

ABSTRACT

SOCIAL WORK

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A STUDY OF ATTITUDES AND KNOWLEDGE ABOUT HIV/AIDS
TRANSMISSION AMONG AFRICAN-AMERICAN COLLEGE
FEMALE STUDENTS

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The purpose of this study was to determine the attitudes and knowledge of HIV/AIDS transmission among African-American college females students. Participants in the study consisted of 31 sophomores and 28 freshmen who attended a predominantly Black women's college in the city of Atlanta. To examine attitudes and knowledge of the participants, the AIDS Education Questionnaire (AEQ) developed by Bateman et al., was administered to the sample. The questionnaire assessed students' feelings of susceptibility to AIDS, knowledge about AIDS transmission, knowledge about HIV testing, and social attitudes concerning persons with AIDS. The findings of this study revealed that

A STUDY OF ATTITUDES AND KNOWLEDGE OF HIV/AIDS
TRANSMISSION AMONG AFRICAN-AMERICAN
COLLEGE FEMALE STUDENTS

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African-American college female students were very knowledgeable about AIDS transmission, held liberal attitudes toward persons with AIDS, and possessed some concern about AIDS. Participants seemed less knowledgeable about HIV testing and the relationship of a positive test result and AIDS. Freshmen emerged as being more knowledgeable about HIV testing than sophomores.

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CHAPTER ONE

INTRODUCTION

Acquired Immune Deficiency Syndrome (AIDS) has become the number one health priority in this country. Since the first cases of AIDS were recognized in 1981, approximately 100,000 cases of AIDS have occurred worldwide (Velimirovie, 1987). By March 1989, 90,990 cases of AIDS were reported in the United States. Of those reported cases, 51,987 (57%) were white, 24,328 (27%) were Hispanic (Thomas, Gilliam, & Iwrey, 1989). Although whites still constitute a majority of the AIDS cases, African-Americans and Hispanics are contracting AIDS in numbers far greater than their relative percentage in the population (Thomas et al., 1989). African-Americans constitute 12% of the population, yet they represent 27% of the AIDS cases. Hispanics constitute 7% of the population and 15% of the AIDS cases (Centers for Disease Control, 1991).

More recent statistics on AIDS suggest that more than 143,286 people in the United States have been diagnosed with AIDS, and it is estimated that 5 to 10 million Americans will be infected with the human

immunodeficiency virus (HIV) (Centers for Disease Control, 1990). Experts project that by the year 1991, approximately 50% of these people will have died (Roscoe & Kruger, 1990). The number of AIDS cases will continue to increase, with more than 100,000 deaths occurring in 1991 (Centers for Disease Control, 1991).

The presence of AIDS in disparate groups, linked only by probable routes of transmission, was among the first pieces of evidence suggesting an infectious cause (Campbell, 1990). AIDS was first identified in homosexual men in 1981. Subsequently, other groups identified were: intravenous (IV) drug users, Haitians, recipients of blood and blood products, infants born to mothers at risk, and heterosexual partners of persons with AIDS (Campbell, 1990). This latter group, i.e., heterosexual partners of women, now constitute the fastest growing group with AIDS. The Centers for Disease Control (1990), report that women comprised 10% or 14,452 of the adult AIDS cases, with a disproportionate share of African-American (52%) and Hispanic (20%) women leading this trend.

One other group that may be at increased risk for HIV/AIDS acquisition is college students. DiClemente,

Forrest, and Micklen (1990) state college students may be at increased risk (for HIV/AIDS) because college represents a period of transition from adolescence to adulthood, with increased autonomy from parental authority. It is a time of accelerating personal, social, and intellectual development; marked by increased sexual and drug experimentation, and a heightened sense of immortality. It is this increased sexual and drug experimentation that has contributed to the growing numbers of college students afflicted with HIV/AIDS, and its deadly outcomes. Currently, there have been 2,560 cases and 2,732 deaths among adult/adolescents, of which college students are included (Centers for Disease Control, 1990). In light of these statistics, many experts fear that an epidemic among college students is approaching.

Statement of the Problem

It is without question that AIDS among college students is increasing; however, AIDS among African-American college females is reaching alarming proportions. As of November 1990, females between the ages of 20-24 comprised 6% or 1,039 of AIDS cases in the adult/adolescent category. Of this number,

African-Americans in the same age group comprised 6% or 497 cases of AIDS; while Hispanic females comprised 7% or 251 cases, White females between the ages of 20-24 comprise 7% or 287 cases of AIDS (Centers for Disease Control, 1990). Although the percentage rate for African-American females has remained constant, the actual number of cases has increased. This growing trend among African-Americans and Hispanics is alarming and research strongly suggests that preventive efforts to reduce the spread of AIDS be specifically targeted to these populations.

To date, the research concerning college female students and AIDS is scarce, and the research that does exist focuses on modifying sexual and drug behaviors as a mode of prevention. Although research in this area has been helpful in understanding the risk of AIDS among college students there has been little information or studies conducted concerning the attitudes and knowledge of HIV/AIDS transmission among college female students.

Significance of the Problem

As stated earlier, AIDS among college female students is increasing, and African-American females

are disproportionately represented in this increase, as indicated by the previous statistics. Research does suggest that educational efforts aimed at minimizing the spread of AIDS be targeted to African American and Hispanic females; however, judging from previous statistics, it appears that: 1) little information and limited knowledge may not be reaching these populations; 2) knowledge alone may not be sufficient to insure that females will make the necessary behavioral changes to protect themselves and others from contracting AIDS; 3) failure to personalize their (females') risk of AIDS (Sunenblick, 1989).

To understand and examine this problem more closely, the author conducted an informal survey in which 15 (female) sophomores at Spelman College were polled regarding their knowledge and awareness of HIV/AIDS transmission. The results of this survey revealed that 80% or 12 of the females were somewhat aware of AIDS, but less than 40% or 7 were knowledgeable about AIDS. When these same females were asked if they felt that AIDS was a threat to society or them, a large majority (over 85%) indicated AIDS was a threat to society, but not to them. An overwhelming

majority of the females (90%) reported they could tell if someone had AIDS, "just by looking at them".

These observations clearly suggest that while these females were aware of AIDS, they did possess limited knowledge about AIDS, and held misconceptions about how to determine if someone had AIDS. Observations such as these are highly indicative of this population's lack of education about AIDS. If prevention is to be effective with this population, it must first seek to educate and dispel myths associated with AIDS.

The results of this informal survey, along with the disproportionate number of African-American females affected by AIDS lead the author to pursue research, examining attitudes and knowledge held by college females in relation to HIV/AIDS transmission. Determining the attitudes and knowledge would, perhaps help to develop and focus preventative strategies aimed at reducing the spread of AIDS among college female students, and generate new knowledge/information which contributes to the growing body of literature in this area.

Social work practitioners working with females

within a college setting become vital agents in helping to reduce the spread of AIDS among college females. First, social workers working with college females must become knowledgeable about AIDS, so as to educate and inform students about AIDS and AIDS prevention. Secondly, social workers must take a leading role in identifying, developing, and implementing educational and outreach strategies aimed at reducing the spread of AIDS among college females. Thirdly, social workers must develop culturally sensitive intervention strategies for aiding those females, who have AIDS, to cope and live with their diagnosis. Finally, social workers must become advocates in helping to erase the social stigma associated with AIDS.

CHAPTER TWO

REVIEW OF LITERATURE

The purpose of this review is to present a thorough and informative overview of AIDS and college female students. This review will examine AIDS from a more general perspective, i.e., focusing on both males and females, because of the limited information on college females and AIDS. Since African-American students are disproportionately affected by AIDS, this review will also examine information relative to African-American college students and AIDS.

The review of literature is presented within the following sections: 1) lifestyles of college female students; 2) knowledge and attitudes about AIDS; and 3) preventive strategies.

Lifestyles of College Females

Numerous studies have been conducted which examined the changing lifestyles of college females. One such study by Robinson, King, and Balswick (1972) surveyed 395 college students at a southern university to ascertain the extent of change in sexual behavior and attitudes from data gathered in 1967. The major changes in reported incidence of premarital coitus and

petting were manifested by females with males remaining approximately the same as the previous study.

Attitudes toward certain aspects of sexual behavior were reported by females to be more liberal, while the males were more conservative than in the previous study.

King, Robinson, and Balswick (1977) conducted a more recent study in which data were gathered by means of questionnaires for 1965, 1970, and 1975, from students attending a southern university to ascertain the extent to which sexual behavior and attitudes had changed. Results of this study revealed that among males, there was no change in the rate of premarital coitus between 1965 and 1970, however, the rate of premarital coitus had increased since 1970. For females, the rate of premarital coitus increased 9.6 percent between 1965 and 1970, and nearly twice that amount (18.8 percent) between 1970 and 1975. Significant change was noted in females' attitudes about sex, however, there was virtually no difference in attitude between males and females in the 1975 sample.

Jedlicka and Robinson (1982) conducted a third

quintennial replication of Robinson et al's. 1965 survey of premarital sexual behavior and attitudes among college students. The study showed that: 1) there was a continued but asymptotic increase in reported premarital sexual behavior among both men and women; 2) there were fewer differences in attitudes and behavior between men and women; and 3) some students have replaced the traditional double standard with a "new" double standard. An increase was observed in the view among students that premarital sexual behavior was immoral and sinful, while at the same time reported sexual behavior was at higher levels for both males and females than at any other time studied.

Kirschner and Sedlacek (1987) studied students' sexual attitudes and behaviors, but focused more on gender differences. They found higher rates of premarital intercourse in the face of more conservative sexual standards for women than for men. For sexual attitudes, however, Kirschner and Sedlacek found that group standards for women were more conservative in 1983 than in 1973.

Abler and Sedlacek (1989) conducted a longitudinal study of freshmen's sexual attitudes and behaviors over

a 15 year period to determine if controlling the population and setting in which data were collected, could long term trends be seen more clearly? Entering freshmen in 1972, 1983, 1987 were randomly assigned and asked to complete questionnaires consisting of items assessing sexual behavior and beliefs; and AIDS-related items (attitudes and behavior) were added in 1987. The results of the study showed that students in 1972 were more likely than students in other years to believe abortions should be readily available, but that contraception increases promiscuity. On the other hand, students in 1972 were more likely than those in other years to perceive an availability of contraceptive information and prescriptions on campus. In regard to behavior, several significant differences were found for three years, including students in 1987 who reported the highest levels of intercourse, and who were more likely to have had intercourse regularly over the past 12 months. Several differences were also found within each year for premarital sexual standards, with the exception of perceptions of female behavior. These differences included the fact that, in all years, women were less likely than men to include premarital

sexual intercourse as part of their sexual code; when they did, they more often indicated that they believed in sexual intercourse before marriage, only when they were deeply involved with someone emotionally. The largest percentage of both men and women (16% for men and 20% for women) reported either concern without overriding fear or moderate fear about getting AIDS. Only a minimal percentage of both men and women expressed little or no concern about catching the disease. The only significant gender difference relates to respondents' perceptions of male attitudes. Twice as many women as men reported that men did not perceive the risk of getting AIDS.

Murstein, Chaplin, Heard, and Vyse (1989) did a study to investigate sexual behavior, drugs, and relationship patterns on a college campus over thirteen years. Three samples of college students at a small New England liberal arts college received questionnaires in 1974, 1979, and 1986 regarding their sexual philosophies, behavior, and relationship with most recent partner, relationship with parents, use of drugs and alcohol. The findings showed that sexual behavior increased dramatically from 1974, 1979, and

then decreased in 1986. Men were found to be somewhat (in 1974) less involved with their most recent sex partner, and significant differences were found between men and women with respect to their philosophy of sex. Their (men) relationship with their parents did not influence men's sexual behavior, though drug usage was less associated with nonvirginity and less commitment to their partners. For women, relationships with their parents and religious upbringing were associated with virginity, and drug usage was associated with less commitment. The 1986 sample showed more commitment to the last sex partner as compared to 1979. The 1986 sample was more conservative than the 1974 sample. Women were found (in 1986) to be more committed than men, and the philosophy of sex was significantly more conservative for both men and women in 1986, as compared to 1979.

DeBuno, Zinner, Daamen, and McCormick (1990) observed several interesting findings in a study which compared the sexual practices of college women before and after the start of the current epidemics of chlamydia trachomatis, genital herpesvirus, and human immunodeficiency virus type 1 infection. Four-hundred

and eighty six college women were surveyed who consulted gynecologists at a student health service in 1975, 1986, and 1989 at the same university. The results showed that the percentages of women in this population, who were sexually experienced were the same in all three years (88 percent in 1975, 87 percent in 1986, and 87 percent in 1989). The use of condoms as the usual method of birth control increased. In 1975, only 12 percent reported the regular use of condoms during sexual intercourse, in some cases in conjunction with other methods of contraception, as compared with 21 percent in 1986 and 41 percent in 1989. No significant differences were found in the three surveys in the number of male partners or the frequency of fellatio cunnilingus, or anal intercourse.

Of the seven studies mentioned, the general consensus seemed to be that college students' attitude and behavior toward sex had changed dramatically over the last two decades. Two of the studies noted that females were becoming more liberal in their attitudes and behavior toward sex, while males were more conservative. This finding is quite interesting, considering that females traditionally have held more

conservative attitudes and behavior toward sex, while males were more liberal. Only one of the seven studies discussed AIDS, gonorrhea, and other sexually transmitted diseases (stds); and it was concluded that there had been little change in sexual practices (in 1975, 1986, and 1989) in response to new and serious epidemics of stds. Sex, drugs, and relationship patterns were discussed in one study. It was concluded that the continuum of drug use was moderately but significantly associated with lack of commitment to one's most recent sex partner. In addition, it was shown that prominent diseases, such as AIDS, herpes, etc., were successful in pushing college students toward more committed sexual relationships, though not abstention (Mustein, et al., 1989).

Knowledge and Attitudes about AIDS

The literature on college students and AIDS revealed a great deal of variability in levels of knowledge, as well as in attitudes about AIDS (Sunenblick, 1989). One study done by Freimuth, Edgar, and Hammond (1987) investigated college students' awareness and interpretation of AIDS risk. They surveyed 1,250 full-time students at the University of

Maryland and found that most of the students were knowledgeable about AIDS, particularly about well publicized facts. More than 95%, for example, knew the AIDS virus could be transmitted by someone who is infected but does not show any symptoms. About one-third of the students did not know the virus could be transmitted by saliva, tear drops, vaginal secretions, insect bites, or intercourse. Although students were able to accurately rate the relative risk of certain behaviors and even overestimated the risk of other behaviors, they were not personalizing their risk of AIDS. Significant differences were found between two groups of students (those with multiple sex partners and those without) in their own risk of exposure to AIDS. Students reported little change in behavior in the past six months. Ishii-Kuntz (1988), expanded previous studies by examining how knowledge and concern about AIDS affect perceived change in sexual behavior among college students at one university. Using a sample of undergraduate students at the University of California-Riverdale, Ishii-Kuntz found that students' concern about AIDS was strongly related to their perceived change in sexual behavior.

More accurate knowledge of sexual transmission, however, did not seem to encourage such change.

Krupa and Vener (1988), collected data to investigate college students' attitudes toward AIDS carriers and knowledge of the disease. The sample consisted of 1,175 college students attending Michigan State University. A positive relationship was found between the level of knowledge a student possessed regarding the disease and their willingness to associate with infected individuals. DiClemente, Zorn and Temoshok (1986) conducted one of few studies which addressed AIDS and African-American college students. The sample included 1,294 adolescents of which 19% were White, 17% were Black, and 11% Hispanic. The results of the study revealed ethnic differences in adolescents' knowledge and misconceptions about AIDS. In addition, a lower knowledge score was highly correlated with an increased perception of personal susceptibility to AIDS.

In another study by DiClemente, Boyer, and Morales (1988), data were reported on knowledge, attitudes, and misconceptions about AIDS among Black and Latino adolescents. Consistent with the previous study,

results showed black and Latino adolescents were approximately twice as likely as White adolescents to have misconceptions about the casual transmission of AIDS.

Seltzer, Gilliam, and Stroman (1988) reported similar findings in a study of 489 residents of the District of Columbia. In a survey of public perceptions of AIDS, respondents who had incorrect knowledge of AIDS and supported repressive actions toward AIDS victims were more likely to be less educated, Black, and to have a great personal concern for contracting AIDS.

Thomas, Gilliam, and Iwrey (1989), conducted a more extensive study which dealt with AIDS and African American college students. They surveyed 975 undergraduates attending a large East Coast university to assess knowledge about AIDS and reported risk behaviors among African-American college students. Findings showed that knowledge of basic AIDS-related facts was satisfactory. Selected questions on how HIV is not transmitted posed some problems for respondents. Approximately 17% of respondents had experienced anal intercourse, 6.5% reported using heroin, 32.6% reported

having had multiple sex partners, 16% had been treated for a sexually transmitted disease. Students who reported engaging in high-risk behaviors had statistically significantly lower mean knowledge scores than those who reported not engaging in those same high-risk behaviors.

Manning, Balson, Barenberg, and Mizell (1989), assessed college students' susceptibility to AIDS. Freshmen's perceived susceptibility to AIDS and barriers to prevention were examined. Students' comments showed that many misunderstandings lay behind an apparent understanding of the facts about AIDS.

McGill, Smith, and Johnson (1989), surveyed 207 sexually active teenagers attending a family planning clinic to assess knowledge, attitudes, and risk characteristics of this population. Results indicated that respondents were aware of the major modes of HIV transmissions, but they had some misconceptions about risk associated with casual contact. Nine percent of respondents reported engaging in behavior, placing them at risk for HIV infection. Eighty-seven percent of the respondents reported they were afraid of getting AIDS, and 57% answered that they would rather get any other

disease than AIDS.

Kruger and Roscoe (1990), in a study on AIDS and late adolescence, surveyed approximately 300 adolescents to assess their knowledge of AIDS, and to determine if and how their sexual behaviors had changed as a result. Findings suggested that late adolescents were quite knowledgeable regarding AIDS and its transmission; however, only about one-third had altered their sexual behavior as a result of fear of the disease.

Koopman, Rothenam-Borus, Henderson, Bradley, and Hunter (1990), did a study which examined knowledge of AIDS and beliefs about prevention among adolescents. Surveys assessing knowledge of AIDS and beliefs about AIDS prevention were administered to three samples of adolescents at high risk for contacting AIDS: 43 runaway females, 43 runaway males, and 36 self-identified gay males. Gay males demonstrated significantly greater knowledge of AIDS; however, there were few differences in beliefs among the groups. Knowledge of AIDS was significantly correlated with beliefs about AIDS prevention.

DiClemente, Forrest, and Mickler (1990), collected

data on 1,127 students at geographically diverse universities and colleges in the United States to assess students' knowledge and attitudes about AIDS and self-reported changes in HIV preventive behaviors. The findings indicated that while students demonstrated a high level of knowledge with respect to AIDS transmission they were also likely to possess many misconceptions about casual contact as a route of HIV transmission. HIV-related sexual risk-taking behavior was also substantial. A large proportion (37%) of students reported never using condoms during sexual intercourse and having had multiple sexual partners during the year preceding the study. A significant proportion of students reported increasing health-protective behavior, although identification of the magnitude of these changes was not attained. Knowledge of AIDS transmission was not related to behavior change, although perceived risk of HIV infection was strongly associated with self-reported increase in health-protective behaviors.

Crawford (1990) examined attitudes about AIDS and the effects of those attitudes on the behavior of 131 undergraduate college students at Loyola University.

Participants reported having minimal concern about contracting AIDS from their current or future sexual partners, and their rate of sexual activity had not changed from that of previous years. Of all participants, 69% reported they did not use condoms during their sexual encounters. White students were more knowledgeable about AIDS than their peers from minority groups. Although all participants were aware they could not contract the AIDS virus through common social interactions, 80% reported they would feel very anxious if a classmate who had AIDS continued to attend classes. Crawford noted that future AIDS prevention programming directed at college populations may need to emphasize the increasing rate of HIV infection among teenagers and young adults.

In general, the results from the previous studies seem to suggest that college students were knowledgeable about AIDS; however, a great many were not personalizing their risk of AIDS, nor were they exercising "safer sex" practices.

The three studies pertaining to AIDS and African-American college students revealed mixed findings. Two of the studies noted that

African-American and Hispanic students were less knowledgeable about AIDS than White students; and a lower score was highly correlated with an increased perception of personal susceptibility to AIDS (DiClemente, et al., 1986). The third study suggested that, as a group, African-American students had adequate knowledge about AIDS; but high-risk students who had the greatest need for accurate information about AIDS knew significantly less about AIDS (Thomas, et al., 1989).

Prevention

Enormous variability exists among studies addressing strategies for minimizing the risk of HIV/AIDS among college students. One such study by Caruso and Haig (1987) examined the effectiveness of health services for the prevention of AIDS on college campuses. Health services departments from 47 Philadelphia area colleges were surveyed concerning 1) their judgment of how campus AIDS programs should ideally be run, and 2) their institutions' current activities related to the AIDS situation. In evaluating where to disseminate information, respondents expressed a clear preference for providing

AIDS education to on campus groups (students, faculty, staff, etc.) over those less centrally related to the campus (e.g., trustees, alumni). Respondents also expressed strong approval for providing special on-campus counseling for "risk groups" but preferred to refer individuals off campus for medical testing. There were interesting discrepancies between respondents' conceptualization of an ideal AIDS program and what had actually occurred on these campuses to date. Approximately two-thirds of these institutions had received professional AIDS-related guidelines, established a campus AIDS task force, purchased and/or distributed brochures to the campus community, and expressed interest in joining an AIDS coalition. However, only one-third of the institutions had actually adjusted their counseling services, and even fewer had budgeted funds for the training of existing personnel.

McDermott, Hawkins, Moore, and Cittadino (1987) did a study addressing AIDS awareness and information sources among selected university students. McDermott et al., assessed both knowledge of sources about AIDS in a sample of 29 students attending a large midwestern

university. A 20-item forced choice inventory consisting of cognitive and demographic items. Overall, knowledge of AIDS-related facts was high. However, 37.3% of the sample was unclear about AIDS' lethal potential, 35.4% did not recognize AIDS-associated opportunistic diseases, and 31.7% did not relate risk of contracting AIDS with indiscriminate sexual behavior. The three leading reported sources of AIDS information were television, newspaper, and magazines, respectively. Though media attention given to AIDS abounds, certain misconceptions still were held by young adults.

Hill (1988) investigated the relationship between AIDS-related anxiety and the evaluation of condom advertisements. Subjects in the study consisted of 74 male and female students at an eastern university. Results suggested that attitudes toward condom ads may have been based on subjects' level of anxiety concerning the spread of AIDS in society. Also, data showed that subjects held more positive attitudes for moderate-fear appeals than for high-fear appeals.

Baffi, Schroeder, Redian, and McCluskey (1989) also studied condom use, but focused more on factors

influencing condom use in heterosexual male college students. The study assessed selected heterosexual male college students' use of condoms, and their attitudes toward sexuality and condoms. Three-hundred and five male students completed questionnaires, and the findings identified no relationship between attitudes toward sexuality and attitudes toward condoms. A negative correlation (-.42%) was found between attitudes toward condoms and intentions to use condoms within the month if the subjects were to have intercourse.

Abramson, Sekler, Berk, and Cloud (1989), assessed the impact of an undergraduate class on AIDS at UCLA, which was designed to alter students' attitudes about AIDS and their high risk behaviors. The results suggested that the UCLA AIDS course had a beneficial impact upon attitudes, knowledge, and behavior relevant to the transmission of HIV/AIDS. Though not statistically significant, students in this study were also less likely to engage in unprotected vaginal sex.

Dommeier, Marquard, Gibson, and Taylor (1989) also studied the effectiveness of an AIDS campaign on a college campus. They surveyed faculty, staff, and

students at California State University to determine if AIDS awareness week was beneficial in raising awareness of AIDS. A pretest-posttest design was used to determine whether AIDS-related attitudes of students, faculty, and staff were affected by an AIDS-awareness week. The results showed that the awareness week was successful in exposing the campus community to AIDS information. It was only marginally effective in changing AIDS-related attitudes because posttest attitudes were already at desirable levels; only a fraction of the campus community attended the highly motivating events of the campaign, and faculty did not actively support the goals of the campaign.

DiClemente, Pies, Stroller, Straits, Olivia, Haskin, and Rutherford (1989) studied a school-based AIDS educational curricula in San Francisco to assess its effectiveness. Classes within schools were designed as either intervention classes or nonintervention classes. All students completed a pretest and posttest AIDS knowledge and attitude survey. The results indicated that AIDS instructions classes demonstrated a significant knowledge-advantage, as well as change in attitudes (e.g., reflecting

greater tolerance for attending class with students who may have AIDS or HIV infection).

Gerrard and Reis (1989) examined gender differences concerning retention of contraceptive and AIDS information in the classroom. They compared pretest and posttest knowledge of contraception and AIDS in erotophobic (people with negative emotional orientations toward sexuality) erotophillic (positive attitude toward sexuality) students in a university class on human reproductions. The results showed that male erotophobics initially knew less, however, there was no knowledge (about AIDS) differences between males and females or erotophobics and erotophillics at the end of the course.

Reiss and Leik (1989) evaluated various models aimed at reducing the spread of HIV/AIDS. A probability model based on estimates for prevalence and infectivity of HIV was developed. The model was used to compare the two widely publicized risk reduction strategies: 1) reducing the number of partners and 2) using condoms. The results indicated that under almost all conditions of prevalence and infectivity, consistent and careful condom use is a far more

effective method of reducing the risk of HIV infection.

In general, the findings from the previous studies were mixed. For example, studies by Dommeyer, et al., and McDermott et al., showed that while AIDS awareness campaigns on campuses were successful in exposing students to AIDS; they were, however, marginally effective in changing AIDS-related attitudes. In contrast, studies by Abramson et al., and Pies et al., showed that the effectiveness of school-based AIDS programs were highly successful in changing knowledge and attitudes relative to HIV/AIDS. Moreover, studies by Abramson et al., and Pies et al., suggested that on-going reinforcement of AIDS information may have contributed to the success of these school based/campus AIDS programs.

Theoretical Framework

The developmental theory was chosen to explain the developmental theory, knowledge and attitudes about HIV/AIDS transmission among college female students. The developmental theory focuses on the normative physical, cognitive, and psychological changes of adolescence and permits an inquiry into sexual behaviors by providing a framework of adolescent

identity consolidation (Sunenblick, 1989). The progression of identity consolidation necessitates a reworking of earlier developmental issues for the adolescent. As the process occurs, a window on earlier developmental periods often emerges, providing a closer perspective on the existence of developmental deficits (Sunenblick, 1989). This perspective helps to provide a developmental context for understanding choices that adolescents make regarding their sexual behavior (Sunenblick, 1989).

In order to conceptualize the interface of adolescent developmental theory and AIDS, the tasks of autonomy, self-esteem regulation, and identity consolidation will be examined. These three tasks will also be examined from an Afro-Centric perspective to address current problems confronting African-American adolescents.

The achievement of autonomous functioning for the adolescent involves the disengagement from family ties as the adolescent engages with the world of peers and social institutions (Goethals, 1970, Pillari, 1988). Behaving independently is not the equivalent of being psychologically autonomous. Until one can achieve a

certain amount of psychological independence, it is extremely hard to achieve an identity (Sunenblick, 1989). As the adolescent moves outside of the family, he or she is expected to demonstrate increasing ability to regulate self-esteem from within rather than through external sources (Sunenblick, 1989). Berkowitz (1977) and Deutsch (1967) both suggest that for those adolescents who are in need of having others perform what in normal development would become self-regulating functions, the journey toward more complete autonomous functioning becomes difficult. Their reliance on others to make them feel complete often results in impulsive sexual acting-out in an effort to meet these needs (Sunenblick, 1989).

Self-esteem regulation in adolescence requires an understanding of narcissism and narcissistic vulnerability, central dimensions of adolescent character structure that influence adolescent relationship-seeking behaviors and ultimately their sexual behaviors (Thompson, 1987). As adolescents disengage from their families, there is accompanying sense of ego loss which triggers the heightened vulnerability so often noted in the adolescents'

personality organization (Mishne, 1986). In response, the defenses of invulnerability and denial, manifest by omnipotent and grandiose behaviors, appear as adolescents attempt to restore and stabilize their self-esteem (Kaplan, 1986; Meeks, 1971). Referred to as narcissistic vulnerability, this is viewed as a normative aspect of young adult character structure. The successful negotiation of this phase in large part results from experiences that provided for adequate psychic structure, including internal mechanisms for self-esteem regulation and self-soothing (Sunenblick, 1989). By late adolescence, the capacity to regulate self-esteem needs from within is greatly influenced by earlier developmental experiences. The abilities to be truly intimate, to seek mutual sexual fulfillment, and to discuss sexuality and contraceptive protection are impeded to the extent that adolescents have an unstable sense of self and are psychologically vulnerable (Sunenblick, 1989). These adolescents often regulate their self-esteem through external sources. In these situations, adolescents may not communicate about sexual matters with their partners or may seek out indiscriminate sexual encounters, thus placing

themselves and their partners at risk for AIDS (Sunenblick, 1989).

A major challenge during late adolescence is the achievement of selfhood or "ego identity," that Erikson (1965/1975) speaks of as an essential ingredient of the coherent self. Finding new identifications, loyalties, and intimacies outside the accustomed family dependencies permeates development. The most important fundamental aspect of identity consolidation is sexual identity development (Sunenblick, 1989). The adolescents' sense of self in large part is based on the extent to which sexual impulses are successfully negotiated. Earlier developmental experiences influence the ability to negotiate closeness and to experience intimacy in interpersonal relationships (Sunenblick, 1989; Pillari, 1988). The more open adolescents are able to be with each other, the more likely that they can talk about intimate topics such as sexual behaviors, sexual history, and plans for contraception (Bryne, 1983). On the other hand, some adolescents may be uncomfortable in discussing the topic of sex with their partners, thus avoiding contraceptive protection altogether or taking the risk

of engaging in sex with a partner who may be infected with stds (Sunenblick, 1989). In circumstances such as these, sexual behaviors may be used erratically or indiscriminately to avoid the negotiation of closeness and distance in the relationships in an effort to buoy the adolescent's faltering sense of self (Blos, 1962; Deutsch, 1967). For some adolescents, a frantic search for comfort, connection, and affection may be reflected in promiscuous sexual behaviors that place them at risk for sexually transmitted diseases, such as AIDS (Sunenblick, 1989).

In considering these developmental tasks from an Afro-Centric perspective, it is important to examine problems which may impact the African-American adolescents' attainment of such tasks. One problem concerns the high illegitimacy rate among African American females. According to an article published in *The Atlanta Journal and Constitution*, January 22, 1991, the Black out-of-wedlock rate has more than doubled to 63.5 percent (in 1988, the last year for which figures are available), while the White rate has risen faster, more than quadrupling from over 4 percent in 1988. Of the babies born out-of-wedlock in 1988, 539, 696 were

White and 426,665 were Black. These figures are alarming and it is expected that such figures will increase within the next few years. For many African-American females, maintaining an out-of-wedlock pregnancy has meant foregoing educational aspirations, living in substandard/poverty stricken housing, and receiving welfare payments in order to care for their children. Taken as a whole, these problems create an environment in which the female is unable to actualize her own self-worth, independence, and identity.

Another problem confronting African-American adolescents concerns the growing use of "Survival Sex" in exchange for money to support drug habits. Because of the erratic behavior associated with survival sex, many adolescents unknowingly transmit the virus from one person to another, while supporting and maintaining their drug addicted behavior. The adolescents' use of survival sex oftentime will involve other criminal activities, such as shoplifting, sell of illegal drugs and robbery, to support their drug habit and provide an economic means of survival for their families.

Because of their illegal involvements with drugs, sex, robberies, and other criminal related activities,

many African-American adolescent males are arrested and incarcerated for years, thus contributing to the disproportionate number of African-American males who are incarcerated. Developmentally, these youngsters often become "old before their time". That is, they engage in activities (i.e., illegal drug selling, violent shootings associated with drug selling), which forces them to mature rapidly and live faster and dangerously; often foregoing critical psychological and emotional growth, which are essential in the development of identity consolidation.

Definition of Terms

For the purpose of this study, the following terms have been defined:

1) Acquired Immunodeficiency Syndrome (AIDS), a disease characterized by opportunistic infections (e.g., pneumocystis carinii pneumonia, candidiasis, toxoplasmosis) and malignancies (e.g., Kaposi's sarcoma, non-Hodgkin's lymphoma) in immunocompromised persons (Steadman's Medical Dictionary, 1990).

2) Human immunodeficiency virus, (HIV), the virus component of AIDS. This virus destroys the immune system (Steadman's Medical Dictionary, 1990).

3) "Survival Sex": The utilization of sex for the procurement of drugs, which places the individual at risk for HIV/AIDS.

4) Substance Abuse: Marked psychologic and physiologic dependence upon a substance, such as alcohol or drugs, which has gone beyond voluntary control (Blackston's Gould Medical Dictionary, 1979).

Statement of Purpose and Research Questions

The purpose of this study was to determine the attitudes and knowledge of HIV/AIDS transmission among freshmen and sophomore college females. Because this is a descriptive study, and no hypothesis was required, a number of questions were of interest to the researcher, such as:

1) Will those females from families in which parents had higher levels of formal education (college and beyond) make more informed, less conservative responses regarding AIDS than those females whose parents received less formal education?

2) Will there be a difference between how freshmen and sophomores respond with respect to knowledge and attitudes about AIDS?

3) Will females with pre-professional

(pre-dentistry, pre-med, education, etc.) and science majors make more accurate and less conservative responses about AIDS than those with other majors?

CHAPTER THREE

METHODOLOGY

This study was a replication of a study conducted by Rudolph E. Jackson, M. D., W. A. Alexander, Ph.D., R. Bakeman, and B. Bagley (1987), entitled "AIDS Education and Attitudes: **"Experience with Minority Students in the Atlanta University Center."** Results of the study revealed the following: almost all students had accurate knowledge about research-substantiated routes of transmission, but many students held to certain myths about AIDS transmission, especially those who held socially conservative attitudes. Confusion existed in several areas including blood donation and infection, the purpose of HIV testing, the insect as the vector for the virus, and relative risk for Blacks and Whites.

This chapter included the following:

- 1) description of the research design; 2) sampling; 3) data collection procedure, and 4) analysis of the study.

Research Design

The study employed a descriptive research design in examining female college students' knowledge and

attitudes relative to HIV/AIDS transmission. According to Grinnell (1989), the purpose of a descriptive research design is to obtain data about a particular social problem; and to find out the distribution of certain attributes among a sample of respondents randomly drawn from a population. In carrying out this research design, Grinnell states one is not interested in why this distribution exists but what the distribution is.

This study described and compared the attitudes and knowledge of freshmen and sophomore college female students enrolled (full or part-time) at a predominantly Black women's college in the city of Atlanta. Permission was obtained from the Director of Residential Life, in early February, to carry out the study (See Appendix A). Each participant was given a detailed description of the study, and written consent for their participation was obtained (See Appendix B).

Participants voluntarily completed the following questionnaire packet: 1) demographic data (sex, age, etc.); 2) questions assessing students' attitude toward persons with AIDS; 3) questions assessing students' knowledge about AIDS.

Sample

The population consisted of 28 freshmen and 31 sophomores. The subjects' age ranged from 17 to 20 with a mean age of 19. The researcher distributed the questionnaires in the freshmen and sophomore residence halls on days designated by the resident director. A convenience sample was utilized in the study.

Data Collection Procedure

The AIDS Education Questionnaire (AEQ); developed by Roger Bateman, Ph.D., William Alexander, Ph.D., and Judith Lamb, Ph.D., was administered to the population (See Appendix C). The instrument assessed knowledge and attitudes relative to HIV/AIDS transmission.

This questionnaire was a self-report pencil and paper instrument, which contained six sections. The first section of the questionnaire, a demographic section, asked questions regarding the subjects' age, sex, and religious preference. The second section composed questions addressing one's feeling of susceptibility to AIDS. The third section asked about routes of transmission for the AIDS virus. The fourth section addressed groups that are at risk. The fifth section referred to the meaning of a positive test

result. The final section dealt with social concerns surrounding AIDS, and with identifying socially conservative and socially liberal individuals. All questionnaires were completely anonymous.

Data Analysis

Data were analyzed using the SPSS-X software packet for the social sciences. Values were computed for three dependent summary variables: knowledge about the transmission of AIDS, knowledge about AIDS testing, and liberal attitudes about AIDS. This process was done by summing scores from the 1 to 5 Likert scale of part C, E, and F of the questionnaire. No scoring was computed for items in parts B and D because there does not appear to be any non-controversial way to sum the responses (Bagley, 1987). Some of the questions were reverse scored because of inverse wording.

A "t-test" analysis was performed to examine the relationship between class standing and liberal attitudes about AIDS. Additionally, a "t-test" was performed to examine the relationship between respondents' academic majors and conservative responses. One-way ANOVAs were performed to test significance for parental levels of education and

conservative attitudes about AIDS, and knowledge about AIDS transmission and testing.

CHAPTER FOUR

PRESENTATION OF RESULTS

The results presented will cover the following areas: characteristics of the sample; class standing; respondents' majors; parental education; concerns about AIDS; knowledge about the transmission of AIDS; knowledge about groups at risk; knowledge about HIV testing; and, social attitudes about AIDS.

Characteristics of the Sample

The largest religious preference category was Baptist (50%). The other responses were split among five other denominations, with ranges of 5% to 7%. The academic majors were diverse. The largest categories were biology (20%) and psychology (21%). Some of the other categories: English, political science, economics, and mathematics, ranged from 5% to 16%. Sophomores comprised the largest group of respondents (52%), while freshmen comprised 47%. Over thirty percent of the students came from homes where the father had completed college. See table 1 for information on parents' level of education.

Table 1**Parental Level of Education**

PARENT	EDUCATION COMPLETED	NUMBER	PERCENTAGE
Father	Did not complete high school	1	1.7
	Finished high school	7	11.9
	Some College	17	28.8
	Finished College	8	13.6
	Advanced Degree	22	37.3
	Not Applicable	3	5.2
	No Response	1	*Missing
Mother	Did not complete high school	1	1.7
	Finished high school	11	18.6
	Some College	13	22.0
	Finished College	12	20.3
	Advanced Degree	21	35.6
	No Response	1	*Missing

Note. *Missing = Missing Cases

Class Standing

The "t-test" analysis revealed no statistically significant relationship between class standing and liberal attitudes about AIDS ($t = .074$, $p = .46$). Neither freshmen nor sophomores made liberal or conservative responses. Further analysis revealed no significant difference between freshmen or sophomores in terms of their knowledge about AIDS transmission ($t = -0.77$, $p = .45$), or knowledge about AIDS testing ($t = 0.34$, $p = 0.78$). Though no significance was obtained, there were significant mean and standard deviation scores, which deserved reporting (See table 2).

Table 2
Table of Mean and Standard Deviations for Class Standing and Summary Variable

Variable	Class Standing	Mean	*SD
Attitudes about AIDS	Freshmen	55.8	5.69
	Sophomores	54.7	5.61
Knowledge about AIDS	Freshmen	36.7	4.82
	Sophomores	37.8	6.51
Knowledge about AIDS testing	Freshmen	29.9	3.09
	Sophomores	29.6	3.69

*SD = Standard Deviation

Respondents' Majors

The respondents' majors were classified into two groups. They were health/science majors (i.e., pre-dentistry, biology, chemistry, etc.) and other (i.e., business, drama, dance, etc). The rationale for categorizing the majors was the researcher's assumption that those students with health/science majors would respond more accurately. The results revealed that there was no significant difference based on respondents' majors (health/science or other) in relation to knowledge about AIDS transmission ($t = 0.39$, $p = 0.67$). There was also no significance based on respondents' major in relation to their knowledge about AIDS testing ($t = 1.537$, $p = 0.132$) or attitudes about AIDS ($t = -0.87$, $p = 0.387$). Although no statistical significance was obtained, there were significant mean and standard deviation scores which deserved reporting (See table 3).

Table 3

Table of Mean and Standard Deviation Scores Based on Respondents' Major

Variable	Major	Mean	SD
Knowledge about AIDS	Science/health-related	37.25	6.32
	Others (business, dance, etc.)	36.67	4.57
Knowledge about AIDS	Science/health-related	30.18	3.38
	Others (business, dance, etc.)	28.8	3.11
Attitudes about AIDS	Science/health-related	54.7	6.36
	Others (business, dance, etc.)	56.1	5.13

Parental Education

One-way ANOVAs for the three summary variables (knowledge about AIDS transmission, knowledge about AIDS testing, and attitudes about AIDS) were computed based on three groups of parental education. The first group consisted of those students where no parent(s) completed college. Group two comprised those students whereby only one parent completed college. Group three consisted of students where both parents had completed college. Of the three groups mentioned, none were statistically significant for knowledge about AIDS transmission ($F = .7612$, $p = .4722$). There was no statistical significance for the three groups for knowledge about AIDS testing ($F = .0167$, $p = .9835$). In addition, there was no statistical significance for the three groups for attitudes about AIDS ($F = 1.6206$, $p = .2084$). Although no statistical significance was obtained, there were significant mean and standard deviation scores worthy of reporting (See table 4).

Table 4

**Table of Mean and Standard Deviation for Summary
Variables and Three Groups of Parent Education**

Summary Variable	Groups of Parent Education	*N	Mean	SD
Knowledge about AIDS transmission	Group 1-No parent completed college	15	38	4.7
	Group 2-Only one parent completed college	17	35	4.3
	Group 3-Both parents completed college	23	37	6.7
	Whole Group	55	37	5.5
Knowledge about AIDS testing		15	29	3.4
		15	29	3.1
		22	29	3.4
		52	29	3.3
Attitudes about AIDS		15	53	4.9
		15	57	5.9
		21	55	5.9
		51	55	5.7

*N = Number

Concerns about AIDS

Based on the data, over half (57%) of the respondents indicated they were concerned about AIDS. Almost all (98%) have reportedly watched at least one television program about AIDS. This is coupled with the fact that more than 76% have seriously talked with a friend about AIDS. Only 20% personally knew someone with AIDS, and 49% knew someone who knows someone with AIDS. Even without the personal experience of AIDS, the virus was recognized as a serious condition by all (100%) of the respondents. It is believed to be so serious that 85% of those surveyed acknowledged that the AIDS epidemic was a major health priority for the United States. Fifty percent felt that the AIDS epidemic ranged from fairly to extremely serious in the personal perspective, and 59% felt that AIDS is somewhat serious to extremely serious for people they know.

Knowledge About the Transmission of AIDS

The students were generally knowledgeable about AIDS. For example, 96% knew that sharing intravenous drug needles with someone carrying the virus was likely to transmit AIDS. Ninety-nine percent knew that anal intercourse with an active partner carrying the AIDS

virus was likely to transmit AIDS. Ninety-nine percent also knew that vaginal intercourse with an active partner would likely transmit AIDS, and 94% knew that AIDS could be transmitted through oral intercourse. See table 5 for mean and standard scores for sources of transmission.

A majority of the students (86%) knew that visiting areas where people with the AIDS virus congregate was unlikely to transmit AIDS; however, only 14% did not know this. Eighty-six percent also knew that shaking hands with, hugging, or otherwise touching a person with the AIDS virus was unlikely to transmit AIDS. Seventy percent of the respondents knew that using a condom during sexual intercourse would very likely prevent the transmission of the AIDS virus. Of the 70%, 5 % felt that using a condom during intercourse would not prevent the transmission of the AIDS virus. Sixty-two percent knew that sharing drinking glasses was an unlikely route to transmit AIDS, but 38% did not know this. In addition, 40% knew that being bitten by an insect that had bitten a person with the AIDS virus was unlikely to transmit AIDS; 34% were neutral and 23% indicated that being bitten by a

person with the AIDS virus was very likely to transmit AIDS. Ninety-five percent thought that the virus could be transmitted from the swallowing of semen from an infected person. Although no definitive statements or documented cases have been reported concerning the swallowing of semen, researchers feel that the swallowing of semen, in large quantities, may transmit the AIDS virus (Centers for Disease Control, 1991).

Table 5**Table of Mean and Standard Deviations for Sources of
AIDS Transmission**

Sources of Transmission	Mean	SD
Casual touch by *PWAs	1.6	1.09
Visiting areas where *PWAs are	1.7	.925
Using public phone	1.7	.134
Eating food prepared by *PWAs	1.8	.934
Using condoms	2.3	.148
Sharing drinking glasses	2.4	1.113
Being bitten by an insect	2.7	.151
Deep kissing	3.3	1.181
Oral intercourse	4.8	.597
Sharing IV needles	4.9	.601
Anal intercourse	5.0	.183
Vaginal intercourse	5.0	.183

*PWAs = Persons with AIDS

Knowledge About Groups at Risk

As with knowledge about transmission, the respondents were also knowledgeable about groups at risk for AIDS. For example, 97% of the respondents knew that intravenous drug users were at high risk for AIDS, and 3% knew that lesbian women were at almost no risk for AIDS (See table 6). Sixty-four percent responded that lesbian women were at high risk, and 18% responded that heterosexual women were at high risk; 47% indicated some risk and 27% indicated moderate risk for heterosexual women. In fact, heterosexual women are at higher risk for AIDS than lesbian women (Jackson, et al, 1987). In terms of race, 24% of the subjects responded that whites were at high risk for AIDS and 34% responded that African Americans were at high risk for AIDS. Twenty-five percent of the respondents knew that children were at almost no risk for AIDS; 24% indicated slight risk, and 29% indicated moderate risk for children. Twelve percent felt that persons donating blood were at moderate to high risk for AIDS.

Table 6
Different Risk Groups Based on Degree of Risk
(Percentage Scores)

Groups	almost no risk	slight risk	some risk	mode- rate risk	high risk	no response
1) Persons donating blood	54.2	20.3	13.6		8.5	3.4
2) Health Care Workers	5.2	5.2	29.3		36.2	24.1 Missing
3) IV drug users					3.4	96.6
4) Receiv- ing blood products	3.4	8.6	10.3		36.2	41.4 Missing
5) New- borns mothers with AIDS	3.4	1.7	3.4		13.6	78.0
6) Child- ren	25.9	24.1	29.3		15.5	5.2 Missing
7) Hete- rosex- ual men	3.4	5.1	44.1		27.1	20.3

(table continues)

Table 6
Different Risk Groups Based on Degree of Risk

Groups	almost no risk	slight risk	some risk	mode- rate risk	high risk	no resp- onse
8) Bi- sex- ual men	5.1		5.1	25.4	64.4	
9) Gay Men			1.7	16.9	79.7	Missing
10) Hete- rosex- ual women	3.4	3.4	47.5	27.1	18.6	
11) Les- bian women	3.4	3.2	10.2	18.6	64.4	
12) Peo- ple with multi- ple sex part- ners		3.4	11.9		84.7	
13) Whites in U.S.	5.2	1.7	31.0	37.9	24.1	Missing

(table continues)

Table 6**Different Risk Groups Based on Degree of Risk**

Groups	almost no risk	slight risk	some risk	mode- rate risk	high risk	no resp- onse
14) Ame- ri- can Blacks	3.4	1.7	30.5	30.5	33.9	
15) His- pan- ics	1.7		28.8	44.1	25.4	

Knowledge About HIV Testing

There was much confusion among the respondents concerning knowledge about HIV testing. For example, ninety-one percent thought that individuals who tested positive should be referred to a physician for further evaluation (See table 7). However, 47% thought that a positive on the HIV test meant that an individual had AIDS, and 30% also thought a positive on the HIV test meant that an individual had the AIDS virus. In fact, a positive test means that an individual has been exposed to the AIDS virus and has antibodies, yet only 47% of the students knew this.

To further assess students' knowledge about AIDS testing, a chi-square analysis by cross tabulation of class standing was performed to determine the significance between class standing and knowledge about HIV testing. The analysis revealed marginal significance ($x^2 < .08$) between class standing and knowledge about HIV testing. Interestingly, this analysis revealed more freshmen (68%) than sophomores (32%) appeared to be more knowledgeable about HIV testing than expected.

Table 7

**Table of Mean and Standard Deviations for Knowledge
About AIDS Testing**

AIDS Testing Question	Mean	SD
High risk people can donate blood	1.5	1.006
People who are positive have AIDS	3.0	1.279
High risk negative people can donate blood	3.0	1.371
People who are positive have the AIDS virus	3.3	1.409
Positive people have antibody to virus	3.4	1.412
Positive people will develop AIDS	3.6	.116
Positive people are infectious	4.1	1.087
HIV positive people should see a physician for further evaluation	4.8	.597

Social Attitudes About AIDS

In this section of the questionnaire, the students seemed to give very liberal responses. Eighty-three percent agreed or strongly agreed that resolving public concerns about AIDS must be balanced with protecting the civil rights of persons with AIDS, and at risk for AIDS. Sixty-eight percent agreed or strongly agreed that civil rights laws should be enacted to protect people with AIDS or at risk for AIDS from discrimination. Eighty-three percent disagreed or strongly disagreed (17% were neutral or not sure) that people with AIDS should be legally quarantined to protect the public's health; 51% agreed or strongly agreed; 37% were neutral or not sure, and 87% strongly disagreed that the names of people known to have AIDS should be published so that others can avoid them. Fifty-four percent agreed or strongly agreed that the current hysteria about AIDS is probably more of a threat to the public's welfare than is AIDS. Sixty-four percent agreed or strongly agreed that people who want to quarantine persons with AIDS are only revealing their own bigotry. While there were similarities of opinions about quarantining persons

with AIDS, there were also agreement about spending government money for AIDS. Ninety-seven percent agreed that the federal government should increase its funding for research on AIDS and 91% agreed that the federal government should fund educational programs to teach people how to avoid AIDS.

CHAPTER FIVE

SUMMARY AND CONCLUSIONS

The results of the study suggested that African-American female college students who participated in this study, as a group, were highly knowledgeable about AIDS transmission, possessed some concern about AIDS, held liberal attitudes about persons with AIDS, and adequately personalized their own risk of AIDS.

The findings of high levels of knowledge about AIDS transmission were consistent with similar observations in other college samples (DiClemente et al., 1990; Freinueth et al., 1987; Krupka, 1988; Roscoe and Brown, 1990; McGill, et al., 1989), but not consistent with Jackson et al.'s sample. The higher levels of knowledge in the present sample may be due to general increases in knowledge among college females in the four years since Jackson's study was conducted. It could also be due to gender differences. The present sample was restricted to college female students, who may have been more knowledgeable about AIDS than the previous sample, which consisted of males and females from three colleges in the Atlanta University Center.

The findings that students possessed some concern about AIDS, held liberal attitudes about persons with AIDS, and adequately personalized their own risk of AIDS were not consistent with Jackson et al.'s (1987) findings: the higher levels of knowledge in the present sample may have a positive correlation with the more liberal attitudes and more adequately personalizing their own risk of AIDS.

Results of the study also suggested that this sample was less knowledgeable, perhaps confused, about AIDS testing questions. One question in particular, "Persons tested HIV positive have AIDS," posed so much difficulty that over forty-five percent of the sample thought this question to be true. Another question that posed difficulties for the students was, "People who are HIV positive have the AIDS virus." While fifty percent thought this question to be true, the remaining fifty percent thought this question to be false. These findings were surprising given that over seventy percent indicated AIDS had been discussed in class.

An interesting finding emerged when a chi-square analysis was performed with the question, 'HIV positive people have AIDS,' and class standing. More freshmen

(68%) than sophomores believed this question to be false. Freshmen's higher percentage may be due to their having more knowledge about HIV testing than sophomores. It could also be that sophomores, presumably knowledgeable, overestimated their ability to correctly respond to this question. Whatever was responsible for the differences in response, it does appear that sophomores need education with regard to HIVS testing.

Analysis of Research Questions

The first research question sought to determine if there were significant differences between how freshmen and sophomores responded with regard to knowledge and attitudes. A statistically significant relationship was not found between the two groups of students in their responses to the questions concerned with social attitudes. Interpreted differently, neither freshmen or sophomores responded conservatively or liberally. In fact, both groups tended to respond similarly with regard to knowledge and attitudes. The reason for this is questionable. It might be assumed that freshmen would make more conservative responses due to their lack of exposure. It might be expected that with more

education and hopefully more enlightenment, sophomores would make more liberal responses; however, this was not the case.

The next question sought to determine if there were any significant differences in the way students with various academic majors responded to the questionnaire. The "t-test" analysis was not statistically significant, suggesting that the major of a student was not distinguishable among students. It was theorized that students with research oriented majors might be more motivated to seek out information and would be more informed on AIDS issues. This was not proven in the analysis. This does not mean that students do not research areas of concern, only that there was no distinction between students with various academic majors in their responses on the questionnaire.

The last question examined the relationship between parental college attendance and students' knowledge about AIDS testing and their social attitudes about AIDS. The ANOVAs were not statistically significant, suggesting that those students from homes where parents, one or both, attended college did not

make more correct or incorrect responses with regard to knowledge about HIV testing than students whose parents had not attended college. While no plausible explanation for this finding was established, an interesting observation was that students responded similarly with regard to the question.

Based on the results of this study, the following conclusions were reached:

- 1) The population surveyed was very knowledgeable about AIDS transmission, held liberal attitudes about persons with AIDS, able to assess their risk of AIDS, and possessed some concern about AIDS.
- 2) In general, the sample was less knowledgeable about HIV testing and the relationship of a positive HIV test result and AIDS. Freshmen emerged as being more knowledgeable about HIV testing than sophomores. This area raises the need for more education among sophomores about HIV testing.
- 3) This sample was very heterogeneous which reflected the fact that their responses were similar and almost identical.
- 4) When all three research questions were tested for significance, they were, a) not statistically

significant, but revealed significant mean and standard deviation scores, and b) no relationship, strong or weak, was established between the research questions.

Limitations of the Study

While this study identified important findings regarding students' knowledge and attitudes about HIV/AIDS transmission, there were limitations in the research design, sample, and sample size that restricted generalizability of the findings. Foremost was the lack of random sample. The sampling methodology used to select participants was a convenience sample. The sampling method included freshmen and sophomores who were most likely representative of the school's freshmen and sophomore population. However, without additional data on the total college population, it was difficult to conclude whether the sample was comparable to the college population from which it was drawn. Thus, extrapolating the findings to the total population of college students was tenuous.

A second issue, although closely related to the first, concerns the sample and the sample size. As was mentioned, the sample was composed of females (31

sophomores and 28 freshmen) who were very heterogeneous in terms of their knowledge and attitudes about AIDS and family backgrounds. The fact that this sample was very heterogeneous and small may be a factor in not obtaining any level of significance with the empirical questions. Thus, future research with a larger and more diverse sample (i.e., inclusion of freshmen and sophomores from other colleges) may yield a different set of findings, necessary to assess this sample's knowledge and attitudes about HIV/AIDS transmission.

A final limitation of the study concerned the length of the questionnaire. As was mentioned in the methodology, the AIDS questionnaire contained 73 questions. A comment made by the respondents was that the questionnaire was too lengthy. Future use of the questionnaire should focus on reducing its length, without losing the substance and importance of each questions.

Suggested Research Directions

Additional research investigating the relationship between knowledge and attitudes about HIV/AIDS transmission is needed in this population if we are to motivate and bring about behavioral changes in those

females who are at greater risk of HIV/AIDS. Development of a probability sample that would permit generalization of the findings to the U.S. college population would also be useful in estimating the prevalence of risk taking behaviors among this group. Further, longitudinal studies are needed to assess and examine the stability of findings, but more importantly, to identify those students engaging in high risk behaviors.

CHAPTER SIX

IMPLICATIONS FOR SOCIAL WORK PRACTICE

Education continues to be our most effective weapon for reducing the spread of AIDS among college female students. It is essential that females educate themselves about AIDS and its deadly consequences. To do so will require the skills and talents of educators, social workers, school health officials, and community leaders to develop and implement effective AIDS programs for African-American females.

The tools necessary to develop and implement culturally sound, yet gender sensitive AIDS programs will require an understanding of the life and death issues often confronting many HIV positive females. In order for this to happen, social workers must feel comfortable in addressing their own feelings about AIDS, and assessing their own mortality.

Social workers must bear in mind that any risk assessment with this population must reflect an understanding of late adolescent developmental theories. Late adolescence is a period of life where energies are placed on establishing independence away from parents, exploration of sexuality, and identity

consolidation. This is also a period of life where immortality and invincibility are at its highest. Recognizing the role of immortality and invincibility in adolescent thinking may be another useful tool in assessing this population's risk of AIDS.

Social workers must also bear in mind that when working with this population in attempting to modify their behaviors, attitudes, and knowledge about AIDS, the use of various systems and the role of the change agent become essential in this effort. The intergration of the matrix, and specifically the change agent, as defined by the Clark Atlanta University School of Social Work, appears to be a natural role for social workers as they participate in HIV/AIDS prevention and education activities on the college campus. As change agents, social workers are committed to assisting college students in adopting patterns of safe behaviors and ultimately, the reduction of AIDS on the college campus.

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APPENDIX A**LETTER TO AGENCY**

February 17, 1991

I am a second year graduate student at Clark Atlanta University School of Social Work, where I am pursuing a Master's Degree in Social Work. As part of the educational requirements, I am required to complete a master's thesis. My topic is: "Knowledge and Attitudes About HIV/AIDS Transmission Among Female College Students". To carry out this study, I will be using a questionnaire developed by Dr. Rudolph E. Jackson, Morehouse School of Medicine, aimed at measuring the students' knowledge and attitudes about AIDS. I would like to administer the questionnaire to 25 freshmen and 25 sophomores who currently attend Spelman College. Completion of the questionnaire will take approximately 20 minutes of the participants' time.

All information collected will be kept confidential and will be destroyed immediately following the completion of this study. Each participant will be asked to voluntarily participate in this study. The participant will be given a full

explanantion of the study, along with a written consent form securing their participation.

I am enclosing a copy of the abstract, protocol, questionnaire, and consent form for review and consideration. Your assistance in reviewing the information for approval is appreciated. If additional information is needed, please feel free to call me at: (h) 223-5722 between 5:30-9:00 pm, Monday through Sunday; (w) 524-0543 between 6:00-11:00 pm, Monday through Sunday.

Sincerely,

Vera L. Murphy

APPENDIX B
LETTER OF EXPLANATION AND CONSENT
FORM FOR PARTICIPANTS

February 17, 1991

Dear Participant:

I am a second year student at Clark Atlanta University School of Social Work, where I am pursuing a Master's Degree in Social Work. As part of my studies in Social Work, I am seeking information about your attitudes and knowledge of HIV/AIDS transmission. Better understanding of your attitudes and knowledge of HIV/AIDS, hopefully, can assist me and college officials in developing educational and outreach programs aimed at reducing the spread of AIDS among college females.

You will receive one questionnaire, which contains three parts. Part I contains demographic data, such as age, sex, race, etc. Part II contains information regarding how you feel about AIDS. Part III contains information about your knowledge of HIV/AIDS transmission.

Completion of the questionnaire will take a total of 15 minutes. Information contained in the

questionnaire will be kept confidential and will be destroyed immediately following the completion of this study.

I hope you will be willing to participate in this study and be assured that your participation is voluntary. I welcome any questions you may have regarding the study and your participation in it. I will be visiting your dorm to distribute the questionnaires on Wednesdays and Fridays during the month of February. Again, your comments and information will remain strictly confidential. If you have questions, please feel free to call me at 223-5722.

Thanks for your time and cooperation.

Sincerely,

Vera L. Murphy

**CONSENT FORM FOR PARTICIPANTS
IN ATTITUDINAL STUDY**

I, _____, have been informed and fully understand the purpose of this study.

I, _____, give my consent to take part in this study.

_____ Date

_____ Researcher

_____ Witness

APPENDIX C

AIDS EDUCATION QUESTIONNAIRE (AEQ)

AIDS Education Questionnaire, 2/6/87

Part A. Because we want to know something about who you are, the questions in this part ask for some basic facts. Please fill in or check the blanks as appropriate.

1. What is your age?
2. Your sex? Male___ Female___
3. Race/ethnicity? Black___ White___
Hispanic___ Asian___
Other (____)
4. Marital status? Single___ Married___
Divorced___ Separated___
Widowed___
5. Your religious preference? _____

(If you are not a student, ignore the next three questions.)

6. What is your major? _____
Your class? Freshman___ Sophomore___
Junior___ Senior___
7. What is your mother's education? (If raised by a woman other than your mother, answer for the woman who had the most influence on you.)
Did not finish high school___
Finished high school___
Took some college courses___
Finished college___
Has an advanced degree___
Doesn't apply, no woman raise me___
8. What is your father's education? (If raised by a man other than your father, answer for the man who had the influence on you.)
Did not finish high school___
Finished high school___
Took some college courses___
Finished college___
Has an advanced degree___
Doesn't agree, no woman raised me___
9. What is your father's education? (If raised by a

man other your father, answer for the man who had the most influence on you.)

Did not finish high school____
 Finished high school____
 Took some college courses____
 Finished college____
 Has an advanced degree____
 Doesn't apply, no man raised me____

Part B1. We also want to know how you feel about some issues concerning AIDS. Which of the following statements do you think are true? Which do you think are false? Are there some for which "don't know" is a better answer? (Circle the answer that seems correct for you.)

true false don't
 know

1. I sometimes worry about getting AIDS.
2. I am less likely than most people to get AIDS.
3. Nobody I know is likely to get AIDS.
4. I know someone personally who has AIDS.
5. I don't know anyone myself who has AIDS but someone I know knows an AIDS patient.
6. AIDS is not as serious a disease as most people seem to think.
7. I have watched at least one TV show about AIDS.
8. I have talked seriously with a friend about AIDS.
9. Fewer people are affected by AIDS than most people think.

(If you are not a student, ignore the next question.)

10. AIDS has been discussed in at least one of my classes.

Part B2. Overall, how serious do you think the AIDS epidemic is? (Circle the number that comes closest to your belief.)

1	2	3	4	5
not at	slightly	somewhat	fairly	extremely
all	serious	serious	serious	serious
serious				

11. For you personally.
12. For people you know.
13. For the United States as a whole.

Part C. Current scientific research suggests that the AIDS virus is more likely to be transmitted in some situations than others. How likely do you think it is that each of the following situations will transmit AIDS? (Circle the number that comes closest to your belief.)

1	2	3	4	5
very unlikely to trans- mit AIDS	probably unlikely to trans- mit AIDS	neutral, not sure	probably likely to to trans- mit AIDS	very likely to trans- mit AIDS

1. Eating food prepared by a person carrying the virus.
2. Using a public telephone recently used by a person carrying the virus.
3. Sharing a drinking glass with a person carrying the virus.
4. Sharing an intravenous (IV) needle with a person carrying the virus.
5. Shaking hands with, hugging, or otherwise touching a person carrying the virus.
6. Deep kissing, exchanging saliva with a person carrying the virus.
7. Oral intercourse, swallowing semen of a person carrying the virus.
8. Anal intercourse, active partner, a person carrying the virus.
9. Vaginal intercourse, active partner, a person carrying the virus.
10. Visiting areas where persons carrying the virus congregate.
11. Using a condom during sexual intercourse.
12. Being bitten by an insect that has bitten a person carrying the virus.

Part D. Medical authorities think that some groups of people are more at risk for getting AIDS than others. How much at risk do you think the following groups are? (Circle the number that comes closest to your belief.)

1	2	3	4	5
almost no risk for AIDS	slight risk for AIDS	some risk for AIDS	moderate risk for AIDS	high risk for AIDS

- | | | | | | | |
|-----|--|----|---|---|---|---|
| 1. | Health-care workers. | *1 | 2 | 3 | 4 | 5 |
| 2. | Intravenous (IV) drug users. | | | | | |
| 3. | Persons receiving blood products. | | | | | |
| 4. | Persons donating blood. | | | | | |
| 5. | Newborns whose mothers have AIDS. | | | | | |
| 6. | Children | | | | | |
| 7. | Heterosexual men | | | | | |
| 8. | Bisexual men | | | | | |
| 9. | Gay (homosexual) men | | | | | |
| 10. | Heterosexual women | | | | | |
| 11. | Lesbian (homosexual) women | | | | | |
| 12. | People with multiple sex partners | | | | | |
| 13. | Whites living in the United States. | | | | | |
| 14. | American Blacks | | | | | |
| 15. | Hispanics living in the United States. | | | | | |

Part E. In order to prevent the spread of AIDS through blood transfusions, a test has been developed for screening blood donated to blood banks. The test is also being used by the military and some insurance companies. How true do you think the following statements about this test are? (Circle the number that comes closest to your belief.)

1	2	3	4	5
false	probably false	neutral, not sure	probably true	true

1. Persons who are positive should be referred to a physician for further evaluation.
2. People who are positive have AIDS.
3. Members of high-risk groups who are positive can donate blood.
4. Members of high-risk groups who are negative can donate blood.
5. People who are positive have the AIDS virus.
6. People who are positive have antibodies to the AIDS virus.
7. People who are positive are infectious and so could give AIDS to others.
8. People who are positive do not have AIDS but will

develop AIDS in 2-5 years.

Part F. The statements below are matters of opinion. There are no right or wrong answers. Please indicate how much you agree with each of these statements. (Circle the number that comes closest to your opinion.)

1	2	3	4	5
strongly disagree	disagree	neutral, not sure	agree	strongly agree

1. The federal government should increase its funding for research on AIDS.
2. Activities that spread AIDS, such as some forms of sexual behavior should be outlawed.
3. To some extent, people who contract AIDS through sexual behavior have earned their disease.
4. People who want to quarantine persons with AIDS are only revealing their own bigotry.
5. All people in high risk groups should be required to take the test for AIDS antibodies.
6. Civil rights laws should be enacted to protect people with AIDS or at risk for AIDS from discrimination.
7. The names of people known to have AIDS should be published so that others can avoid them.
8. I would support residential care facilities for people with AIDS, including in my own neighborhood.
9. Resolving public concerns about AIDS must be balanced with protecting the civil rights of persons.
10. People with AIDS should be legally quarantined to protect the public health.
11. The current hysteria about AIDS is probably more of a threat to the public welfare than is AIDS itself.
12. The federal government should fund educational programs to teach people how to avoid AIDS.
13. I would not want to send a child of mine to a school where another child with AIDS is enrolled.
14. Scientists who say that AIDS can't be transmitted by casual contact don't really have all the facts they claim to have.
15. Some political and religious groups are just using public worry about AIDS to further their own

cause.

*1 2 3 4 5 = Same format used in other
areas of questionnaire.