence how members of various groups are perceived. An individual’s attitudes and beliefs about a social group or about a set of behaviors; morals, and schemas, influence one’s perception of others. From an attributional framework, studying the influence of individual traits on perceptions is essential (Weiner, 1993). In the case of attributions about people with HIV/AIDS (PWAs), understanding variations in individuals’ attitudes toward HIV and knowledge of HIV can greatly enhance our understanding of how PWAs are perceived and how individuals behave toward them.

During the third decade of the AIDS epidemic, despite interventions to educate the public about HIV and prevention, HIV is still highly stigmatized by the public. Negative attitudes towards HIV and social groups associated with the illness have resulted in anger, negative feelings, and negative treatment of people living with HIV/AIDS, their loved ones, and the social groups to which they belong (Herek, Capitanio, & Widaman, 2002). AIDS related stigma has discouraged some individuals from being tested and has influenced if and to whom individuals disclose their seropositive status (Herek, et al., 2002).

The literature on attribution theory and stigma towards HIV infected individuals, suggests that several factors influence people’s attitudes toward this group including mode of infection, perceived knowledge of preventive methods, and knowledge of HIV. Attitudes towards persons infected with HIV/AIDS have been noted to impact whether individuals seek treatment, the comfort level of health professionals with providing
treatment, the psychological well-being of the infected person, and the willingness of the
general public to interact with infected persons (Carr & Grambling, 2004; Clark, et al.,
2003; Currey, Johnson, & Ogden, 1990; Ladany, Stern, Inman, 1998). Knowledge of
HIV/AIDS including routes of transmission and methods of prevention have been found
to lead to a more tolerant view of those infected with HIV/AIDS, but may have little
impact on overall attitude toward PWA.

Based on estimated infection rates, women worldwide, especially those of color
are being affected by HIV at higher rates than some other groups. African American
women are one of the groups most impacted by the AIDS epidemic in the United States.
The increasing rate among women is a more recent occurrence, when compared to
infection rates among homosexuals and intravenous drug users. The public’s perceptions
of HIV/AIDS and person with the illness have been studied extensively. However,
perceptions of women with HIV and people of color have been studied to a lesser extent.
Therefore, the current study proposes to examine from an attributional perspective,
knowledge and attitudes, two factors that influence the process of constructing
attributions of HIV infected African American women. The relationship between these
factors is illustrated in Figure 1.1.

Assessing the public’s views of individuals with HIV/AIDS will be helpful in
changing stigmatizing beliefs and improving the medical and social treatment of PWAs.
The following is a review of the literature on attribution theory, attitudes, and knowledge
pertaining to HIV/AIDS.
Figure 1.1: Relationship between Attitudes, Knowledge, and Attributions
CHAPTER 2  
REVIEW OF THE LITERATURE

2.1 Attributions

Attribution theory focuses on the explanations that people make about situations and the people around them (Weiner, 1986). Individuals attempt to predict and control their environment through the process of linking events with their causes (attributions) (Smirles, 2004; Weiner, 1986). According to Weiner (1993), attributions share three dimensions of causality: “locus of causality (does the cause lie within or outside of the person?), stability (is the cause temporary or permanent?), and controllability (is or is not the cause subject to volitional change?)” (p. 289). When making a judgment about a negative outcome, one may progress through the stages of assigning control, responsibility, and blame to the person involved in the situation (the agent) (Mantler, Schellenberg, & Page, 2003). The attribution made after evaluating the situation may influence a person’s interpretation of the situation and subsequent behavioral and emotional responses (Mantler, et al., 2003; Weiner, 1993). During the process of making an attribution, individuals assess the event for controllable and uncontrollable causes (Cobb & De Chabert, 2002), which include the actions of the person and environmental circumstances (Smirles, 2004).
An assignment of control suggests that the agent (individual) was involved in the final action that led to the negative outcome (Mantler, et al., 2003). Perceived control over an event, leads to the agent being neglected or punished and decreases the likelihood they will be helped (Weiner, Perry, & Magnusson, 1988). Assigning causal controllability is essential to one making a judgment of responsibility.

If the individual is viewed as responsible for their circumstances, they are assigned responsibility for their actions (McDonell, 1993). Attributions of responsibility have been suggested to be influenced by a variety of factors including moral judgments, causality, and social judgments (McDonell, 1993; Shaver, 1975; Smirles, 2004). These factors can be categorized into the general categories of situational and personal factors. Thus when one is making an attribution of responsibility, one is assuming that the agent was cognizant of the repercussions of their actions, they intended to act, acted on their own volition, are capable of distinguishing right from wrong, and were not coerced (Mantler, et al., 2003). The level of responsibility ascribed to the agent leads to increasing levels of anger and less pity (Dijker & Koomen, 2003).

After assignments of controllability and responsibility have been made, the individual makes an assignment of blame. The process of attributing blame is based on personal values and beliefs and a consideration of all possible explanations for the event (Mantler, et al., 2003). These attributions determine the behavioral responses toward the agent (Mantler, et al., 2003).
2.2 Attributions of Illness

From an attribution perspective, the nature of the illness influences reactions that individuals have toward the affected/infected individual. According to Weiner’s attribution theory, the perceived cause of the stigma (illness), influences future expectations of the individual, such as the likelihood of recovery, behavioral responses toward the individual and emotional reactions toward the individual (Weiner, et al., 1988). Whether the illness is mental-behavioral or physical, whether contracting the disease was within the individual’s control, and whether the illness could be cured and/or treated, influences how those with an illness are perceived (Weiner, et al., 1988). For example, Mantler, Schellenberg, and Page (2003), found that among a sample of undergraduate students who assessed the level of controllability, blame, and responsibility of a man for contracting HIV or developing lung cancer, students ratings of blame were lower than those of controllability and responsibility. Although blame ratings were the lowest, blame contributed uniquely and consistently to the explanation of behavioral and emotional intentions of the participants and was the only attribution that was related to participants’ pre-existing social attitudes (Mantler, et al., 2003).

When examining the perception of HIV infected persons by college students it is important to understand the nature of their perceptions. Attribution theory allows individuals’ perceptions to be understood by examining individuals’ cognitions, affect and behavior. HIV/AIDS is a highly stigmatized illness that fosters varied reactions. From its introduction to the U.S. population HIV has caused negative emotional and
behavioral reactions in individuals ranging from fear and anger to isolation. Thus, understanding how individuals decide to assign blame is essential to determining how to reduce these reactions and to facilitate change.

2.3 Attributions of Controllability over HIV Infection

Among college students, controllability has been found to influence reactions to HIV infected individuals. Pullium (1993) found that controllability influenced the level of non-judgmental sympathy, helping, liking and empathy expressed toward the fictitious infected individual, more so than other variables assessed. Likewise, Leon and Wingate (1991) instructed students to read one of three descriptions of a fictitious character who had contracted HIV through various modes. Students reacted most favorably to those who contracted HIV via means beyond their control and rated these victims as being least responsible for contracting HIV. The more perceived control the individual was perceived to have over contracting HIV, the more negative participants’ reactions. Leon and Wingate concluded that positive or negative reactions to individuals perceived as having control and/or responsibility for their infection serves a knowledge function allowing people to make sense of the world around them.

Contrary to the findings of Pullium and Leon and Wingate, other researchers have found evidence that suggests that controllability alone may not influence reactions to HIV positive persons. Although Dooley’s (1995) study illustrated that onset controllability was correlated with more anger and less pity expressed by participants, onset controllability did not directly influence helping judgments. Pity was found to mediate the effect that onset controllability has on helping. Derlega, Sherburne, and Lewis (1998), suggest that perception of controllability was not enough alone to influence
reactions to HIV positive people. Yet, male participants identified more with infected people who had one sexual partner or used protection, but contracted HIV. The males in this study, asked more question regarding the accuracy of the diagnosis when the cause was uncontrollable, and were more willing to disclose intimate feelings with persons who contracted HIV through uncontrollable modes.

These studies suggest that perception of control may or may not directly influence emotional reactions towards HIV infected people. However, perception of control may also influence how people react towards PWAs. This could suggest that perceptions of control over infection decrease desire to interact with HIV positive people.

2.4 Attributions of Responsibility for Contracting HIV

An assignment of personal responsibility influences how people respond to individuals. In the case of HIV/AIDS, attributions of responsibility could lead to social distancing and isolation by non-infected members of their social network (McDonell, 1993). The relationship between perception of stigmas and attributions of responsibility leads to social distancing (Albrecht, Walker, and Levy, 1982). For example, participants have reported being more willing to interact with HIV infected people who contracted the virus through a blood transfusion and homosexual lifestyle that through intravenous drug use (Leone & Wingate, 1991). Additionally, attributions of responsibility have been suggested to influence policy, programs, and responses to the needs of HIV infected persons (Cobb & De Chabert, 2002; Ladany, Stern, & Inman, 1998; McDonnell, 1993).

Becares and Turner (2004) found that among a sample of undergraduate students, responsibility influenced the level of empathic responding toward infected persons. Students who read an entry from the diary of a non-responsible (infected via a blood
transfusion after a car accident), HIV positive target responded more empathically than those who read an entry from a responsible (infected via frequent unprotected sex) HIV positive target.

2.5 Attributions of Blame for Contracting HIV

Weiner’s attribution theory suggests that attributions of responsibility and blame are closely related, yet distinct concepts. Responsibility is emotion free whereas, blame is associated with negative emotions (Weiner, 1995). An attribution of blame is determined by the magnitude of the consequences of one’s actions (Weiner, 1995). Once the agent has been labeled as responsible for a negative event, an attribution of blame tends to follow.

A tendency to blame the victim or blame society can affect one’s interactions with HIV positive persons. Both general victim (holding the victim accountable) and AIDS specific victim blame are positively related to discrimination and maintaining social distance (Johnson, Mullick, & Mulford, 2002). Thus persons holding the victim accountable for his/her actions are likely to isolate HIV infected people. However, the tendency to blame society in general or AIDS-specific society is positively correlated with social responsibility and negatively correlated with discrimination (Johnson, et al, 2002). Therefore, people who blame society for creating environments in which one can contract HIV are more likely to feel obligated to help others infected with HIV/AIDS. These individuals may be more inclined to respond altruistically and endorse programs and funding to support PWAs.

Powell, Christensen, Abbott, and Katz (1998) investigated the behavioral and characterlogical attributions of blame that are made about PWAs. The researchers found
that blame was a function of AIDS-related stigma not character or behavior. Additionally, the more similar participants were to the homosexual couple in the scenario, the less likely they were to attribute blame to the couple for becoming infected. When a heterosexual couple was used in the second experiment of the study, a similar pattern of reduced blamed as a function of similarity to the characters was found. However, the negative correlation was stronger in behavioral blame.

In addition to similarity to the victim and individual tendencies to blame the victim or society, it has been suggested that mode of transmission influences attributions of blame. Powell and colleagues (1998) found that participants were more likely to blame the characters for their behavior when they engaged in unprotected sex with a person they did not know was HIV positive than someone who had unprotected sex with a non-infected person. Participants in this experiment made attributions of behavioral blame and did not attribute blame to character flaws (Powell, et al., 1998). When asked to allot compensation to HIV infected persons, participants’ patterns of compensation were opposite to their patterns of blame (Keil & Schellenberg, 1998). Individuals allocated larger sums of financial support to victims infected through passive modes such as mother to infant transmission and infection through contaminated blood products although they represented the smallest percentage of PWAs. The least amount of compensation were distributed to the groups which the participants attributed the most blame for their infection including homosexuals, intravenous drug users, and homosexual intravenous drug users (Keil & Schellenberg, 1998). Of the individuals sampled, males, people of color, and more authoritarian persons reported the most negative attitudes toward homosexual men (Keil & Schellenberg, 1988).
The literature above suggests that several factors influence attributions of control, blame, and responsibility made by college students about HIV positive individuals. Modes of transmission, sexual orientation of the victim, and gender of the participant have been suggested as influences on attributions. In addition, as suggested by Alicke (2000) and Mantler and colleagues (2003), individuals’ prior beliefs, values, and attitudes influences their judgments and may increase or decrease blame directly or indirectly. Similarly, Weiner (1993) suggests examining personal traits that influence attributions about HIV positive persons. The current study proposes to examine two types of prior beliefs suggested to influence attributions, attitudes and knowledge.

2.6 Attitudes Toward and Knowledge of HIV/AIDS

Attitudes held by individuals help them understand their surroundings and make sense of the world around them and their feelings, thoughts and actions (Leone & Wingate, 1991). Attitudes towards people with HIV/AIDS have been suggested to serve several basic functions and can predict people’s behaviors toward people infected with HIV/AIDS (PWA). People’s attitudes toward PWAs can be used to assess the cost and benefits of interacting with people with HIV/AIDS (Schneider, 2004). For example, one’s decision to engage in interaction with a PWA can be based on how they believe this association will affect how they are viewed by others. Negative affect leads to a decrease in the likelihood of interacting with PWAs. Second, people may hold and express a positive or negative attitude toward PWAs as a way of representing their values and beliefs to others about certain groups of people. Since HIV/AIDS related stigma is
multidimensional and includes stereotypes of other social groups including homosexual and intravenous drug users, one may develop attitudes toward PWAs that informs others of their views of these groups.

Studies have shown that people’s attitudes towards PWA are related to their reactions to HIV infected people (Herek & Capitano, 1999; McBride, 1998). Research participants have reported being less willing to interact with PWAs compared to people suffering from other terminal/chronic illnesses (Sheehan, Lennon, & McDevitt, 1991). Similar results have been found among children and adolescents (Cole, Roberts, & McNeal, 1996; DeLoye, Henggeler, & Daniels, 1993).

Negative attitudes toward PWAs continue to exist despite efforts to educate the public. Although interventions are being implemented to combat the negative attitudes the general public has towards HIV/AIDS and those infected with the virus, a review of available studies by Brown, Macintyre, and Trujillo (2003), suggests that interventions may not be causing permanent attitude change. Studies involving promoting tolerance in the general public toward PWAs through education and interventions have shown mixed success. While a majority of the studies reported a decrease in stigmatizing attitudes and an increase in tolerance for PWAs, very few of the studies assessed for or reported long-term impact (Brown, et al., 2003). Several studies have shown that education can be used as a method of increasing the knowledge level of individuals, however, these studies reported varied results on the impact of knowledge on attitude change (Brown, et al., 2003). Similarly, among health professionals, the impact of information and interventions on attitude change has been varied. Interventions among health professionals have been found to improve knowledge about HIV/AIDS, willingness to
treat PWA, and improve knowledge of infection control practices (Brown, et al., 2003). However, in some of these studies fear of infection was not reduced. Overall, these studies did not provide unanimous support for the positive influence of education on changing negative attitudes towards PWAs.

The college student population has been studied extensively during the AIDS epidemic in the United States and abroad (Bruce & Walker, 2001; Sheehan, Ambrosio, McDevitt, & Lennon, 1990). Several explanations have been offered as to why assessing the college population is important. In prior studies, college students’ were assessed because of their increased likelihood to engage in risky sexual behavior, have multiple sexual partners, and greater risk for contracting HIV (Becares & Turner, 2004; Bruce & Walker, 2001; Sheehan, et al., 1990; Zimmer & Thurston, 1998). According to the Centers for Disease Control, HIV infection rates between the periods of 2000 and 2003 and AIDS cases between 1999 and 2003 increased among 15-24 year olds (CDC, 2004). These statistics suggest that studying individuals within these age brackets is still essential as rates of infection continue to increase.

2.6.1 HIV Attitudes and Knowledge in the 1980s

Evaluations of college students’ attitudes in the 1980s suggest that college students held relatively moderate attitudes towards HIV/AIDS and PWAs (Goodwin & Roscoe, 1988; Sheehan, et al., 1990). In the 1980s, HIV was stereotyped as a primarily homosexual illness. Several studies at the time evaluated individuals’ attitudes toward homosexuals as well as their attitudes toward HIV/AIDS. Homosexual persons tended to be judged less favorably by the participants in several studies of undergraduate students.
(Fish, & Rye, 1991; Goodwin & Roscoe, 1988; Sheehan, et al., 1990). Females were found in several studies to be more accepting than males of individuals infected with HIV (Goodwin & Roscoe, 1988; Sheehan, et al., 1990).

When studying primarily attitudes toward PWAs, Biasco & Taylor (1991) reported attitudes were mixed. While a majority of students would not mind having an HIV positive person in their neighborhood, eating with a PWA, or allowing their children to attend school with an HIV positive child, only one third stated they would give CPR to an HIV positive person.

College students’ knowledge of HIV/AIDS during the 1980s was examined by DiClemente, Forrest, and Mickler (1990). Data for this study was collected from undergraduates across the United States and revealed that students were knowledgeable about HIV, yet they held misconceptions about transmission of HIV. DiClemente and colleagues (1990) found that 98 percent of the students in the sample endorsed at least one item which suggests HIV could be transmitted via personal contact.

According to Fish and Rye (1991), knowledge of HIV/AIDS influences attitudes but not social distancing. Participants with greater knowledge of HIV and its transmission reported more positive perceptions of a target person with AIDS. However, willingness to interact with an infected person was not correlated with knowledge.

Gaines, Iglar, Michael, and Patton (1988) found that in their sample of college students, females were more empathic and understanding of PWAs and were more knowledgeable. Despite this difference, students still possessed negative feelings and attitudes. Students endorsed statements that suggested God was punishing homosexuals (over forty percent) and that they would not live in a residence hall if someone who lived
there had AIDS (over 50%). The researchers concluded that reactions to AIDS were based on feelings and values (attitudes), not knowledge (cognitive information).

Dorman and Reinzo (1988) assessed attitudes of students in an introductory health class. Students in the sample were moderately knowledgeable about modes of transmission, but consistently missed questions regarding sneezing and coughing being modes of transmission. The sample also possessed negative attitudes toward PWAs. Fifty five percent expressed fear of contracting HIV from HIV positive classmates. The authors concluded that lack of knowledge fueled negative attitudes towards PWAs and may contribute to incorrect behavior to avoid infection.

2.6.2 HIV Attitudes and Knowledge in the 1990s and 2000

During the 1990’s college students were still found to be relatively knowledgeable about HIV/AIDS and possessed relatively positive attitudes towards persons infected with HIV. The studies reviewed suggest a relationship between attitudes toward PWAs and HIV related knowledge.

James and Frese (1993) conducted a path analysis to determine the variables that influenced participants’ attitudes toward PWAs. General knowledge and transmission knowledge were positively influenced by attitudes toward PWAs. In this study, transmission knowledge had a greater effect on attitudes towards PWAs, with gender having the second largest effect, with transmission knowledge and academic level having lesser effects.

When considering culture, students from diverse backgrounds, may have varying levels of awareness and knowledge of HVI/AIDS. Goh (1993) found that across ethnic groups, college students attitudes toward HIV/AIDS were positively correlated with
acceptance and support of HIV-related issues, but not with individuals with HIV/AIDS. Generally speaking, the college students in this study were relatively knowledgeable about HIV/AIDS, with non-U.S. born Asian students reporting significantly lower levels of knowledge. The researcher suggested that lack of exposure to American culture may contribute to the lower knowledge scores of non-U.S. born Asian students.

Longitudinal studies assessing college students’ knowledge and attitudes from the late 1980s and 2000 reveal changes and stability in students’ perception and awareness. McCormack (1997) conducted a study over an eight year period (1987-1995) measuring changes in student knowledge and attitudes about HIV/AIDS. Over the course of the study, attitudes of the student population became increasingly more positive. By 1995, only 1% of the students were fearful of HIV positive individuals compared to 20% in 1987. Students in the sample were consistently knowledgeable of protective measures (i.e. condoms reducing risk on infection), there being no cure, and that pregnant women can pass the illness on to their fetus. Students also became increasingly knowledgeable of routes of transmission (i.e. you can’t get HIV from mosquitoes), and knowing there is treatment for HIV. Although, a majority of students were knowledgeable of these issues, there were still large numbers (approximately 40%) who did not know these facts. Additionally few of the students knew HIV could be transmitted by breast milk (26% in 1991 and 37 % in 1995) and that HIV positive individuals will ultimately develop full blown AIDS (28%).

Bruce and Walker (2001) conducted a 15 year study from 1986 to 2000, in which the attitudes of college students about HIV/AIDS and people with HIV/AIDS were assessed. Over the course of the study, students became more tolerant of persons with
HIV/AIDS and more knowledgeable of the illness. Despite the overall trend towards
tolerance and knowledge, the data revealed that these tendencies fluctuated over time.
For example, during certain periods of assessment, tolerance was associated with
perceived knowledge about HIV/AIDS. In certain instances, it is suggested that comfort
ratings were positively correlated with greater tolerance. Likewise, during several periods
perceived knowledge was correlated with attitudes about HIV and PWAs.

The data consistently showed that female college students (11 of 13 samples)
were more comfortable interacting with a fellow student with HIV/AIDS and were more
tolerant of PWAs. This difference was found to increase across time. Although, women
appeared to be more tolerant, the tolerance levels of males toward PWAs and HIV
infection increased as well. The authors suggest that gender differences in attitudes
toward HIV/AIDS and PWAs were relatively stable and are issues that need to be
considered.

Overall, the study found that higher tolerance toward PWAs is positively
correlated with comfort with casual contact. From 1991 to 2000 students reported being
more comfortable around classmates or roommates who are HIV positive, with students
feeling less comfortable around infected roommates. For several years of the study
students reported knowing more people personally with HIV. Thus, the researchers
hypothesized that the larger the number of HIV infected individuals that students knew,
the more tolerant they were towards individuals with HIV/AIDS.

The aforementioned studies involving college students and the general public
suggest that knowledge about HIV is increasing. The studies pertaining to college
students suggest that knowledge about HIV/AIDS may be correlated with attitudes
toward HIV-related issues and/or individuals with HIV/AIDS and that tolerance is associated with comfort with interacting with PWAs. Studies involving the general public suggested that superficial changes occurred in attitude based on improved knowledge, yet more than knowledge is necessary to cause long-term changes in attitudes (Brown, et al., 2003). In other words, education and interventions may make individuals more tolerant of people with HIV/AIDS, but may not cause changes in their attitudes towards the group.

Differences in beliefs and experiences among individuals can lead to variations in perceptions of the same situation. Researchers have suggested that attributions of responsibility can be influenced by the individual (Malovich & Stake, 1990; Smirles, 2004). Thus assessing traits of individuals is essential to understanding the process of forming attributions.

Several factors have been suggested to influence perceptions of PWAs. Suggested influences include: knowledge, attitudes towards individuals with HIV/AIDS, contact with people with HIV/AIDS (PWAs), confidence in one’s ability to take preventive measures, and gender. For example, the negative attitudes of individuals toward HIV/AIDS affect PWAs. Perceived HIV-related stigma negatively impacts disclosure rates and psychological functioning among African American women with HIV (Clark, Linder, Armstead, & Austin, 2003). Fear of disclosure creates barriers to seeking health care among those infected (Carr & Grambling, 2004). A diagnosis of HIV infection alters women’s self-perception and has led to social distancing by family members and friends, as well as health professionals, church members and their ministers.
(Carr & Grambling, 2004). Because of the impact that other’s attitudes and perceptions can have on PWAs, it is imperative that researchers understand factors that can impact the formation of negative or positive perceptions.

HIV infection rates are increasing among women of color and people between the ages of 15 and 24. Therefore it is important to continue to assess college students’ knowledge of HIV and preventive methods. When assessing perceptions of PWAs, many studies focus on homosexual males infected with the virus. Many studies examining the perception of HIV positive individuals have not focused on the perception of females with the illness. The current study proposes to assess personal qualities of college students that could influence attributions of control, blame, and responsibility of HIV infected African American women (see Figure 2.1). Studying perceptions of women is important, as they represent one of the groups most impacted by the HIV/AIDS epidemic. Understanding how women with HIV are viewed by others will greatly assist the development of programs targeting those infected and the general public to reduce any biases that exist toward women with HIV. Based on the literature presented regarding student perceptions, attitudes, and knowledge, the following hypotheses have been proposed.

1. The participants will be knowledgeable about HIV/AIDS and protective measures.

2. Participants will express positive attitudes toward women with HIV.

3. Participants will express positive general attitudes toward HIV/AIDS.

4. Female participants will express more positive attitudes toward women with HIV than male participants.
5. Female participants will express more positive general attitudes toward HIV/AIDS than male participants.

6. People who have a personal relationship with an HIV positive person or volunteer with agencies that help PWAs will have more positive attitudes towards HIV/AIDS and women infected with HIV/AIDS, than those who have no interaction with PWAs.

7. Mode of transmission will influence the attributions that participants make, with participants assigning greater amounts of control, blame, and responsibility to the HIV infected African American woman who contracted HIV through an active mode of transmission than through a passive mode of transmission.

8. Attributions of control and responsibility will positively influence attributions of blame made about the HIV infected woman.

9. HIV/AIDS related attitudes and knowledge will account for a portion of the variance in attributions about women with HIV. HIV/AIDS related attitudes and knowledge will negatively influence attributions about African American women with HIV, with positive attitudes and greater knowledge of the illness being associated with positive attributions. Due to the structure of the measure used, positive attitudes in this study will be reflected by lesser amounts of control, blame and responsibility being attributed to the HIV infected individual.

10. Attitudes toward women with HIV will account for a portion of the variance in attributions about women with HIV. Attitudes toward women with HIV will negatively influence the attributions about African American women with HIV,
with more positive attitudes toward women being associated with lesser amounts of control, responsibility, and blame assigned to the individual.

11. Knowledge of protective behaviors will account for a portion of the variance in attributions about women with HIV. Knowledge of protective behaviors will negatively influence attributions about an HIV positive woman who contracted through a passive route and positively influence attributions about women with HIV who acquired HIV through an active route.
Figure 2.1: Relationship between Attitudes, Knowledge, and Attributions
CHAPTER 3

METHODOLOGY

3.1 Participants

Two hundred students registered for an introductory psychology course were recruited over the period of one quarter during the 2005-2006 school year. Students were recruited through the website for the Research Experience Program (REP), a component of the Introductory Psychology course which allows students to learn about psychological research by participating in the research studies of the psychology department’s faculty and graduate students.

3.2 Measures

The following instruments were used to quantify the variables in this study. Two versions of the questionnaire were created and used in the study (Protocol A and Protocol B). All odd numbered questionnaire packets were labeled as Protocol A which contained the instruments in the following order: demographic questionnaire, self-efficacy protective behaviors, attitudes towards HIV, HIV-related knowledge, attitude toward
women with AIDS, social desirability measure, and two vignettes. All even numbered questionnaire packets were labeled Protocol B and contained the instruments in reverse order starting with the vignettes and ending with the demographic questionnaire.

3.2.1 Demographic Questionnaire. A brief demographics questionnaire was used to collect information regarding participants’ age, sex, race, current year in college, and college major (see Appendix A). Additional information was gathered regarding their knowledge of individuals with HIV/AIDS and their relationship to the infected individual through questions asking a) if they volunteered with organizations that served HIV/AIDS infected individuals; b) had any knowledge of an HIV positive person; c) the number of infected persons known; and d) their relationship to the infected individual ranging from person in the media or known through a presentation to a family member or friend.

3.2.2 Self-Efficacy Instrument for Protective Sexual Behaviors (SEPSB). The Self-Efficacy Instrument for Protective Sexual Behaviors (see Appendix B) assesses individuals’ confidence in their ability to engage in various types of protective sexual behavior (Cecil & Pinkerton, 1998). The SEPSB was normed primarily on Caucasian undergraduate students taking psychology courses at a large Midwestern university. The measure consists of three domains. The ability to refuse sexual intercourse consists of 8 items (e.g. “with someone you have known for a few days or LESS?; with someone who is pushing you to have sexual intercourse”) which are rated on a 5-point Likert type scale (1 = not at all sure to 5 = very sure). The individual’s confidence in questioning potential sexual partners consists of 5-items (e.g. “Discuss preventing AIDS or sexually transmitted diseases (gonorrhea, etc) or PREGNANCY with your boyfriend/girlfriend?; Ask your boyfriend/girlfriend if he/she has ever had a sexually transmitted disease?”) and
is rated on a 5-point Likert type scale (1 = not at all sure to 5 = very sure). The confidence in one’s ability to obtain and use condoms consists of 5 items (e.g. “use a condom correctly?; use a condom every time that you had sexual intercourse?”) and is rated on a 5-point Likert type scale (1 = not at all sure to 5 = very sure). Higher scores on the individual subscales and higher total scores indicate greater levels of self-efficacy. The total score on the SEPSB ranges from 18 to 90. The Self-Efficacy Instrument for Protective Sexual Behaviors total score was used to assess students’ knowledge of behaviors that can reduce the likelihood of HIV infection. The current study reported a total score reliability of .73. Cecil and Pinkerton (1998), reported internal reliabilities for the sample used in the development study of .85 (refusing sexual intercourse), .80 (questioning potential partners), and .81 (ability to obtain and use condoms) for the three subscales of the measure.

3.2.3 Attitudes Toward Women with HIV/AIDS Scale (ATWAS). The ATWAS (see Appendix C) is a 27-item measure that assesses individuals’ attitudes toward women with HIV/AIDS (O’Hea, Systma, Copeland, & Brantley, 2001). The 27-items are rated on a 5-point Likert type scale with 1 corresponding with strongly disagree and 5 corresponding with strongly agree. There are four subscales of the ATAS: child care (e.g. “Women who transmit HIV to their unborn baby should have their baby taken away”) (α=.82), myths/negative stereotypes (e.g. “Most women with HIV/AIDS are prostitutes or sex workers.”) (α=. 84), reproduction/contraception issues (e.g. “Pregnant women with HIV/AIDS should be forced to have their baby tested for HIV.”) (α=.71), and sympathy/transmission route (e.g. “I feel more sympathetic toward women who get HIV/AIDS from blood transfusions than those who get it from injection drug use.”)
A total score ($\alpha=.82$) ranging from 27 to 135, can be calculated with higher scores reflecting more positive attitudes towards women with HIV/AIDS. The aforementioned internal reliability scores were calculated during scale development. In this study, the total score on the ATWAS was used to assess participant attitudes toward women with HIV. The Cronbach’s alpha for this sample was .73 for the total score.

**3.2.4 Attitudes Toward AIDS Scale (ATAS).** The ATAS (see Appendix D) is a measure that assesses attitudes toward HIV/AIDS and HIV/AIDS related knowledge using two 25-item scales (Goh, 1993). The Attitudes scale is scored on a 5-point Likert type scale (1=strongly disagree and 5=strongly agree) and contains 2 subscales (Attitudes toward Issues and Attitudes toward Persons) with higher scores indicating more positive attitudes towards HIV and PWAs. Sample questions from the ATAS Attitude subscale include: “I would avoid having contact with persons who have AIDS” and “Person with AIDS deserve support from their families and community.” An overall Attitudes total score can be computed. Total scores range from 25-125 on the Attitudes scale. The Knowledge scale has a true-false format ($\alpha=.82$). Scores on the Knowledge scale range from 0-25, with higher scores reflecting greater knowledge of HIV. Items on the Knowledge scale include: “Only homosexuals get AIDS” and “One can get AIDS by sharing a meal with a person who has AIDS.” Due to advances in treatment, the diversification of HIV infection, greater knowledge of the virus, and the fact that this measure was created approximately 13 years ago, the questions and their answers were reviewed for current accuracy. Several changes were made to the scoring of the ATAS. The changes made were based on information provided by the Centers for Disease Control (www.cdc.gov/hi/pubs/faq.39.htm). Specifically, responses to the following
questions were altered: “AZT is the only drug approved by the U.S. Food and Drug Administration for the treatment of AIDS” and “About 400,000 people in the United States are infected with the HIV virus”. These changes did not affect the range of total scores on the measure. In the present study, the total Attitudes scale score was used to assess attitudes towards HIV and the Knowledge scale score was used to assess participant knowledge.

The ATAS was developed using a sample of undergraduate and graduate students at an urban public university on the East coast. The developer reported a test-retest reliability of .74 for the Attitudes subscale and .82 for the Knowledge subscale (Goh, 1993). Goh reported reliability scores for the development sample ranging from .81 for the Attitudes subscale from undergraduates to .82 for the graduates students and .80 and .81 for undergraduate and graduate scores on the Knowledge subscale. The reliability coefficients for the present study were $\alpha = .72$ for the Attitudes subscale and $\alpha = .59$ for the Knowledge subscale.

3.2.5 Balanced Inventory of Desirable Responding-6 (BIDR-6). The BIDR-6 (see Appendix E) (Paulhus, 1991) assesses social desirability responding using a 40 item instrument that consists of 2 subscales, Self-Deception (tendency to give positively biased self-reports) and Impression Management (deliberate self-presentation to an audience). Each item is rated on a 7-point Likert type scale ranging from 1 (not true), 4 (somewhat true), and 7 (very true) with higher scores reflecting exaggerated responding. The Impression Management subscale measures the tendency of individuals to over-report desirable behaviors and underreport desirable ones in order to obtain social approval (e.g. “I never swear”; I have never dropped litter on the street”). For the
purpose of this study the Impression Management subscale was used to assess social
desirability among the participants. Paulhus (1991) suggests assigning 1 point for each
extreme response of a 6 or 7 after reverse scoring the negatively keyed items. This will
lead to the scores on the Impression Management subscale ranging from 0 to 20, with
higher scores representing increased socially desirable responding. Paulhus (1991)
reported means for college student samples of 4.3 for males (SD= 3.1) and 4.9 (SD= 3.2)
for females in 1988 and an overall mean of 11.9 (SD=4.5) in 1984. Previous studies have
reported internal consistency ranging from .75 to .86. Paulhus (1991) reported a test-
retest reliability correlation of .65. A Cronbach’s alpha coefficient of .67 was reported
for the current sample.

3.2.6 Vignettes. Each participant responded to two brief vignettes describing an
HIV positive African American woman. Both vignettes use the same character
(Aminah, a 23-year-old African American, heterosexual female), but each details a
different mode of transmission. Vignette A (see Appendix F) describes a passive route of
transmission (contracting HIV via sexual assault). Vignette B (see Appendix G) describes
an active route of transmission (contracting HIV via intravenous drug use). Each
participant read both vignettes and responded to 12 questions after each vignette with
four of twelve questions assessing beliefs regarding controllability (Aminah’s illness was
under her personal control; It was something that Aminah did that caused her illness;
Aminah could not have prevented her illness; Aminah had no control over the cause of
her illness), four of twelve questions assessing responsibility (Aminah is responsible for
her illness.; Aminah is accountable for her illness; Aminah’s illness is not a result of her
own negligence; Aminah should not be held personally liable for her illness), and four of
twelve questions assessing blame (Aminah is to blame for her illness; It is her own fault that she is ill; Aminah does not deserve what happened to her; Aminah should not feel guilty for being ill) for HIV infection. Each question was rated on a 4-point Likert type scale ranging from 1 (strongly disagree) to 4 (strongly agree) with higher responses reflecting greater levels of perceived responsibility, controllability and blame for infection. Total scores for each set of four questions are calculated by adding the participant’s scores for the four questions that comprised each subscale. Two questions in each set required reverse scoring prior to calculating the total scores for the subscales. Total scores on each subgroup of questions (controllability, responsibility, and blame) range from 4 to 16 with higher scores indicating greater perceptions of control, responsibility, and blame attributed to the character in the vignette. The questions used in this study were adapted from research by Mantler, Schellenberg, and Page (2003) involving 222 undergraduate students in introductory psychology course in the United Kingdom. The authors reported an internal reliability of .91, .91, and .82 for the Controllability, Responsibility, and Blame subscales respectively. In the present study, for the passive level of agency (Scenario A, sexual assault scenario) Cronbach’s alpha of .77, .77, and .76 were computed for the controllability, responsibility, and blame subscales respectively. For the controllability, responsibility, and blame questions for the active level of agency (Scenario B, intravenous drug), internal reliability coefficients of .83, .83, and .82 were computed respectively.
3.3 Procedure

Students in Introductory Psychology accessed the Research Experience Program website, read a brief description of the present study (see Appendix H), and select the proposed study from a list of several research projects. Each experimental session was restricted by gender (males only or females only), thus students were instructed to sign up for the sections that were for their respective gender. This allowed the researcher to ensure that equal numbers of males and females participated in the experiment. The students volunteered to participate in this study completed the instruments in a group setting in a designated location at a specified time. Upon entering the room, students were instructed to sign their name in the space provided next to their first initial and last name on a sign-in sheet to record their attendance, ensuring they would receive REP credit. Once the students were seated, they were randomly given a questionnaire packet (Protocol A or Protocol B). Each packet contained a demographics questionnaire, the two vignettes, ATAS, ATWAS, Self-Efficacy Instrument for Protective Behaviors, and the BIDR-6. The questionnaire packets in this study were constructed with 100 of the questionnaire packets containing the instruments in the order discussed previously and with 100 packets presented in reverse order. Alternating the order of the instruments within the survey packets was an attempt to account for order effect in the sample. Prior to beginning the survey, the researcher read out loud to the participants an introductory statement (see Appendix I) that they were also given briefly discussing the nature of the study. The participants then completed the survey packet. It took an average of 20 minutes for the participants to complete the survey packet. Total questionnaire completion time ranged from 15 minutes to 35 minutes. Upon completion of the survey,
participants returned the surveys to the researcher and received a debriefing letter which thanked them for their participation and provided participants with additional information regarding the nature of the study and the contact information of the researcher (see Appendix J).
CHAPTER 4
RESULTS

4.1 Demographics

Two hundred undergraduate students taking introductory psychology were recruited through the website for the Research Experience Program which allows students to receive course credit for participating in research experiments. One hundred male and 100 female college students completed the questionnaire packet. The modal student that participated in this study was single (n= 199), heterosexual (n= 195), White (n =168) and 19 years of age. Most of the students identified as being first year students (n=119) with majors in the colleges of art (n=32), engineering (n= 23), human ecology (n= 22) or were undecided (n= 22). A majority of students reported being Christian (n=148) and participated in religious worship practices between 0 and 2 times per month (n=149). Fifty-seven percent of students (n = 113) engaged in volunteer or community service activities. Reported contact with HIV positive individuals was low, with 17 students (8.4%) reporting volunteering with HIV infected populations and 46 (22.8%) having knowledge of someone with HIV/AIDS.
4.2 Test for Order Effect

Two versions of the questionnaire packet were used in this study. Version A contained the measures in the following order: demographic questionnaire, SEPSB, ATWAS, ATAS, BIDR-6, sexual assault vignette, and intravenous drug use vignette. Whereas, version B contained the measures in the following order: sexual assault vignette, intravenous drug use vignette, BIDR-6, ATAS, ATWAS, SEPSB, and demographic questionnaire. Independent samples t-tests were performed on the data to determine the influence of the order of items on participant responses. The t-tests showed that the varied order of the subscales on the two versions (A and B) of the questionnaire packet did not influence participants’ responses (see Table 4.1). Therefore, data from versions A and B of the questionnaire packet were not analyzed separately.
Three correlation analyses were performed to assess several relationships between the study’s variables. Two planned correlation analyses were performed to assess: 1) the relationship between all of the study’s variables including attitudes, knowledge, and the
impact of mode of transmission on the attributions made among all participants and 2) the impact of gender on attitudes, knowledge, and modes of transmission and attributions.

Since a substantial number of students of color [African American (n= 10); African (n=1); Asian/Asian American (n= 10); Caribbean (n= 1); Hispanic (n= 4); Multi-Racial (n=3); American Indian/Alaskan Native (n=1)] participated in the study, a third post-hoc correlation analysis was performed to determine if race affected the pattern of responding of the participants.

The first correlation matrix, examined the relationship among the study’s variable among all participants. In the first analysis (see Table 4.2) attitudes towards HIV/AIDS were found to be negatively and moderately correlated with attitudes towards women with HIV (r= -.60, p<.01). This suggests that the more positive students’ attitudes are towards women with HIV/AIDS, the more negative their attitudes are towards HIV/AIDS, or vice versa. Confidence in one’s ability to engage in protective behaviors was weakly correlated with attitudes towards HIV/AIDS (r = .21, <.01).

Students who felt confident in their ability to protect themselves had more positive attitudes about HIV/AIDS. These relationships suggest that students with more positive attitudes towards HIV/AIDS and related issues are more likely to have faith in their ability to protect themselves from contracting the illness.

The correlations among attribution subscales of the sexual assault vignette were weaker than those among attributions subscales of the intravenous drug use vignette. Attitudes toward AIDS were weakly correlated with control (r =-.23, p<.01), responsibility (r =-.18, p<.05), and blame (r =-.33, p<.01) for contracting HIV via sexual assault in vignette A, while attitudes towards women with HIV/AIDS was weakly
correlated with blame \((r = .16, p < .05)\) for contracting HIV and control \((r = .25, p < .001)\) over contracting HIV in vignette A. When the character contracted HIV via sexual assault, participants with positive attitudes toward HIV/AIDS were less likely to attribute blame, control, and responsibility to the infected person. HIV-related knowledge was weakly correlated with attributions of control in vignette A \((r = -.23, p < .01)\). Confidence in one’s ability to engage in sexually protective behaviors was negatively correlated to attributions of control over contracting HIV via sexual assault \((r = -.17, p < .05)\).

Moderate positive correlations were found between the attribution subscales (control, responsibility, and blame) of the scenario in which the character contracted HIV via intravenous drug use (vignette B). Attributions of control were correlated with responsibility \((r = .82, p < .01)\), and blame \((r = .63, p < .01)\), while blame was correlated with responsibility \((r = .69, p < .01)\). The amount of control the subjects attributed to the character for being infected is related to the amount of responsibility and blame attributed to the character for engaging in behaviors which led to HIV infection.

The attributions made about the character in vignette B were also weakly correlated with personal contact with HIV infected persons as measured by the two demographic questions regarding volunteering with the population and having knowledge of persons with the illness. Having knowledge of an HIV infected individual was positively related to attributions of control \((r = .20, p < .01)\) and responsibility \((r = .17, p < .05)\). These correlations suggest that attitudes and knowledge are related to attributions of control, responsibility, and blame of a person infected with HIV formed by students.
In the second correlation analysis, gender was used as the grouping variable to determine if the gender of the respondent influences perceptions of persons with HIV. When scores were compared by gender, similar correlation patterns were found for men and women (see Table 4.3). However, for female students, attributions of blame made about the character that contracted HIV from sexual assault were negatively correlated with attributions of control \( (r = -0.33, p<0.01) \) and responsibility \( (r = -0.21, p<0.05) \) made about the character that contracted HIV from using intravenous drugs.

As previously stated, a third correlation analysis was performed post-hoc comparing scores by race because a sizeable number of students of color participated in the study (see Table 4.3). Since several racial groups contained small numbers of participants, race was dummy coded into two groups, White and non-White [African American \((n=10)\); African \((n=1)\); Asian/Asian American \((n=10)\); Caribbean \((n=1)\); Hispanic \((n=4)\); Multi-Racial \((n=3)\); American Indian/Alaskan Native \((n=1)\)] students. The analysis shows that for White students, attitudes towards HIV/AIDS was moderately correlated with knowledge \( (r = 0.47, p<0.01) \), attitudes toward women \( (r = -0.60, p<0.01) \), and protective behaviors self-efficacy \( (r = 0.42, p<0.05) \). For students of color, only attitudes toward women were moderately correlated with attitudes towards HIV/AIDS \( (r = -0.60, p<0.01) \) and weakly correlated with self-efficacy to engage in protective sexual behaviors \( (r = 0.17, p<0.05) \).

When examining the correlations between measures of attitude and knowledge and the attribution scores from the two vignettes, among students of color and White students several differences and similarities were seen. For students of color, attitudes towards HIV/AIDS were weakly correlated with control \( (r = -0.19, p<0.01) \),
responsibility (r = -.16, p<.05), and blame (r = -.30, p<.01) attributions toward the character that contracted HIV via sexual assault. For White students, attitudes towards HIV were moderately associated with attributions of responsibility (r = -.55, p<.01) and blame (r = -.51, p<.01) in vignette A. Additionally for white students, a moderate correlation was computed between attitudes towards women with HIV/AIDS and attributions of responsibility (r = .74, p<.01) and blame in vignette A (r = .47, p<.01). Attitudes toward women with HIV/AIDS scores were not correlated with attributions made by students of color for vignette A or B. For students of color a positive moderate correlation was found between attitudes of responsibility and blame in vignette A (r = .42, p<.01). This relationship was not found for White students. It should be noted that the lower correlations found among students of color could be a function of the small number of respondents of color in the study. As in the previous correlations, moderate to strong correlations were found between control, responsibility, and blame attributions toward the characters that contracted HIV via intravenous drug use for all students.
<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.13</td>
<td>-60**</td>
<td>.21**</td>
<td>.23**</td>
<td>-.18*</td>
<td>-.33**</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>-.04</td>
<td>.11</td>
<td>-.23**</td>
<td>-.07</td>
<td>.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>-.08</td>
<td>.25**</td>
<td>.05</td>
<td>.16*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>-.17*</td>
<td>-.08</td>
<td>-.12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.37**</td>
<td>.34**</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.41**</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(continued)</td>
</tr>
</tbody>
</table>

Table 4.2: Correlations Among the Study’s Variables
Table 4.2 (continued)

<table>
<thead>
<tr>
<th></th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Attitudes</td>
<td>.13</td>
<td>.04</td>
<td>-.09</td>
<td>-.05</td>
<td>-.03</td>
<td>.23**</td>
<td>-.08</td>
</tr>
<tr>
<td>2. Knowledge</td>
<td>.03</td>
<td>.06</td>
<td>.02</td>
<td>-.04</td>
<td>.11</td>
<td>.09</td>
<td>.00</td>
</tr>
<tr>
<td>3. ATWAS Total</td>
<td>-.10</td>
<td>-.02</td>
<td>.11</td>
<td>.01</td>
<td>-.05</td>
<td>-.11</td>
<td>.03</td>
</tr>
<tr>
<td>4. SEPSB</td>
<td>.06</td>
<td>.05</td>
<td>-.02</td>
<td>.01</td>
<td>-.02</td>
<td>.32**</td>
<td>.20**</td>
</tr>
<tr>
<td>5. Control A</td>
<td>-.21**</td>
<td>-.20**</td>
<td>-.14</td>
<td>-.06</td>
<td>-.04</td>
<td>-.11</td>
<td>.00</td>
</tr>
<tr>
<td>6. Responsibility A</td>
<td>-.29**</td>
<td>-.22**</td>
<td>-.13</td>
<td>-.08</td>
<td>-.06</td>
<td>-.18*</td>
<td>-.03</td>
</tr>
<tr>
<td>7. Blame A</td>
<td>-.23**</td>
<td>-.20**</td>
<td>-.12</td>
<td>.02</td>
<td>.09</td>
<td>-.21**</td>
<td>-.09</td>
</tr>
<tr>
<td>8. Control B</td>
<td>.82**</td>
<td>-.63**</td>
<td>.20**</td>
<td>.05</td>
<td>.13</td>
<td>.11</td>
<td></td>
</tr>
<tr>
<td>9. Responsibility B</td>
<td>-.69**</td>
<td>.17*</td>
<td>.13</td>
<td>.10</td>
<td>.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Blame B</td>
<td>.11</td>
<td>.10</td>
<td>-.07</td>
<td>-.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Knowledge of HIV + Person</td>
<td>.26**</td>
<td>.09</td>
<td>-.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Volunteer with HIV + People</td>
<td>.05</td>
<td>-.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. BIDR-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.14*</td>
</tr>
</tbody>
</table>

Note. ATAS= Attitude Towards AIDS Scale (Goh, 1993); ATWAS= Attitudes Towards Women with AIDS Scale (O’Hea, et al, 2001); SEPSB= Self-Efficacy Instrument or Protective Sexual Behaviors (Cecil & Pinkerton, 1998); BIDR-6= Balanced Inventory of Desirable Responding (Paulhus, 1991); Control, Responsibility, Blame A= Vignette A; Control, Responsibility, Blame B=Vignette B

Attitudes and Knowledge are the subscales from the ATAS.

* p<.05
** p<.01
<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Attitudes</td>
<td>.18</td>
<td>-.67**</td>
<td>.12</td>
<td>-.07</td>
<td>-.19</td>
<td>-.36**</td>
<td>.05</td>
<td>.04</td>
<td>-.07</td>
<td></td>
</tr>
<tr>
<td>2. Knowledge</td>
<td>.11</td>
<td>-.09</td>
<td>.15</td>
<td>-.20*</td>
<td>-.08</td>
<td>-.04</td>
<td>.01</td>
<td>.09</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>3. ATWAS Total</td>
<td>-.54**</td>
<td>.02</td>
<td>-.12</td>
<td>.17</td>
<td>.14</td>
<td>.16</td>
<td>-.01</td>
<td>.01</td>
<td>.15</td>
<td></td>
</tr>
<tr>
<td>4. SEPSB</td>
<td>.15</td>
<td>-.00</td>
<td>.03</td>
<td>-.16</td>
<td>.04</td>
<td>-.16</td>
<td>.01</td>
<td>.06</td>
<td>-.06</td>
<td></td>
</tr>
<tr>
<td>5. Control A</td>
<td>-.28**</td>
<td>-.26**</td>
<td>.32**</td>
<td>-.14</td>
<td>.39**</td>
<td>.33**</td>
<td>-.11</td>
<td>-.17</td>
<td>-.08</td>
<td></td>
</tr>
<tr>
<td>6. Resp. A</td>
<td>-.08</td>
<td>-.01</td>
<td>-.08</td>
<td>-.15</td>
<td>.33**</td>
<td>.42**</td>
<td>-.22**</td>
<td>-.22*</td>
<td>-.06</td>
<td></td>
</tr>
<tr>
<td>7. Blame A</td>
<td>-.29**</td>
<td>.16</td>
<td>-.16</td>
<td>-.05</td>
<td>.35**</td>
<td>.39**</td>
<td>-.15</td>
<td>-.17</td>
<td>-.14</td>
<td></td>
</tr>
<tr>
<td>8. Control B</td>
<td>.21*</td>
<td>.03</td>
<td>-.19</td>
<td>.09</td>
<td>-.33**</td>
<td>-.37**</td>
<td>-.32**</td>
<td>.84**</td>
<td>.64**</td>
<td></td>
</tr>
<tr>
<td>9. Resp. B</td>
<td>.04</td>
<td>.01</td>
<td>-.05</td>
<td>-.02</td>
<td>-.21*</td>
<td>-.22*</td>
<td>-.23*</td>
<td>.80**</td>
<td>.69**</td>
<td></td>
</tr>
<tr>
<td>10. Blame B</td>
<td>-.15</td>
<td>.01</td>
<td>.07</td>
<td>-.01</td>
<td>-.19</td>
<td>-.22*</td>
<td>-.10</td>
<td>.63**</td>
<td>.68**</td>
<td></td>
</tr>
</tbody>
</table>

(Continued)

Note. The values in the upper diagonal are those for 100 males and those in the lower diagonal are for 100 females.

ATAS = Attitude Towards AIDS Scale (Goh, 1993); ATWAS = Attitudes Towards Women with AIDS Scale (O’Hea, et al, 2001); SEPSB = Self-Efficacy Instrument or Protective Sexual Behaviors (Cecil & Pinkerton, 1998); BIDR-6 = Balanced Inventory of Desirable Responding (Paulhus, 1991); Control, Responsibility, Blame A = Vignette A; Control, Responsibility, Blame B = Vignette B

*  p<.05
** p<.01

Table 4.3: Correlations Among Variables in Male and Female College Students
Table 4.3 (continued)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Attitudes</td>
<td>-09</td>
<td>-05</td>
<td>.34**</td>
<td>-05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Knowledge</td>
<td>.15</td>
<td>.10</td>
<td>.15</td>
<td>.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>ATWAS</td>
<td>.04</td>
<td>-02</td>
<td>-25*</td>
<td>.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>SEPSB</td>
<td>-06</td>
<td>.02</td>
<td>.26**</td>
<td>.36**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Control A</td>
<td>-08</td>
<td>-07</td>
<td>-17</td>
<td>.14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Resp. A</td>
<td>-.11</td>
<td>.01</td>
<td>-.13</td>
<td>.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Blame A</td>
<td>-.01</td>
<td>.11</td>
<td>-.19</td>
<td>-.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Control A</td>
<td>.24</td>
<td>.02</td>
<td>.03</td>
<td>.14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Resp. B</td>
<td>.11</td>
<td>.12</td>
<td>.05</td>
<td>.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Blame B</td>
<td>.06</td>
<td>.09</td>
<td>-.17</td>
<td>-.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Knowledge of HIV + Person</td>
<td>-.09</td>
<td>.10</td>
<td>.01</td>
<td>.02</td>
<td>.01</td>
<td>.01</td>
<td>.07</td>
<td>.13</td>
<td>.25*</td>
<td>.17</td>
<td>.28**</td>
<td>.03</td>
<td>-.01</td>
</tr>
<tr>
<td>12.</td>
<td>Volunteer with HIV + People</td>
<td>-.03</td>
<td>.11</td>
<td>-.07</td>
<td>-.11</td>
<td>.07</td>
<td>.01</td>
<td>.07</td>
<td>.08</td>
<td>.13</td>
<td>.11</td>
<td>.22*</td>
<td>.05</td>
<td>-.04</td>
</tr>
<tr>
<td>13.</td>
<td>BIDR-6</td>
<td>.03</td>
<td>-.01</td>
<td>.03</td>
<td>.33**</td>
<td>-.03</td>
<td>-.21*</td>
<td>-.21</td>
<td>.23*</td>
<td>.16</td>
<td>.03</td>
<td>.19</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Worship Practices</td>
<td>-.09</td>
<td>.10</td>
<td>-.01</td>
<td>.05</td>
<td>-.20</td>
<td>-.09</td>
<td>.01</td>
<td>.07</td>
<td>.07</td>
<td>.07</td>
<td>-.04</td>
<td>-.03</td>
<td>.11</td>
</tr>
</tbody>
</table>
Table 4.4: Correlations among Variables in White and Non-White College Students

Note. The values in the upper diagonal are those for 30 non-White [African American (n= 10); African (n=1); Asian/Asian American (n= 10); Caribbean (n= 1); Hispanic (n= 4); Multi-Racial (n=3); American Indian/Alaskan Native (n=1)] and those in the lower diagonal are for 168 White students.

ATAS= Attitude Towards AIDS Scale (Goh, 1993); ATWAS= Attitudes Towards Women with AIDS Scale (O’Hea, et al, 2001); SEPSB= Self-Efficacy Instrument or Protective Sexual Behaviors (Cecil & Pinkerton, 1998); BIDR-6= Balanced Inventory of Desirable Responding (Paulhus, 1991); Control, Responsibility, Blame A= Vignette A; Control, Responsibility, Blame B=Vignette B

*  p<.05
** p<.01
<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Attitudes</td>
<td>.47**</td>
<td>-.60**</td>
<td>.42*</td>
<td>-.55**</td>
<td>-.34</td>
<td>-.51**</td>
<td>.13</td>
<td>.06</td>
<td>-.15</td>
<td></td>
</tr>
<tr>
<td>2. Knowledge</td>
<td>.09</td>
<td>-.19</td>
<td>.31</td>
<td>-.23</td>
<td>-.10</td>
<td>-.04</td>
<td>-.07</td>
<td>.08</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>3. ATWAS Total</td>
<td>-.60**</td>
<td>.01</td>
<td>-.21</td>
<td>.74**</td>
<td>.28</td>
<td>.47**</td>
<td>-.07</td>
<td>.03</td>
<td>.30</td>
<td></td>
</tr>
<tr>
<td>4. SEPSB</td>
<td>.17*</td>
<td>.12</td>
<td>-.05</td>
<td>-.16</td>
<td>-.10</td>
<td>-.27</td>
<td>.13</td>
<td>-.00</td>
<td>-.11</td>
<td></td>
</tr>
<tr>
<td>5. Control A</td>
<td>-.19**</td>
<td>-.22**</td>
<td>.14</td>
<td>-.19*</td>
<td>.30</td>
<td>.50**</td>
<td>-.12</td>
<td>-.09</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>6. Responsibility A</td>
<td>-.16*</td>
<td>-.06</td>
<td>-.01</td>
<td>-.08</td>
<td>.38**</td>
<td>.36</td>
<td>-.39*</td>
<td>-.30</td>
<td>-.25</td>
<td></td>
</tr>
<tr>
<td>7. Blame A</td>
<td>-.30**</td>
<td>.05</td>
<td>-.09</td>
<td>-.09</td>
<td>.32**</td>
<td>.42**</td>
<td>-.19</td>
<td>.07</td>
<td>.09</td>
<td></td>
</tr>
<tr>
<td>8. Control B</td>
<td>.15</td>
<td>.03</td>
<td>-.10</td>
<td>.06</td>
<td>-.23**</td>
<td>-.27**</td>
<td>-.24**</td>
<td>.79**</td>
<td>.72**</td>
<td></td>
</tr>
<tr>
<td>9. Responsibility B</td>
<td>.07</td>
<td>.01</td>
<td>-.02</td>
<td>.05</td>
<td>-.20**</td>
<td>-.21**</td>
<td>-.25**</td>
<td>.83**</td>
<td>.79**</td>
<td></td>
</tr>
<tr>
<td>10. Blame B</td>
<td>-.07</td>
<td>.01</td>
<td>.06</td>
<td>-.00</td>
<td>-.18*</td>
<td>-.12</td>
<td>-.16*</td>
<td>.62**</td>
<td>.67**</td>
<td></td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Attitudes</td>
<td>-.15</td>
<td>-.15</td>
<td>.40*</td>
<td>.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Knowledge</td>
<td>-.27</td>
<td>.08</td>
<td>.36*</td>
<td>.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. ATWAS</td>
<td>.13</td>
<td>-.23</td>
<td>-.22</td>
<td>.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. SEPSB</td>
<td>-.03</td>
<td>.12</td>
<td>.55**</td>
<td>.31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Control A</td>
<td>.25</td>
<td>-.10</td>
<td>-.26</td>
<td>-.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Resp. A</td>
<td>.10</td>
<td>-.16</td>
<td>-.05</td>
<td>-.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Blame A</td>
<td>.16</td>
<td>.08</td>
<td>.23</td>
<td>-.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Control B</td>
<td>.28</td>
<td>-.04</td>
<td>-.05</td>
<td>.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Resp. B.</td>
<td>.25</td>
<td>.05</td>
<td>-.14</td>
<td>.16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Blame B</td>
<td>.01</td>
<td>-.09</td>
<td>-.17</td>
<td>.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Knowledge w/-.03 of HIV + Person</td>
<td>-.01</td>
<td>.00</td>
<td>.04</td>
<td>-.12</td>
<td>-.13</td>
<td>-.02</td>
<td>.17*</td>
<td>.13</td>
<td>.12</td>
<td>.41*</td>
<td>.03</td>
<td>.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Volunteer w/-.10 HIV+ People</td>
<td>-.09</td>
<td>.03</td>
<td>-.04</td>
<td>-.06</td>
<td>-.05</td>
<td>.09</td>
<td>.08</td>
<td>.16*</td>
<td>.15</td>
<td>.19*</td>
<td>.04</td>
<td>.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. BIDR-6</td>
<td>.20**</td>
<td>.04</td>
<td>-.09</td>
<td>.27**</td>
<td>-.09</td>
<td>-.20**</td>
<td>.18*</td>
<td>.16*</td>
<td>-.04</td>
<td>.11</td>
<td>.06</td>
<td>.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Worship Practices</td>
<td>-.09</td>
<td>-.03</td>
<td>.03</td>
<td>.19*</td>
<td>-.01</td>
<td>-.02</td>
<td>-.09</td>
<td>.06</td>
<td>.03</td>
<td>-.04</td>
<td>-.05</td>
<td>-.06</td>
<td>.15</td>
<td></td>
</tr>
</tbody>
</table>
4.4 Socially Desirable Responding

Impression management was assessed in the study’s sample to determine if students were responding in a manner that reflected their true attitudes and perceptions. Scores on the BIDR-6 suggest that students in this sample were answering truthfully and were not presenting themselves in a more favorable manner. Students’ average scores on the impression management subscale were similar to those reported by Paulhus (1991) mentioned in the preceding chapter for college students. No significant differences were found in students’ responses on the bases of gender, race, or version of the questionnaire packet completed. Impression management was correlated with several of the study’s variables. For example, impression management was positively correlated with SEPSB scores (r = .32, p < .01) and ATAS Attitudes scores (r = .23, p < .01) for the sample. However, the relationships between impression management and SEPSB scores (r = .40, p < .05) and ATAS Attitudes scores (r = .55, p < .01) were strongest for White students. Additionally, impression management was negatively correlated with responsibility (r = -.18, p < .05) and blame (r = -.21, p < .01) scores for the sexual assault vignette of participants. Therefore these correlations suggest that there is a relationship between higher impression management scores and more positive attributions of the victim in the sexual assault vignette. Overall, the participants’ scores on the impression management scale were low suggesting, that participants were not answering in socially desirable manner. However, when examining specific factors, the findings suggest that students may have been responding in a more socially appropriate way and not responding in an manner congruent with their beliefs.
4.5 Personal Contact

In this study, the amount of personal contact that students have with HIV infected persons was assessed by two questions: “1) Do you know anyone who is HIV positive and 2) Have you ever volunteered with an organization that serves HIV/AIDS infected individuals?”. Personal contact was not associated with measures of attitudes, knowledge or self-efficacy. Thus the hypothesis that personal contact with an HIV infected person will be related to positive attitudes toward those infected was not supported. However, having interactions with HIV positive persons was associated with attributions. Knowing someone with HIV was associated with control (r =.20, p<.01) and responsibility (r = .17, p<.05) attributions made about HIV victims that contracted HIV through intravenous drug use, suggesting that knowledge of an infected individual is related to more negative views of those infected through an active mode. For male students, knowing persons with HIV was weakly associated with attributing control to the HIV infected victim of a sexual assault (r =.24, p<.05).

4.6 Attitudes towards Individuals with HIV/AIDS and Women with HIV/AIDS

Mean scores for the ATWAS and the ATAS Attitudes subscale were calculated to determine the average attitudes of the respondents. In order to determine if the gender of the respondents influenced attitudes towards women with HIV and towards HIV/AIDS, independent t-tests were performed. A one-way ANOVA was completed to assess the impact of race on the attitudes of the students in the sample. The students’ responses were also analyzed to determine which issues larger number of students expressed uncertain or neutral attitudes.
As hypothesized, the participants in this study had positive attitudes towards HIV/AIDS. The mean scores of the study’s variables (see Table 4.5) show that the students have positive attitudes toward HIV/AIDS (M= 98.16, SD = 10.66). Independent t-tests (see Table 4.6) show that students scores on the ATAS Attitude subscale differ significantly by gender, t (198)= -4.16, p<.05. Female students’ (M= 101.17) attitudes towards AIDS were significantly more positive than male students attitudes (M= 95.14). This finding supports the hypothesis that females would express more positive attitudes toward HIV/AIDS than males. The students’ attitudes towards HIV/AIDS did not vary significantly by race as illustrated by the results of the one-way ANOVA.

It was hypothesized that participants will have positive attitudes towards women with HIV/AIDS. However, students expressed scores at the 50th percentile of possible scores on the ATWAS (M = 64.66, SD =11.19). This score suggests that students’ attitudes towards women with HIV were moderate and not extremely negative or positive. An independent t-test revealed that there was no mean difference in students’ scores due to gender, t (198) = 1.145, p =.25. Therefore, the hypothesis that female participants will express more positive attitudes toward women with HIV than male participants was not proven. Likewise, the one-way ANOVA shows that students’ attitudes towards women with HIV did not vary significantly by race, F(1, 196) = 1.70, p =.19. When examining student responses, students replied with uncertainty to several items on the ATWAS. Larger number of students responded “unsure” to questions regarding modes of transmission in women and behaviors of HIV infected women. Nearly half of students (43.6%) responded that they were unsure if: “Most women with HIV/AIDS have been infected by their heterosexual partner who is an injection drug
user”. Around 30 percent of students reported being “unsure” if: 1) “Women with HIV/AIDS should be allowed to have children” (34.2%); 2) “Women with HIV/AIDS should be sterilized (or have their tubes tied) so they cannot have children” (30.2%); and 3) “Most women with HIV/AIDS sell their bodies for drugs” (31.7%).

4.7 HIV-related Knowledge

The HIV-related knowledge of college students was assessed in this study. It was hypothesized that participants will be knowledgeable about HIV/AIDS. The mean score of the ATAS knowledge scale supports this hypothesis and shows that the students in the sample appeared highly knowledgeable of HIV (M = 20.93, SD = 1.86) (see Table 4.5) answering on average 80 percent of the questions correctly. Students who expressed extremely high levels of knowledge and extremely low levels of HIV knowledge were identified. Twenty-three of the students surveyed scored in the 90th percentile answering at least 23 of 25 questions correctly. While 28 students scored in the 10th percentile answering 18 questions or less correctly.

The scores of male and female respondents were compared using an independent samples t-test. The independent t-test showed that mean scores on the ATAS knowledge scale did not differ significantly by gender, t (198) = -4.106, p =.161 (see Table. 4.6). A one-way ANOVA was also performed to determine if White and non-White students varied in their HIV–related knowledge. The one-way ANOVA comparing responses of White students and students of color (see Table 4.7) shows that White students were significantly more knowledgeable than students of color, F(1, 196) = 9.79, p <.01.
Additionally, the questions that a larger number of students answered incorrectly were identified to determine the misconceptions about HIV that exist among this student population. When examining the items on the ATAS knowledge scale a majority of students inaccurately answered questions regarding treatment of HIV ("AZT is the only drug approved by the U.S. Food and Drug Administration for the treatment of AIDS."—50%) and the number of people infected with the illness in the U.S. ("About 400,000

<table>
<thead>
<tr>
<th>Scale</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATAS Attitudes</td>
<td>98.16</td>
<td>10.66</td>
</tr>
<tr>
<td>ATAS Knowledge</td>
<td>20.94</td>
<td>1.86</td>
</tr>
<tr>
<td>ATWAS Total Scale</td>
<td>64.66</td>
<td>11.19</td>
</tr>
<tr>
<td>SEPSB</td>
<td>68.94</td>
<td>10.32</td>
</tr>
<tr>
<td>Control A</td>
<td>5.40</td>
<td>1.93</td>
</tr>
<tr>
<td>Responsibility A</td>
<td>5.56</td>
<td>2.03</td>
</tr>
<tr>
<td>Blame A</td>
<td>4.86</td>
<td>1.47</td>
</tr>
<tr>
<td>Control B</td>
<td>14.44</td>
<td>2.53</td>
</tr>
<tr>
<td>Responsibility B</td>
<td>14.37</td>
<td>2.40</td>
</tr>
<tr>
<td>Blame B</td>
<td>12.53</td>
<td>3.02</td>
</tr>
<tr>
<td>BIDR-6</td>
<td>5.09</td>
<td>2.78</td>
</tr>
</tbody>
</table>

Table 4.5: Descriptive Statistics for the Attitudes towards AIDS Scale-Attitudes and Knowledge Subscales, Attitudes towards Women with AIDS Scale, Self-Efficacy for Protective Sexual Behaviors Scale, Attributions of Control Responsibility and Blame scores for Vignettes A and B, and the Balanced Inventory of Desirable Responding-6.
people in the United States are infected with the HIV virus” - 79.7%). Lesser numbers of students incorrectly answered questions regarding AIDS symptoms (“Impaired memory and concentration and motor deficits may occur in some AIDS patients” - 33.2%) and incubation stage of the virus outside of the body (“The AIDS virus can remain infectious outside the body for up to ten days if it is at room temperature” - 33.2%). However, these results should be interpreted with caution as the reliability coefficient of this subscale was low for this sample (α = .59).

It was been suggested that individuals of different racial/ethnic groups may possess various levels of HIV-related knowledge. Since several students of color participated in this study, a one-way analysis of variance (ANOVA) (see Table 4.8) was performed to determine if White students responded differently than students of color. The ANOVA shows that White students and students of color scored significantly different on the ATAS Knowledge subscale (F (1, 196) = 9.79, p < .01) with White students possessing greater HIV-related knowledge. However, due to the small number of participants in several racial categories, a contrast analysis could not be completed to further analyze the differences between racial group scores to determine which groups of minority students differed significantly from the White students in the sample.
<table>
<thead>
<tr>
<th>Scale</th>
<th>Males (N=100)</th>
<th>Females (N=100)</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>ATAS</td>
<td>95.14</td>
<td>11.55</td>
<td>101.17</td>
</tr>
<tr>
<td>Attitudes</td>
<td>20.75</td>
<td>1.96</td>
<td>21.12</td>
</tr>
<tr>
<td>ATWAS</td>
<td>65.56</td>
<td>10.70</td>
<td>63.75</td>
</tr>
<tr>
<td>SEPSB</td>
<td>65.60</td>
<td>10.81</td>
<td>72.27</td>
</tr>
<tr>
<td>Control A</td>
<td>5.58</td>
<td>2.00</td>
<td>5.21</td>
</tr>
<tr>
<td>Responsibility A</td>
<td>5.86</td>
<td>2.17</td>
<td>5.29</td>
</tr>
<tr>
<td>Blame A</td>
<td>4.93</td>
<td>1.53</td>
<td>4.78</td>
</tr>
<tr>
<td>Control B</td>
<td>14.26</td>
<td>2.77</td>
<td>14.61</td>
</tr>
<tr>
<td>Responsibility B</td>
<td>14.34</td>
<td>2.56</td>
<td>14.39</td>
</tr>
<tr>
<td>Blame B</td>
<td>12.40</td>
<td>3.21</td>
<td>12.65</td>
</tr>
<tr>
<td>BIDR-6</td>
<td>4.70</td>
<td>2.71</td>
<td>5.48</td>
</tr>
</tbody>
</table>

*p<.001

Table 4.6: Descriptive Statistics and Gender Comparisons for the Attitudes towards AIDS Scale-Attitudes and Knowledge Subscales (ATAS), Attitudes towards Women with AIDS Scale (ATWAS), Self-Efficacy for Protective Sexual Behaviors Scale (SEPSB), Attributions of Control Responsibility and Blame scores for Vignettes A and B, and the Balanced Inventory of Desired Responding-6.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Non-White (N=30)</th>
<th>White (N=168)</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATAS Attitudes</td>
<td>100.50</td>
<td>97.76</td>
<td>11.32</td>
<td>10.50</td>
<td>1.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATAS Knowledge</td>
<td>20.03</td>
<td>21.14</td>
<td>2.17</td>
<td>1.71</td>
<td>9.79**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATWAS</td>
<td>66.30</td>
<td>64.35</td>
<td>14.33</td>
<td>10.56</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEPSB</td>
<td>70.63</td>
<td>68.52</td>
<td>10.60</td>
<td>10.28</td>
<td>1.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control A</td>
<td>5.67</td>
<td>5.33</td>
<td>1.94</td>
<td>1.94</td>
<td>.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsibility A</td>
<td>5.57</td>
<td>5.57</td>
<td>1.81</td>
<td>2.08</td>
<td>.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blame A</td>
<td>4.87</td>
<td>4.86</td>
<td>1.46</td>
<td>1.48</td>
<td>.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control B</td>
<td>13.83</td>
<td>14.54</td>
<td>3.14</td>
<td>2.41</td>
<td>1.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsibility B</td>
<td>13.37</td>
<td>14.54</td>
<td>2.55</td>
<td>2.35</td>
<td>6.14*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blame B</td>
<td>12.33</td>
<td>12.56</td>
<td>3.21</td>
<td>3.02</td>
<td>.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIDR-6</td>
<td>5.37</td>
<td>5.04</td>
<td>3.00</td>
<td>2.76</td>
<td>.36</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note.

* p<.01

**p<.001

Table 4.7: Means, Standard Deviations, and Univariate F’s for Study’s Variables

Note: Non-white students include: African American (n= 10); African (n=1); Asian/Asian American (n= 10); Caribbean (n= 1); Hispanic (n= 4); Multi-Racial (n=3); American Indian/Alaskan Native (n=1)
4.8 Knowledge of Protective Behaviors and Ability to Engage in Protective Behaviors

The knowledge of students to engage in protective behaviors and their confidence to engage in these behaviors was assessed using the SEPSB. Students were hypothesized to be knowledgeable of protective behaviors. As hypothesized, students reported feeling knowledgeable of protective measures comfortable in their abilities to engage in protective sexual behaviors (M = 68.94, SD = 10.32). Differences in responses of students based on gender were compared using an independent samples t-test. Female students (M = 72.27, SD = 8.65) reported significantly higher confidence in their abilities than males students (M = 65.6, SD = 1.08), t (198) = -4.82, p<.05. A one way ANOVA was used to compare the responses of White and non-White students. The one-way ANOVA shows that students scores did not vary by race, F (1, 196) = 1.07, p = .30. Most students reported uncertainty in their ability to say “no” to engaging in sexual intercourse in the following situations by responding “Don’t know” to having sexual intercourse: 1) “with someone you want to date again” (24.3%); and 2) “with someone after you have been smoking marijuana” (28.7%). Students also expressed uncertainty in their ability to use a condom during sex after using marijuana (22.3%).

4.9 Attributions of Control, Responsibility, and Blame

Mode of transmission was suggested to influence attributions of control, responsibility, and blame made by respondents. A paired samples t-test was conducted to determine if students responded differently to the HIV infected individual described in the vignettes. To determine if the gender of the respondent influenced the attributions
that were made, an independent t-test was performed. A one-way analysis of variance was conducted to determine if the respondent’s race influenced the attributions made about the HIV positive woman described in the vignettes.

The paired samples t-test reveals that participants’ responses were significantly different on vignette A and vignette B (see Table 4.8). Participants’ attribution scores of control \( (t (199) = -36.59, p<.01) \), responsibility \( (t (199) = -35.77, p<.01) \), and blame \( (t (199) = -30.80, p<.01) \) were significantly higher on vignette B in which the victim contracted HIV through intravenous drug use than on vignette A in which the victim contracted HIV through sexual assault. The differences in scores suggest that students attributed more control, responsibility, and blame to the character who contracted HIV through intravenous drug use (vignette B) than the character who contracted HIV through sexual assault. Independent t-tests show that differences in male and female attributions did not differ significantly on the vignettes.

<table>
<thead>
<tr>
<th>Scale</th>
<th>M</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control A Total- Control B Total</td>
<td>-9.04</td>
<td>3.49</td>
<td>-36.59*</td>
</tr>
<tr>
<td>Responsibility A Total- Responsibility B Total</td>
<td>-8.79</td>
<td>3.48</td>
<td>-35.77*</td>
</tr>
<tr>
<td>Blame A Total- Blame B Total</td>
<td>-7.67</td>
<td>3.52</td>
<td>-30.80*</td>
</tr>
</tbody>
</table>

Note.

* \( p<.001 \)

Table 4.8: Paired Samples t-Test comparison of Attributions of Control, Responsibility, and Blame Scores for Vignettes A (Sexual Assault) and Vignettes B (Intravenous Drug Use).
A one way ANOVA showed that White students and students of color differed significantly on responsibility scores associated with vignette B. White students attributed greater responsibility to the character that contracted HIV through intravenous drug use, $F (1, 196) = 6.14, p < .01$ than students of color. Significant differences in attribution means by way of race were not found for the other attribution scores for either vignette.

Attributions of control and responsibility have been suggested to influence attributions of blame. A major part of this study was to determine if attributing control and responsibility to the victim for being HIV positive influenced the amount of blame placed on the individual for their predicament. Regression analyses were used to assess the influence of mode of transmission on the perception of African American women with HIV. Impression management scores were entered first to determine the impact of this factor on attributions of blame assigned to the individual for contracting HIV. The total score for attributions of control over contracting HIV and the total score for responsibility for contracting HIV were entered simultaneously to assess the impact they have on attributions of blame for being HIV positive.

For blame for contracting HIV via sexual assault in vignette A, attributions of control and responsibility were found to account for 22% of variance in blame scores, $F (3, 199) = 18.72, p < .001; R^2 = .22$ (adjusted $R^2 = .21$) (see Table 4.9). Attributions of control and responsibility contributed uniquely to the variance in the blame scores. The more control and responsibility assigned to the rape victim for being HIV positive was associated with higher attributions of blame for being HIV positive.
When assessing the influence of impression management and attributions of control and responsibility for an intravenous drug user being HIV positive, impression management, control and responsibility accounted for 51% of variance in blame scores on vignette B (see Table 4.10), $F(3, 199) = 66.66$, $p<.001$ (adjusted $R^2 = .51$). Therefore, the more control and responsibility students assigned to the intravenous drug user contracting HIV the greater the amount of blame they place on the victim for being HIV infected. Impression management had a negative relationship with blame scores with higher impression management scores associated with lower attributions of blame scores.

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE B</th>
<th>ß</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIDR-6</td>
<td>-.07</td>
<td>.03</td>
<td>-.13</td>
<td>-1.95ns</td>
</tr>
<tr>
<td>Control</td>
<td>.16</td>
<td>.05</td>
<td>.21</td>
<td>3.14*</td>
</tr>
<tr>
<td>Responsibility</td>
<td>.22</td>
<td>.05</td>
<td>.31</td>
<td>4.49**</td>
</tr>
</tbody>
</table>

Note.

*p<.01
**p<.001
ns = not significant

Table 4.9: Summary of the Multiple Regression Analysis for Variables Predicting the Relationship between Control, Responsibility, and Blame in the Sexual Assault Scenario
After it was established that control and responsibility influenced attributions of blame, the study’s variables of knowledge and attitudes were assessed to determine their influence on attributions. Hierarchical regressions were performed to determine the impact of attitudes and knowledge on attributions of control, responsibility, and blame for contracting HIV through active and passive modes of transmission. See Tables 4.11 - 4.16 for a summary of the analyses for vignettes A and B. For each vignette three regressions were performed with blame, responsibility, or control as the predictor variable. There were three steps in each regression with step one including impression management scores, step two including attitudes towards HIV/AIDS and attitudes toward women with HIV/AIDS and step three including HIV-related knowledge and protective behaviors self-efficacy.

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE B</th>
<th>ß</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIDR-6</td>
<td>-.16</td>
<td>.06</td>
<td>-.15</td>
<td>-2.92*</td>
</tr>
<tr>
<td>Control</td>
<td>.28</td>
<td>.11</td>
<td>.24</td>
<td>2.66*</td>
</tr>
<tr>
<td>Responsibility</td>
<td>.64</td>
<td>.11</td>
<td>.51</td>
<td>5.72**</td>
</tr>
</tbody>
</table>

Note.

*p<.01
**p<.001

Table 4.10: Summary of the Multiple Regression Analysis for Variables Predicting the Relationship between Control, Responsibility, and Blame in the Intravenous Drug Use Scenario
In the first regression (see Table 4.11), attitudes towards HIV/AIDS accounted for variance in blame scores for the character that contracted HIV through sexual assault. Attitudes towards HIV/AIDS contributed significant, negative variance in blame scores for the character that contracted HIV through sexual assault, while attitudes toward women with HIV/AIDS contributed significant positive variance $F(5, 194) = 6.15$, $p<.001; R^2 = .13$ (adjusted $R^2 = .11$). Higher attitudes towards HIV/AIDS scores were associated with lower blame scores for the passive mode transmission (sexual assault). After accounting for the contribution of attitudes towards HIV/AIDS, the other predictor variables did not contribute significant variance to blame scores.

The second hierarchical regression was computed to determine the influence of the study’s variables on predicting attributions of control for contracting HIV from a sexual assault. As a whole, HIV-related knowledge and attitudes toward women with HIV/AIDS accounted for 13% of variance in control scores in vignette A, $F(5, 194)=5.91$, $p<.001; R^2 = .13$ (adjusted $R^2 = .11$) (see Table 4.10). HIV-related knowledge made a unique negative contribution to the variance in control scores. Thus, higher knowledge scores were associated with lower attributions of control, while more positive attitudes towards women with HIV/AIDS were associated with higher attributions of control.
<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIDR-6</td>
<td>-.07</td>
<td>.04</td>
<td>-.13</td>
<td>-1.86 ns</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATAS Attitudes</td>
<td>-.05</td>
<td>.01</td>
<td>-.34</td>
<td>-3.90*</td>
</tr>
<tr>
<td>ATWAS Total</td>
<td>-.01</td>
<td>.01</td>
<td>-.05</td>
<td>-.64 ns</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATAS Knowledge</td>
<td>.08</td>
<td>.05</td>
<td>.10</td>
<td>1.46 ns</td>
</tr>
<tr>
<td>SEPSB</td>
<td>-.00</td>
<td>.01</td>
<td>-.03</td>
<td>-.34 ns</td>
</tr>
</tbody>
</table>

Note. BIDR-6= Balanced Inventory of Desired Responding-6 (Paulhus, 1991); ATAS= Attitude Towards AIDS Scale (Goh, 1993); ATWAS= Attitudes Towards Women with AIDS Scale (O’Hea, et al, 2001); SEPSB= Self-Efficacy Instrument or Protective Sexual Behaviors (Cecil & Pinkerton, 1998)

*p<.001
ns = not significant

Table 4.11: Summary of the Hierarchical Multiple Regression Analysis for Variables Predicting Attributions of Blame in the Sexual Assault Scenario
<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIDR-6</td>
<td>-.02</td>
<td>.05</td>
<td>-.02</td>
<td>-.29ns</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATAS Attitude</td>
<td>-.01</td>
<td>.02</td>
<td>-.06</td>
<td>-.69ns</td>
</tr>
<tr>
<td>ATWAS Total</td>
<td>.03</td>
<td>.01</td>
<td>.19</td>
<td>2.32*</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATAS Knowledge</td>
<td>-.21</td>
<td>.07</td>
<td>-.20</td>
<td>-3.00**</td>
</tr>
<tr>
<td>SEPSB Total</td>
<td>-.02</td>
<td>.01</td>
<td>-.12</td>
<td>-1.63ns</td>
</tr>
</tbody>
</table>

Note. BIDR-6= Balanced Inventory of Desired Responding-6 (Paulhus, 1991); ATAS= Attitude Towards AIDS Scale (Goh, 1993); ATWAS= Attitudes Towards Women with AIDS Scale (O’Hea, et al, 2001); SEPSB= Self-Efficacy Instrument or Protective Sexual Behaviors (Cecil & Pinkerton, 1998)

* p<.05
** p<.01

Table 4.12: Summary of the Hierarchical Multiple Regression Analysis for Variables Predicting Control in the Sexual Assault Scenario
In the third hierarchical analysis (see Table 4.13), impression management, attitudes and knowledge variables were assessed to determine their influence on attributions of responsibility for a rape victim contracting HIV. Attitudes toward HIV/AIDS accounted for a negative, significant portion of the variance in responsibility scores, $R^2 = .06$, $F(5, 194) = 2.40; p<.05$ (adjusted $R^2 = .03$). Thus, higher attitudes

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE</th>
<th>ß</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIDR-6</td>
<td>-.11</td>
<td>.06</td>
<td>-.15</td>
<td>-1.95ns</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATAS Attitudes</td>
<td>-.04</td>
<td>.02</td>
<td>-.19</td>
<td>-2.12*</td>
</tr>
<tr>
<td>ATWAS Total</td>
<td>-.02</td>
<td>.02</td>
<td>-.09</td>
<td>-.99ns</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATAS Knowledge</td>
<td>-.04</td>
<td>.08</td>
<td>-.03</td>
<td>-.47ns</td>
</tr>
<tr>
<td>SEPSB Total</td>
<td>-.01</td>
<td>.02</td>
<td>-.00</td>
<td>.06ns</td>
</tr>
</tbody>
</table>

Note. BIDR-6= Balanced Inventory of Desired Responding-6 (Paulhus, 1991); ATAS= Attitude Towards AIDS Scale (Goh, 1993); ATWAS= Attitudes Towards Women with AIDS Scale (O’Hea, et al, 2001); SEPSB= Self-Efficacy Instrument or Protective Sexual Behaviors (Cecil & Pinkerton, 1998)

*p<.05

ns = not significant

Table 4.13: Summary of the Hierarchical Multiple Regression Analysis for Variables Predicting Responsibility in the Sexual Assault Scenario

In the third hierarchical analysis (see Table 4.13), impression management, attitudes and knowledge variables were assessed to determine their influence on attributions of responsibility for a rape victim contracting HIV. Attitudes toward HIV/AIDS accounted for a negative, significant portion of the variance in responsibility scores, $R^2 = .06$, $F(5, 194) = 2.40; p<.05$ (adjusted $R^2 = .03$). Thus, higher attitudes
toward HIV/AIDS scores were associated with lower attribution of responsibility scores in the vignette containing the character that contracted HIV through sexual assault.

See Tables 4.14 to 4.16, for a summary of the hierarchical regression analyses for vignette B which described a woman who contracted HIV via intravenous drug use. In the first hierarchical regression, none of the variables were found to make a significant contribution to blame scores, $F(5, 199) = 0.62, p > .05; R^2 = .02$ (adjusted $R^2 = -.01$).

In the second set of hierarchical regression analysis, the variables did not make a significant contribution to control scores, $F(5, 199) = 1.10; R^2 = .03$ (adjusted $R^2 = .00$).

In the third set of hierarchical regression, the variables did not make a significant contribution to responsibility scores, $F(5, 199) = .49, p > .05, R^2 = .01$ (adjusted $R^2 = -.01$).
<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE B</th>
<th>$\beta$</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIDR-6</td>
<td>-.06</td>
<td>.08</td>
<td>-.06</td>
<td>-.72ns</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATAS Attitudes</td>
<td>-.01</td>
<td>.03</td>
<td>-.06</td>
<td>-.29ns</td>
</tr>
<tr>
<td>ATWAS Total</td>
<td>-.02</td>
<td>.02</td>
<td>.09</td>
<td>.97ns</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATAS Knowledge</td>
<td>.05</td>
<td>.12</td>
<td>.03</td>
<td>.44ns</td>
</tr>
<tr>
<td>SEPSB</td>
<td>-.00</td>
<td>.02</td>
<td>-.00</td>
<td>.06ns</td>
</tr>
</tbody>
</table>

Note. ATAS= Attitude Towards AIDS Scale (Goh, 1993); ATWAS= Attitudes Towards Women with AIDS Scale (O’Hea, et al, 2001); SEPSB= Self-Efficacy Instrument or Protective Sexual Behaviors (Cecil & Pinkerton, 1998)

ns = not significant

Table 4.14: Summary of the Hierarchical Multiple Regression Analysis for Variables Predicting Attributions of Blame in the Intravenous Drug Use Scenario
Table 4.15: Summary of the Hierarchical Multiple Regression Analysis for Variables Predicting Attributions of Control in the Intravenous Drug Use Scenario

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIDR-6</td>
<td>.10</td>
<td>.07</td>
<td>.10</td>
<td>1.37 ns</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATAS Attitudes</td>
<td>.02</td>
<td>.02</td>
<td>.08</td>
<td>.83 ns</td>
</tr>
<tr>
<td>ATWAS Total</td>
<td>-.01</td>
<td>.02</td>
<td>-.04</td>
<td>-.43 ns</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATAS Knowledge</td>
<td>.01</td>
<td>.10</td>
<td>.00</td>
<td>.05 ns</td>
</tr>
<tr>
<td>SEPSB</td>
<td>.00</td>
<td>.02</td>
<td>.01</td>
<td>.14 ns</td>
</tr>
</tbody>
</table>

Note. BIDR-6= Balanced Inventory of Desired Responding-6 (Paulhus, 1991); ATAS= Attitude Towards AIDS Scale (Goh, 1993); ATWAS= Attitudes Towards Women with AIDS Scale (O’Hea, et al, 2001); SEPSB= Self-Efficacy Instrument or Protective Sexual Behaviors (Cecil & Pinkerton, 1998)

ns= not significant
<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIDR-6</td>
<td>.08</td>
<td>.07</td>
<td>.10</td>
<td>1.24ns</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATAS Attitudes</td>
<td>.00</td>
<td>.02</td>
<td>.02</td>
<td>.22ns</td>
</tr>
<tr>
<td>ATWAS Total</td>
<td>.00</td>
<td>.02</td>
<td>.01</td>
<td>.05ns</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATAS Knowledge</td>
<td>.06</td>
<td>.09</td>
<td>.05</td>
<td>.62ns</td>
</tr>
<tr>
<td>SEPSB</td>
<td>-.00</td>
<td>.02</td>
<td>-.01</td>
<td>-.11ns</td>
</tr>
</tbody>
</table>

Note.  BIDR-6= Balanced Inventory of Desired Responding-6 (Paulhus, 1991); ATAS= Attitude Towards AIDS Scale (Goh, 1993); ATWAS= Attitudes Towards Women with AIDS Scale (O’Hea, et al., 2001); SEPSB= Self-Efficacy Instrument for Protective Sexual Behaviors (Cecil & Pinkerton, 1998)

ns= not significant

Table 4.16: Summary of the Hierarchical Multiple Regression Analysis for Variables Predicting Attributions of Responsibility in the Intravenous Drug Use Scenario
5.1 Summary of Findings

As the HIV/AIDS pandemic progresses, the face of HIV is changing. Today in the U.S., women, teenagers, and the elderly are the populations identified as having the highest increases in HIV infection. Among women, in the United States and abroad, women of color are those most affected by HIV and AIDS. Due to a variety of factors including delayed testing, misinformation about the transmission of HIV and lack of access to health care, more women are being infected by their partners and are dying from the illness. When comparisons are made across the time span of the pandemic, the alarming increase in rates among women is relatively new and has recently started receiving attention from the media. Therefore, this study examined college students’ perceptions of women of color with HIV to determine, how knowledgeable students are about HIV and their attitudes toward HIV and women infected with the illness.
5.1.1 Knowledge

The college students that participated in this study were knowledgeable of HIV-related issues. This finding is comparable to those from previous studies. Over the course of the epidemic, studies evaluating HIV-related knowledge in college students show that this population has become increasingly knowledgeable (Bruce & Walker, 2001; Fennell, 1990; McCormack, 1997; Sheehan, et al, 1990). The high knowledge scores of the participants suggest that the college students in this sample have attended to and internalized information related to HIV transmission and course of the illness. However, due to low reliability of the knowledge subscale in the current sample, it is suggested that these findings be evaluated critically, as the measure used to assess knowledge was not highly reliable for the sample. In the future, it is suggested that exploratory questions regarding how students obtained HIV-related knowledge be included to assess the sources of information that students access to acquire information about HIV.

Overall, students were moderately confident in their ability to engage in protective sexual behaviors. Additional analysis revealed that female students felt more confident in their ability to request that their partners use protection, inquire about a potential partner’s sexual history, and other protective behaviors than male students. Similarly, in a study by Goldman and Harlow (1993), female college students reported higher sexual self-efficacy than male college students. Research has suggested that sexual self-efficacy is associated with safer sex practices (Catania, Kegeles, & Coates, 1990; Freimuth, Hammond, Edgar, McDonald, & Pink, 1992; Goldman & Harlow, 1993). Although the data suggests that the participants are confident in their ability to engage in protective behaviors, it should be noted that for the sample, self-efficacy scores
were weakly correlated with impression management. This relationship was moderately strong for Caucasian students suggesting that they may not be as confident as reported. Yet it should be restated that impression management scores were low for this sample, so self-efficacy reports may not be inflated.

Since attitudes and beliefs have been suggested to influence attributions, this study examined how beliefs about one’s own protective behavior influenced attributions of another’s control and responsibility over contracting HIV. The more confident the students in the study were in their abilities to protect themselves, the less likely they were to attribute control over contracting HIV to the character infected with HIV by sexual assault. Additionally, efficacious students also possessed positive attitudes towards HIV/AIDS and related issues.

Future research should examine how self-efficacy influences attributions of individuals infected with HIV through various modes of transmission. This study did not assess all common modes of transmission. For example, this study did not assess attributions of HIV individuals infected through risky, promiscuous behaviors. Additionally, assessing the frequency at which students use condoms and negotiate the use of condoms would aid in understanding college students’ knowledge regarding protective behaviors and their actual behavior.

5.1.2 Attitudes

The students reported positive general attitudes towards HIV. Female students possessed more positive attitudes toward AIDS as hypothesized. These finding were similar to those from previous studies in which students were found to report increasingly positive attitudes toward HIV/AIDS (Bruce & Walker, 2001; Biasco & Taylor, 1991;
McCormack, 1997). Several of these studies reported that female students had more positive attitudes than male students (Bruce & Walker, 2001; Gaines, et al., 1988; Goodwin & Roscoe, 1988). Studies have suggested that a relationship exists between HIV-related knowledge and attitudes toward HIV/AIDS (Fennell, 1989; James & Frese, 1993; McCormack, 1997). However, in this study, HIV-related knowledge was not associated with students’ HIV-related attitudes.

Based on the possible range of scores, students’ attitudes towards women with HIV scores were moderate. Attitudes toward women with HIV were expected to be more positive than what was reported. Higher scores were expected because stereotypes and attitudes towards homosexual males, which have been suggested to negatively impact HIV-related attitudes, were expected not to influence attitudes toward women (Carney, Werth, & Emanualson, 1994; Fish & Rye, 1991; Goodwin & Roscoe, 1998; Sheehan, et al., 1990). However, in this study attitudes toward women with HIV were not extremely negative or positive. Potential explanations for the neutral attitudes toward women with HIV could reflect a lack of awareness of women who are HIV infected.

According to data from the Centers for Disease Control and Prevention (2006) it is estimated that AIDS cases among women have risen from 8% in 1985 to 27% in 2004. The CDC (2006) suggests that if HIV infection rates worldwide continue to rise among women, the rate of infections among women will be comparable to that among men. As this increase is fairly recent, students may lack awareness of these increases and may still
associate HIV as a primarily male illness. It would be informative to assess students’ knowledge of current trends in HIV infection rates. Additionally, it would be informative to compare students’ attitudes between men with HIV and women with HIV.

An interesting finding of this study is that attitudes towards HIV scores and attitudes towards women with HIV/AIDS scores were negatively correlated. The more negative students’ attitudes toward HIV/AIDS, the more positive their attitudes toward women with HIV. This finding suggests that students’ may view women with HIV differently from other groups of people infected with HIV. For example, if HIV is perceived as a predominately male disease, students may not have formed attitudes regarding HIV positive women. Therefore, their attitudes towards women with HIV/AIDS may be related to various factors besides their attitude toward HIV/AIDS. There are several hypotheses as to why these findings occurred. First, the measure that was used to assess attitudes towards women is relatively new and has not been used in other published studies. Due to the novelty of the instrument and the lack of psychometric information available, the performance of the current subjects on the scale can not be compared to other samples. Second, to the researcher’s knowledge studies that assess attitudes toward women with HIV are very limited. Thus, it is difficult to compare the participants’ attitudes in this study to the attitudes of others.

5.1.3 Personal Contact

Personal relationships and contact with HIV infected individuals has been found to lead to less blame and avoidance of PWAs, decreased stigma, as well as, increases in knowledge and attitudes (Herek & Capitano, 1997; Scollay, et al, 1992). In this study, prior personal contact with HIV positive individuals did not influence general HIV/AIDS
attitudes, HIV-related knowledge, or attitudes towards women with HIV/AIDS. However, personal contact was related to attributions made about African American women with HIV. Having knowledge of someone that is HIV positive was associated with attributing more control and responsibility to the individual that contracted HIV through intravenous drug use. Due to the small number of students in the study that reported knowing someone with HIV, it is difficult to ascertain the true influence of personal relationships with infected individuals on attitudes. In future studies it would be advisable to recruit subjects with personal relationships or prior contact with infected individuals, such as volunteers from agencies that serve HIV positive persons, family and friends of infected persons, or attendees to lectures given by an HIV positive person, for comparison.

5.1.4 Attributions

Weiner states that assigning control and responsibility for the outcome of a situation to an individual could then lead to an assignment of blame for the outcome of the situation. Attributions of control and responsibility were found to influence assignment of blame to HIV infected individuals in this study. For PWAs who contracted HIV through passive and active modes of transmission, assigning control and responsibility over being HIV positive to the individual lead to the PWA being blamed for their infection by others. As was suggested, attributions of control and responsibility appeared to influence attributions of blame made by participants in the present study. However, impression management was found to influence the amount of blame attributed
to persons who contracted HIV through intravenous drug use. Thus, students’ were attempting to portray themselves in a more favorable manner by attributing less blame to the HIV infected intravenous drug user.

Modes of transmission influences the attributions made about the infected individuals (Derlega, et al, 1998; Pullam, 1993). In the current study, greater control over contracting HIV, responsibility for being infected, and blameworthiness were attributed to the active mode of transmission (intravenous drug user with HIV). While minimal control, responsibility, and blame for being HIV positive were attributed to the individual that contracted HIV through a passive mode (sexual assault).

Cognitions, values, beliefs, and previously held attitudes influence one’s attributions (Alicke, 2000; Mantler, et al., 2003; Weiner, 1993). This study examined the impact of attitudes and knowledge on attributions of control, responsibility, and blame. Attitudes towards HIV/AIDS were found to influence attributions of blame and responsibility when making attributions about an individual who contracted HIV through a passive mode of transmission. Attitudes toward women with HIV influenced the amount of control attributed to the victim of sexual assault for contracting HIV. HIV – related knowledge also negatively influenced attributions of control toward the victim of sexual assault. However, attitudes and knowledge did not influence attributions of control, responsibility, or blame made about the character that contracted HIV via intravenous drug use.
There are several explanations why attitudes and knowledge did not influence attributions made about HIV infection through an active mode. First, the findings may suggest that the participants used different sources of information to make attributions of control, responsibility, and blame for the character that was infected with HIV via intravenous drug use. Second, it may suggest that positive attitudes toward HIV/AIDS as well as HIV related knowledge and confidence to protect one’s self from contracting HIV may be outweighed by attributions of blame, control and responsibility.

5.2 Limitations

Several limitations of this study should be noted. First, the college students sampled were from one university in the Midwest. Therefore, the findings of this study should be applied with great caution to college students that are different from the sample. Second, the sample was composed of primarily Caucasian, first year students. Thus, the findings may not be applicable to students of color or to more advanced students. As college students do not represent the entire U.S. population, these findings may not be applicable to individuals not in college.

The students in this study reported feeling efficacious about their ability to engage in protective sexual behaviors. Specifically, female students reported greater confidence in their abilities to engage in self-protective behaviors. However, their reported ability to engage in these behaviors does not reflect their actual behavior.
Although two different versions of the survey were administered to participants, they were not counterbalanced. Therefore, it can not be fully determine if the order of the measures had an effect on the participants’ responses. For example, in both versions of the survey the vignettes were presented in sequence in the same order. Therefore it is possible that participants were primed and responded in a manner that does not reflect their actual attitudes.

The scenarios used to represent active and passive modes of transmission were straightforward. Assessing students’ attributions related to more convoluted scenarios would be insightful. This study did not assess the implication of attributions of blame on behavior towards or treatment of African American women with HIV. In subsequent studies, assessing the influence of attributions on behavior and treatment of HIV persons will enhance understanding of the impact of attributions on behaviors.

This study assessed attributions made about African American women with HIV. However, this study did not assess the influence of attitudes toward African Americans, to determine if participants’ perceptions were influenced by racial stereotypes or prejudice. This study did not assess the impact of race of the character on attributions by comparing attributions made about HIV positive women form different racial/ethnic groups. Therefore it is difficult to determine if African American women with HIV are viewed differently from other women with the illness. Finally, the data analysis shows that attitudes and knowledge are related to attributions made about person who contracted HIV through various modes of transmission by the college students assessed. However, the analysis only suggests that
there is a relationship and that attitudes and knowledge influence attributions. Additional research and analysis is needed to obtain more detailed information about the suggested relationships.

5.3 Implications

The findings of this study have several implications. First, it adds to the literature available on the attitudes and knowledge of college students regarding HIV/AIDS in the United States. These findings along with the findings from other studies can be used to develop educational programs for college students to increase their awareness of the subgroups within the population that are affected by HIV/AIDS, increase the self protective behaviors of college students, and reduce any stigmas and decrease levels of misinformation that may be present among subgroups of the college student population.

For example, educational programs can be developed to increase students’ exposure to those infected with the illness. Programs can be developed to expose students to HIV infected individuals of various ages, genders, sexual orientations, and socioeconomic status, including infected individuals that are demographically similar to the college student population as a way of enhancing students’ awareness and understanding of the illness. Exposure could be provided through live presentations or through videos featuring these individuals. These programs can be integrated into freshman orientation classes, into sexual education courses at the secondary level, or into community outreach programs for adolescents.
Psychoeducational programs can be developed to not only increase students’ self-efficacy to engage in protective behaviors, but to also increase their tendency to engage in these behaviors. These programs can challenge beliefs held regarding who is responsible for negotiating condom use in a relationship. The results from this study suggest that students of color are not as knowledgeable as White students of HIV-related information. This information can be used to develop culturally informed methods of educating students from various racial/ethnic groups. Ideally these programs would also address the educational needs of international students.

Second, this study examines the attitudes towards women with HIV, a topic that has not received much attention as of yet. Many research studies that focus on attitudes towards PWAs tend to focus primarily on males and homosexuals. The present study is among a few studies which are starting to examine other subgroups that being affected by HIV today. The results from this study add to the limited literature on perceptions of women with HIV and highlights areas for continued research. Extensive research in this area is needed to gain additional understanding of the impact of HIV/AIDS on the lives of women including their access to services, their compliance with treatment, the impact on their families and their ability to be caretakers. The data from these studies can be used to develop gender and cultural specific programs for HIV-infected women.

5.4 Directions for Future Research

This study focused on the influence of attitudes towards HIV/AIDS and women with HIV, as well as knowledge of HIV-related issues and protective behaviors and their
impact on the process of making attributions about PWAs. Focusing on additional attitudes, beliefs, and values such as religiosity, locus of control, and worldview, etc., would enhance the understanding of the formation of attributions.

In order to obtain additional detailed information about individual’s attributions towards PWAs, more information needs to be obtained from participants. Conducting individual interviews with participants regarding their beliefs and knowledge of HIV/AIDS would enhance the data obtained. Additionally, this study’s sample consisted primarily of Caucasian, college freshman from a single university in the Midwest. Data from this study is only applicable to a select group of college students, therefore the results can not be applied to groups of college students that differ from the sample. A more diverse sample including larger numbers of minorities, students from different years in college, as well as from various universities would allow the data obtained to be applied to a larger group of college students.

Since college students may not represent the larger population, it is suggested that subsequent studies assess the attitudes, knowledge, and attributions made by other groups in the U.S. For example, attention should continue to be focused on the attributions and attitudes of healthcare professionals and mental health care providers, to enhance understanding of how their attitudes and attributions influence their treatment of women with HIV/AIDS and self-efficacy in providing services to women infected with HIV/AIDS. Studying the attitudes, knowledge, and attributions of the general public towards women with HIV/AIDS will provide valuable information that can be used to
develop prevention and intervention programs to help lessen stigma and increase
awareness among heterosexuals of the impact that HIV is having on women who sleep
with men.

The infection rate of HIV and the death rates from AIDS are steadily increasing
among women of color in the U.S. and abroad, assessing women of color’s attitudes and
attributions towards other women of color with the illness and their attitudes towards
testing and negotiating the use of protective contraceptives would greatly facilitate
preventive and outreach program development for these populations. Researching
health disparities among women of color with HIV/AIDS, as well as the impact of HIV
from a cultural and international perspective will greatly enhance the effectiveness of
programs for these populations in the U.S. and worldwide.
APPENDIX A

DEMOGRAPHIC QUESTIONNAIRE
Age: ______

Gender (M/F): ______

Racial/Ethnic Background:
_____ African American
_____ African
_____ Asian/Pacific Islander
_____ Caribbean
_____ Caucasian (White/European)
_____ Hispanic
_____ Multi-Racial-please specify
_____ American Indian/Alaskan Native

Are you an U.S. citizen?
____ Yes
____ No

What is your sexual orientation?
_____ Heterosexual
_____ Homosexual
_____ Bisexual

Marital Status:
_____ Single
_____ Married
_____ Life Partner/Civil Union
_____ Divorced
_____ Widowed
_____ Separated

Current Year in College:
_____ 1st
_____ 2nd
_____ 3rd
_____ 4th
_____ 5th or more
_____ Graduate/Professional Student

Please select the college which contains your major/area of study:
_____ Colleges of the Arts
_____ College of Architecture
_____ College of Biological Sciences

College of Dentistry
College of Education
College of Engineering
College of Food, Agricultural, and Environmental Sciences
College of Human Ecology
College of Humanities
College of Mathematical & Physical Sciences
College of Medicine and Public Health
College of Nursing
College of Pharmacy
College of Social and Behavioral Sciences
College of Veterinary Medicine
College of Social Work
Fischer College of Business
International Studies
Undecided/Exploring

What is your religious affiliation?
_____ Protestant (Baptist, Methodist, Christian, etc.)
_____ Catholic
_____ Jewish
_____ Muslim
_____ Hindu
_____ Buddhist
_____ Baha’i
_____ Atheist
_____ Agnostic
_____ Other-please specify

How often do you attend worship services?
_____ 0-2 times per month
_____ 3-5 times per month
_____ 5 or more times per month
Do you participate in any volunteer or community service related activities?

___ Yes
___ No

Have you ever volunteered with an organization that serves HIV/AIDS infected individuals?

___ Yes
___ No

Do you know anyone who is HIV positive?

___ Yes
___ No

If so, what is your relationship to the person(s)? (Check all that apply)

___ Family Member
___ Friend
___ An acquaintance
___ Person known through volunteer work
___ Person known through a presentation at school, church, etc.
___ Person known via the media (celebrity, athlete, actor, etc.)
___ Other

How many people do you know that are HIV positive?

___ 0
___ 1
___ 2-4
___ 5-7
___ 8 or more
APPENDIX B

SELF-EFFICACY INSTRUMENT FOR PROTECTIVE SEXUAL BEHAVIORS
Please indicate how sure you are that you would be able to say NO to having sexual intercourse for each item by circling the appropriate number next to each question:

<table>
<thead>
<tr>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>With someone you have known for a few days or LESS?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>With someone whose sex and drug history is not known to you?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>With someone you have dated for a long time?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>With someone you want to date again?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>With someone with whom you have already had sexual intercourse?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>With someone who you want to fall in love with you?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>With someone who is pushing you to have sexual intercourse?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>With someone after you have been smoking marijuana?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Please indicate how sure you are that you would be able to discuss each of the following with your girlfriend/boyfriend.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at Sure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somewhat Unsure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don’t Know</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somewhat Sure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Sure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ask your boyfriend/girlfriend if he/she has ever injected drugs such as heroin or cocaine into his/her veins?

Discuss preventing AIDS or sexually transmitted diseases (gonorrhea, etc) or PREGNANCY with your boyfriend/girlfriend?

Ask your boyfriend/girlfriend about sexual relationships that he/she has had in the past?

Ask your boyfriend/girlfriend if he/she has ever had anal (rectal or butt) intercourse?

Ask your boyfriend/girlfriend if he/she has ever had a sexually transmitted disease (STD)?
APPENDIX C

ATTITUDES TOWARDS WOMEN SCALE (ATWAS)
Please indicate how much you agree or disagree with each item below by using the following rating scale and circling the appropriate number next to the question.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Unsure</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

Women who transmit HIV to their unborn baby should have their baby taken away.  
Women with HIV/AIDS are not in control of their own lives, therefore they are unfit to be in charge of anyone else.  
Women with HIV/AIDS are unfit mothers.  
I think women who give birth to babies who are HIV+ should be prosecuted for child abuse.  
Women with HIV/AIDS should NOT be allowed to make decisions about caring for their children.  
If a woman with HIV/AIDS gives birth to an HIV- child, she should be able to raise that child.  
Women with HIV/AIDS should be allowed to have children.  
Young children should be removed from the home if their mother has HIV/AIDS.  
Pregnant women with HIV/AIDS should be forced to have an abortion.  
Women with HIV/AIDS are failures because they cannot live up to the traditional roles of the woman as mother and caregiver.  
Women with HIV/AIDS should be sterilized (or have their tubes tied) so they cannot have children.  
Most women with HIV/AIDS are injection drug users.  
Most women with HIV/AIDS are prostitutes or sex workers.
Most women with HIV/AIDS sell their bodies for drugs.  
Most women with HIV/AIDS have been infected by their heterosexual partner who is an injection drug user.  
Most women with HIV/AIDS are lesbians.  
Most women with HIV/AIDS have slept around a lot.  
Pregnant women with HIV/AIDS should be forced to have their baby tested for HIV.  
Pregnant women with HIV/AIDS should be forced to take medication (AZT) to reduce the chance their babies with have HIV.  
I think women with HIV/AIDS should allowed to breast-feed their baby, even if it puts the baby at risk of getting HIV.  
Women with HIV/AIDS should volunteer to have their baby tested for HIV.  
A woman owes it to her husband to have unprotected sex with him even if he has HIV/AIDS.  
It is OK for a man with HIV/AIDS to refuse to wear a condom if he pays the woman's bills.  
I feel more sympathy toward women who get HIV/AIDS from blood transfusions than those who get it from injection drug use.  
I feel more sympathetic toward women who get HIV/AIDS from blood transfusions than those who get it from sexual intercourse.  
I feel more sympathetic toward women who get HIV/AIDS from being raped than through being sexually promiscuous.  
I have little sympathy for women who get HIV/AIDS from sexual promiscuity (sleeping around).
APPENDIX D

ATTITUDES TOWARD AIDS SCALE (ATAS)
Please respond to the following items on a 5-category rating scale. Circle the appropriate rating following each item to indicate your response.

1 2 3 4 5
Strongly Disagree Disagree Neutral Agree Strongly Agree

There is no need for the average person to become concerned about AIDS. 1 2 3 4 5
The names of individuals with AIDS should be kept confidential in order to protect them against discrimination. 1 2 3 4 5
If it’s meant to be that I get AIDS there’s nothing I can do to prevent getting the disease. 1 2 3 4 5
More government funds should be spent on providing support services for people with AIDS. 1 2 3 4 5
I would avoid having contact with persons who have AIDS. 1 2 3 4 5
A doctor should have the right to decide if he or she wants to treat patients with AIDS. 1 2 3 4 5
I would feel embarrassed if one of my family members had AIDS. 1 2 3 4 5
It’s important to exercise safety precautions in one’s sex behaviors in order to prevent AIDS. 1 2 3 4 5
Children with AIDS should be allowed to attend school with children who don’t have AIDS. 1 2 3 4 5
There should be separate public facilities (i.e., rest room toilets) for people with AIDS. 1 2 3 4 5
Prevention of AIDS is the responsibility of individual person rather than the society. 1 2 3 4 5
Everyone should be tested for HIV/AIDS infection. 1 2 3 4 5
AIDS is the omnipotent’s way of punishing homosexuals. 1 2 3 4 5
Everybody should know something about AIDS. 1 2 3 4 5
Reckless intravenous drug users should change their drug habits in order to prevent AIDS. 1 2 3 4 5
Persons with AIDS deserve support from their families and community. 1 2 3 4 5
An employee who has AIDS should not be allowed to work.

I have great sympathy for people who suffer from AIDS or AIDS related diseases.

Knowing more about AIDS will cause less fear about the disease.

Children should be educated about AIDS to protect them through their lives.

A doctor may inform, without the consent of the AIDS patient, a sexual partner that he or she is at risk of HIV infection.

Only unfit mothers have children with AIDS.

AIDS can be prevented by taking proper procedures.

Research on AIDS should be a priority for government funding.

I often read and listen to information about AIDS.

Please answer the following items using a true or false format. Circle T if you believe the statement is True, and F if you believe it’s False.

86. Hemophiliacs can get AIDS. T F

87. AIDS is an epidemic. T F

88. Only homosexuals get AIDS. T F

The virus that causes AIDS is called Human Immunodeficiency Virus (HIV). T F

The AIDS virus can remain infectious outside the body for up to ten days if it is at room temperature. T F

One can get AIDS by sharing a meal with a person who has AIDS. T F

People who have AIDS do not develop cancer. T F

Today blood supply in hospitals and blood donation centers is screened for AIDS virus. T F

Impaired memory and concentration and motor deficits may occur in some AIDS patients. T F
One can get AIDS by sharing drug needles.  T  F
AIDS virus may live in the human body for years before symptoms appear.  T  F
One can get AIDS from receiving blood or sperm from a donor who has AIDS.  T  F
By using a condom when having sex, one is always safe from contracting AIDS.  T  F
The HIV test is a blood test which can tell if a person has AIDS.  T  F
There is a cure for AIDS.  T  F
AIDS victims may show extreme tiredness, night sweats, fever, weight loss, diarrhea, etc.  T  F
One can get AIDS by having sexual intercourse with an infected person.  T  F
AIDS is spread by sneezing, coughing, or touching.  T  F
AZT is the only drug approved by the U.S. Food and Drug Administration for the treatment of AIDS.  T  F
One can get AIDS by having sex with someone who uses intravenous drugs.  T  F
AIDS can be spread by having contact with towels or bed linens used by a person with AIDS.  T  F
An infected mother can give the AIDS virus to the baby during pregnancy and/or through breast feeding.  T  F
About 400,000 people in the United States are infected with the HIV Virus.  T  F
Blacks and Hispanics show higher incident rates of AIDS than other ethnic groups.  T  F
More women than men have been infected by the AIDS virus.  T  F
APPENDIX E

BALANCED INVENTORY OF DESIRABLE RESPONDING (BIDR-6)
Using the scale below as your guide, please circle the number to the right of the statement that indicates how true it is for you.

| 1----------2----------3---4------5----------6----------7 |
|---|---|---|---|---|---|---|
| Not True | Somewhat True | Very True |

I sometimes tell lies if I have to. 1 2 3 4 5 6 7
I never cover up my mistakes. 1 2 3 4 5 6 7
There have been occasions when I have taken advantage of someone. 1 2 3 4 5 6 7
I never swear. 1 2 3 4 5 6 7
I sometimes try to get even rather than forgive and forget. 1 2 3 4 5 6 7
I always obey laws, even if I’m unlikely to get caught. 1 2 3 4 5 6 7
I have said something bad about a friend behind his or her back. 1 2 3 4 5 6 7
When I hear people talking privately, I avoid listening. 1 2 3 4 5 6 7
I have received too much change from a salesperson without telling him or her. 1 2 3 4 5 6 7
I always declare everything at customs. 1 2 3 4 5 6 7
When I was young I sometimes stole things. 1 2 3 4 5 6 7
I have never dropped litter on the street. 1 2 3 4 5 6 7
I sometimes driver faster than the speed limit. 1 2 3 4 5 6 7
I never read sexy books or magazines. 1 2 3 4 5 6 7
I have done things that I don’t tell other people about. 1 2 3 4 5 6 7
I never take things that don’t belong to me. 1 2 3 4 5 6 7
I have taken sick-leave from work or school even though I wasn’t really sick. 1 2 3 4 5 6 7
I have never damaged a library book or store merchandise without reporting it. 1 2 3 4 5 6 7
I have some pretty awful habits. 1 2 3 4 5 6 7
I don’t gossip about other people’s business. 1 2 3 4 5 6 7
APPENDIX F

VIGNETTE A
Instructions: Carefully read the following scenario. After reading the scenario please answer the following questions by selecting the number that BEST represents your response.

Aminah is a 23-year-old African American female. She was raped by a stranger who broke into her apartment through a locked window. During a follow-up appointment with her physician, Aminah finds out she has contracted HIV from her rapist.

<table>
<thead>
<tr>
<th></th>
<th>1 Strongly Disagree</th>
<th>2 Disagree</th>
<th>3 Agree</th>
<th>4 Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aminah’s illness was under her personal control.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>It was something that Aminah did that caused her illness.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Aminah could <em>not</em> have prevented her illness.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Aminah had <em>no</em> control over the cause of her illness.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Aminah is responsible for her illness.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Aminah is accountable for her illness.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Aminah’s illness is <em>not</em> a result of her own negligence.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Aminah should <em>not</em> be held personally liable for her illness.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Aminah is to blame for her illness.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>It is her own fault that she is ill.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Aminah does <em>not</em> deserve what happened to her.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Aminah should <em>not</em> feel guilty for being ill.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Instructions: Carefully read the following scenario. After reading the scenario please answer the following questions by selecting the number that BEST represents your response.

Aminah is a 23-year-old African American female heroine addict. Aminah frequently shares her needles which she uses to inject heroine, with other drug users. While being processed at the county jail, Aminah is given an HIV test and is informed she has HIV.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

Aminah’s illness was under her personal control.
1 2 3 4

It was something that Aminah did that caused her illness.
1 2 3 4

Aminah could not have prevented her illness.
1 2 3 4

Aminah had no control over the cause of her illness.
1 2 3 4

Aminah is responsible for her illness.
1 2 3 4

Aminah is accountable for her illness.
1 2 3 4

Aminah’s illness is not a result of her own negligence.
1 2 3 4

Aminah should not be held personally liable for her illness.
1 2 3 4

Aminah is to blame for her illness.
1 2 3 4

It is her own fault that she is ill.
1 2 3 4

Aminah does not deserve what happened to her.
1 2 3 4

Aminah should not feel guilty for being ill.
1 2 3 4
APPENDIX H
RESEARCH EXPERIENCE PROGRAM SITE TEXT
I am interested in your attitudes toward sexual behaviors and HIV as well as your knowledge of HIV and methods of protection, not in the behaviors that you engage. This study is open to everyone and I am offering 1 hour of REP credit for your participation. If you are interested, please sign up for a section. Please make sure you sign up for the appropriate section for your gender.
APPENDIX I

INTRODUCTORY STATEMENT
Dear Participant:

Dr. Don M. Dell, advisor, and Tamara Godfrey, the lead researcher, are conducting a study concerning students’ health behavior attitudes. In particular, we are interested in attitudes about HIV/AIDS. The results of this study may lead to a better understanding of the attitudes of college students toward health and illness. Additionally, this study may aid in the development of programs regarding health and wellness in the campus environment.

Please do not put your name on any of the materials. We encourage you to work carefully and not skip items inadvertently. You may of course, choose not to respond to any particular item. The packet will take approximately 45 minutes to an hour to complete. Participation in this study is voluntary and participants can withdraw without penalty.

Once the data has been collected, all information that you, the participant, provide will be kept confidential. Only the researchers mentioned above will have access to the information that you provide. Survey responses are otherwise strictly confidential as required by law.

By returning the completed survey packet, you indicate your voluntary participation in this research. For additional information, such as preliminary results, or to address any concerns you may have about this study, please contact Dr. Don M. Dell at dell.1@osu.edu or Tamara Godfrey at godfrey.43@osu.edu. Please remove this letter and complete the following survey.

Thank you for agreeing to participate in this study.

Sincerely,

Don M. Dell, Ph.D.                      Tamara Godfrey, M.Ed.
Associate Professor                 Doctoral Candidate
Department of Psychology         Department of Psychology
The Ohio State University        The Ohio State University
APPENDIX J

DEBRIEFING STATEMENT
Dear Participant:

I would like to thank you for participating in this study. The purpose of this study was to assess your knowledge of HIV/AIDS, your attitudes toward those infected with HIV/AIDS, and your own health behavior. If you have any questions, feel free to contact me, Tamara Godfrey at godfrey.43@osu.edu.

If participation in this study has raised some questions or concerns for you regarding the subject of the study, you may wish to take advantage of one of the following mental health providers located on The Ohio State University’s campus. They are available by appointment and/or walk-in.

- Psychological Services Center (by appointment): 292-2059
- OSU Counseling and Consultation Services: 292-5766
- OSU Hospital Emergency Room: 293-8333

Once again, thank you for your participation.

Sincerely,

Tamara N. Godfrey, M.Ed.
Doctoral Candidate
LIST OF REFERENCES


Recommendation and Reports, 41(RR-17), Retrieved April 11, 2006 from, http://www.cdc.gov/mmwr/preview/mmwrhtml/00018871.htm


