An assessment of selected public school teachers and pre-service teachers knowledge and opinions about AIDS and AIDS education

Grace Louise Powell

University of Northern Iowa

1989

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AN ASSESSMENT OF SELECTED PUBLIC SCHOOL TEACHERS
AND PRE-SERVICE TEACHERS KNOWLEDGE AND OPINIONS
ABOUT AIDS AND AIDS EDUCATION

An Abstract of a Thesis
Submitted
In Partial Fulfillment
of the Requirements for the Degree
Specialist in Education

Grace Louise Powell
University of Northern Iowa
August 1989
AN ASSESSMENT OF SELECTED PUBLIC SCHOOL TEACHERS
AND PRE-SERVICE TEACHERS KNOWLEDGE AND OPINIONS
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ABSTRACT

Acquired Immune Deficiency Syndrome is a rapidly growing public health concern which has led to national and state legislation recommending education as the most effective means of combating the spread of the human immunodeficiency virus (HIV). The purpose of this original 1989 study at the University of Northern Iowa was to identify, by questionnaire, the similarities and differences between the knowledge and opinions concerning acquired immunodeficiency syndrome (AIDS) and AIDS education policies of teachers in practice in Northeast Iowa and teachers in training at the University of Northern Iowa. Questionnaire responses and scores were analyzed using Chi Square and t-test at the .05 level of significance. The groups differed significantly on 17 of the 97 items on the AIDS and AIDS Education Opinion and Knowledge Survey. Results suggest there is minimal response differences between the groups. Identification of opinions of public school educators is needed to address AIDS education and school policy issues.
This Study by: Grace Louise Powell

Entitled: AN ASSESSMENT OF SELECTED PUBLIC SCHOOL TEACHERS AND PRE-SERVICE TEACHERS KNOWLEDGE AND OPINIONS ABOUT AIDS AND AIDS EDUCATION

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CHAPTER 1
INTRODUCTION

Since the first cases of acquired immunodeficiency syndrome (AIDS) were reported in the United States in 1981, the human immunodeficiency virus (HIV) that causes AIDS and other HIV-related diseases has precipitated an epidemic unprecedented in modern history (Centers for Disease Control [CDC], 1988). The CDC Monthly Surveillance Telephone Hotline (personal communication, Gayle Lloyd, June 12, 1989) reported as of April 30, 1989, there have been 94,280 cases of AIDS in the nation. Of these cases 1,561 are in children 13 and under. There are a total of 54,402 deaths in the opportunistic disease category since the first reported case of AIDS in 1981. Of these reported deaths, 858 were children under the age of 13. The Iowa Department of Public Health (personal communication, Ruth Hook, July 11, 1989) reported 142 cases of AIDS in the State of Iowa as of May 31, 1989. Of these cases, three are in children under the age of 13. There have been 75 AIDS-related deaths reported in Iowa since 1983.

According to the Acquired Immunodeficiency Syndrome Research Information Act:

Acquired Immunodeficiency Syndrome (AIDS) is considered by many medical experts to be the gravest public health threat of this century. The actual number of AIDS cases in the U.S. is higher, perhaps much higher, than the official CDC statistics. CDC
estimates that 20% of AIDS cases are not being reported. In addition, not all cases reported to CDC meet its strict definition of AIDS, and therefore are not counted in CDC AIDS statistics. (U.S. Congress, 1987, p. 4)

The Acquired Immunodeficiency Syndrome Research Information Act recommended education for everyone at risk as the most effective tool to combat the spread of AIDS, since there have been no effective drugs or vaccines developed (U.S. Congress, 1987). In 1988 the Iowa Legislature added a provision to the Human Growth and Development-Instructional Requirements which mandated that instruction about AIDS be provided in grades one through twelve. This act also required that all health education programs include "an awareness of sexually transmitted diseases and acquired immune deficiency syndrome" (General Assembly of the State of Iowa, 1987, p. 79) in their content. The Iowa Department of Public Health and the Iowa Department of Education stated:

Since school attendance is the universal experience of young people, AIDS education in the classroom is a valuable component in efforts to promote preventive behaviors. Hopefully, proper education about AIDS in the school setting will reach the young adult before risky health habits related to AIDS are adopted or firmly established. (Edwards, Kabarec, & Katz, 1987, p. 1)

The CDC (1988) stated:

The Nation's system of public and private schools has a strategic role to play in assuring that young people understand the nature of the epidemic they face and the specific actions they can take to protect themselves from becoming infected especially during their adolescence and young adulthood. In
1984, 98% of fourteen and fifteen year olds, 92% of sixteen and seventeen year olds, and 50% of eighteen and nineteen year olds were in school. (p. 13)

In the past, public schools have implemented programs about human sexuality within their health education curriculum. According to Stout and Rivara (1987):

The available evidence indicates that traditional sex education programs in junior and senior high schools have little or no effect either positively or negatively on altering the age of onset or frequency of adolescent sexual activity, on increasing contraceptive use, or on preventing unplanned teenage pregnancy. (p. 377)

In a 1988 Gallup Poll the results indicated:

None of the groups seem to have much confidence in the schools' ability to handle the problem of teenage pregnancy. The public was virtually unanimous in support for developing AIDS education programs in the public schools. Ninety percent thought that such programs should be developed, and only 5% thought that they should not.

There was overwhelming support for teaching what is called "safe sex" as a means of preventing AIDS. (Presumably, most respondents understood this to be teaching the use of condoms.) Seventy-eight percent of the respondents approve teaching "safe sex," while only 16% oppose it. (Gallup & Elam, 1988, p. 34-35)

Norman and Harris (1981) surveyed 160,000 teenagers and found 42% who received sex education felt it was helpful while 57% felt it needed improvement. After conducting research on nine sexuality programs, Kirby (1984) concluded the programs were effective in increasing knowledge level of the participants but had no effect on changing sexual behavior. Three similar surveys conducted between 1969 and 1982 by Zelnick and Kim (1982), Wiechmann and Ellis (1969),
and Spanier (1978) indicated students do not link sexuality education programs with their own sexual activity.

The CDC (1988) have concluded from two surveys done in 1986 and 1987:

Indeed, a random sample of 860 teenagers (ages 16-19) in Massachusetts revealed that, although 70% reported they were sexually active (Having sexual intercourse or other sexual contact), only 15% of this group reported changing their sexual behavior because of concern about contracting AIDS. Only 20% of those who changed their behavior selected effective methods such as abstinence or use of condoms. Most teenagers indicated that they want more information about AIDS. (p. 12)

Statement of the Problem

The purpose of this study was to identify similarities and differences between home economics and physical education teachers in-practice in Northeast Iowa and home economics and physical education teachers pre-service at the University of Northern Iowa (UNI) with respect to knowledge and opinions concerning AIDS and AIDS education. Teachers in-practice were those who have both an Iowa teacher certificate and endorsement to teach either home economics or physical education. The teachers pre-service were persons currently enrolled for the Spring 1989 semester at the University of Northern Iowa and were working toward an Iowa teacher certificate and an endorsement in either home economics or physical education. All the teachers pre-
service teachers had course work, at the university level, that provided information about AIDS and AIDS education.

**Importance of the Study**

The National Education Association (NEA) recommended schools respond to the AIDS crisis by designing preventive programs in the 1987-1988 school year. The NEA also suggested these programs be designed by local educators and presented by certified and properly trained teachers (Wechsler, 1987). The U.S. Department of Health and Human Services stressed the importance of implementing education programs designed to influence behaviors that are crucial in preventing the spread of HIV (CDC, 1988). Identifying similarities and differences of opinions of those involved in AIDS curriculum design and implementation could have important ramifications in formulating AIDS education curricula and policies that will be effective in curbing the spread of HIV.

**Assumptions**

A primary assumption of this investigation was that the survey instrument, utilized for data collection, would allow both home economics and physical education teachers in-practice and both home economics and physical education teachers pre-service to adequately demonstrate their
knowledge and opinions about AIDS and AIDS education. Another assumption is that the knowledge and opinions generated by the survey reflected the knowledge and opinions of all practicing home economics and physical education teachers in Iowa, regardless of gender. It was also assumed that sequencing of the survey questions had no effect on subject response; further the three choices of answers, (a) "Yes," (b) "Don't know," (c) "No," did not produce response bias. The assumption was also made that there was not systematic bias in Senior High School teachers' opinions toward placement of AIDS curriculum units at lower grade levels.

Limitations

A possible limitation of this study might have been that the data generated apply only to high school teachers in-practice who were employed in Northeast Iowa. It could be argued that their responses (knowledge and opinions) were affected by the culture of the region in which they are employed. Another limitation was that teachers pre-service, whose knowledge and opinions were assessed by this study, had not been exposed to the same AIDS course content. Additionally, that the AIDS curriculum experienced by the teachers pre-service at the University of Northern Iowa,
may not have represented the same content being taught in the AIDS curriculum at other universities.

Definition of Terms

**Acquired Immunodeficiency Syndrome (AIDS):** A secondary immunodeficiency syndrome caused by a virus and characterized by severe immune deficiency resulting in opportunistic infections, malignancies, and neurologic lesions in individuals without prior history of immunologic abnormality (Berkow, 1987).

**Human immunodeficiency virus (HIV):** A retrovirus that contains an enzyme called reverse transcriptase that can convert viral RNA in the cytoplasm into DNA which may replicate from extrachromosomal sites or move into the cell nucleus where it becomes part of the host cell DNA. These integrated viral genes are duplicated with normal cellular genes, and all progeny of the originally infected cell will contain the viral genes. Expression of the viral genes for some retroviruses may convert the cell into a cancer, or may have other pathologic effects which may alter normal cell function or produce cell death (Berkow, 1987).

**Opportunistic diseases:** Illnesses that attack humans when natural immunity is weakened. There are five categories: cancers, parasitic infections, viral
infections, fungal infections, and bacterial infections (Douglas & Pinsky, 1987).

**Opinion:** A view, judgment or appraisal formed in the mind about a particular matter (Mish, 1987).

**Pedagogy:** The profession or function of a teacher; teaching (Guralnik, 1970).

**PWA:** Persons with AIDS.

**Teachers in-practice:** Person having an Iowa teacher certification and endorsement to teach home economics or physical education and employed in a Northeast Iowa public school as a teacher in one of those areas.

**Teachers pre-service:** Person currently enrolled for the Spring 1989 semester at the University of Northern Iowa and working toward Iowa teaching certification and endorsement in home economics or physical education. Also, the teachers pre-service have had course work, at the university level, that provided information about AIDS and AIDS education.

**Relatively high agreement:** A term that will be used to discuss a level of response agreement that is at 75% or above between the home economics and physical education teachers in-practice group and home economics and physical education teachers pre-service group, or to discuss a level of response agreement within the home economics and physical education teachers in-practice group only or home economics and physical education teachers pre-service group only.
Relatively moderate agreement: A term that will be used to discuss a level of response agreement that is at 50% to 74% between the home economics and physical education teachers in-practice group and home economics and physical education teachers pre-service group, or to discuss a level of response agreement that is within the home economics and physical education teachers in-practice group only or home economics and physical education teachers pre-service group only.

Relatively low agreement: A term that will be used when response agreement is at 49% or below between the home economics and physical education teachers in-practice group and home economics and physical education teachers pre-service group, or response agreement is within the home economics and physical education teachers in-practice subgroup only and home economics and physical education teachers pre-service subgroup only.

Summary

Currently the American public is being confronted with a disease, AIDS, that is not fully understood by health professionals as well as the lay community. At this time there is no medical treatment that is successful in curing persons with AIDS (PWA). The increasing numbers of reported cases in the nation have led to national and state
legislation recommending education as the most effective means of combating the AIDS epidemic. Before effective AIDS education curricula can be developed, current information and research that surround the AIDS epidemic must be considered.
CHAPTER 2
REVIEW OF RELATED LITERATURE

The literature review will describe information related to the nature and epidemiology of AIDS; confidentiality issues related to AIDS; school curriculum/methods and development issues as related to AIDS; and school board policy issues as related to AIDS. This literature review is organized to support sections of the survey (see Appendix A). The five sections are not discussed in the same order as they appear in the survey.

The Nature and Epidemiology of AIDS

The description of the epidemiology of HIV gives a foundation for better understanding of the dilemma of medical researchers in developing a drug which will combat the virus. HIV is biologically unique in two ways. First, it is a retrovirus which uses reverse transcriptase to transcribe RNA into DNA. Second, retroviruses are the only life forms capable of producing DNA from RNA (Ranis, 1987).

According to Bardell (1987) the infection process begins when the HIV enters the bloodstream of its victim. A protein envelope, which surrounds the virus, bonds to the T-4 white blood cell. The envelope is then removed exposing the RNA. The RNA becomes a template and through reverse
transcriptase the RNA-DNA molecule is formed. The DNA of the RNA-DNA hybrid is used as a template to form a complementary strand of DNA. The double stranded DNA is integrated into the host cell's DNA. When the host cell carries out normal reproduction functions, all progeny inherit the viral gene. AIDS occurs when antibodies that fend off opportunistic diseases are no longer produced by the PWA. T-helper cells are attacked by the HIV and die. B-cells are dependent on stimulation from T-cells in order to become plasma cells and antibody producers.

According to Gadsby (1989), there has been a problem in finding the virus within the T-cells of AIDS patients. The macrophage or scavenger cells have been targeted as the possible carriers of the HIV:

Macrophages are found in both blood and body tissues and normally interact with T cells to defend the body against infection. Macrophages—the word means "big eater" in Greek, ingest the invader, processes it and displays some of the components of their own cell surface in a form that T cells can recognize. This prompts the T cell to initiate the immune response...a flood of antibodies that stick to the invaders, flagging them for destruction. (p. 52)

Finally the macrophages are called into action a second time. Normally they are drawn to the antibody-coated intruders and destroy them. HIV sabotages the defense system, attacks T-cells and infiltrates macrophages resulting in a disruption of cell-to-cell signaling. Macrophages are not destroyed by the virus as are the T-
cells. Thus it is likely that scavenger cells act as carriers spreading HIV to various parts of the body such as the lungs, spleen, skin, and brain. Evidence strongly suggests the HIV infiltrated macrophages are the cause of dementia and neurological problems that develop in one-half of all PWA. It is Gallo's (1987) opinion that HIV mutates so often there are countless strains produced. The result may be never having a vaccine produced to counter all the mutant strains of HIV that now exist or may develop.

HIV does not discriminate on the parts of the body it may infect. According to Batchelor (1989):

It is now known that HIV also infects other parts of the body directly, including the central nervous system and the colon. Although these direct infections are almost certainly responsible for progressive dementia, including motor and cognitive impairment, and the slow wasting due to chronic diarrhea and the inability to properly digest and absorb nutrients, they typically do not lead to death. (p. 854)

Dementia is a term used to describe a condition that involves the brain causing impaired intellectual functioning with compromise in at least three of the following areas: language, memory, visuospatial skills, emotions or personality, and cognition (Buckingham & Van Gorp, 1988).

The symptoms of AIDS progress in seriousness until a stage is reached in which the immune system of the victim becomes affected. Gong and Rudnick (1987) have determined that:

AIDS is composed of many different diseases, and its signs and symptoms vary with their type and severity.
Many AIDS symptoms are common to other illnesses, such as everyday ailments like the common cold, and may be self-limiting and minor. (p. 49)

The National Academy of Sciences reported, "of the many clinical conditions associated with HIV infection, most are the consequences of immunologic damage and not the direct result of HIV infection itself" (Institute of Medicine, 1986, p. 46). Opportunistic infections, which are caused by microorganisms, seldom cause disease in persons with normal immune systems but take advantage of persons with lowered immunity. These opportunistic infections are of primary concern because they are the most common cause of death in PWA (Institute of Medicine, 1986).

One of the most common opportunistic diseases to attack PWA is Pneumocystic carinii pneumonia (PCP) which is caused by a sporozoan that produces a frothy exudate filling the alveoli in the lungs (Tortora, 1986). In the past PCP had been an extremely uncommon disease. In June of 1981, the CDC received a report in which five cases of PCP had been reported in a period of eight months. The CDC reported, "this pneumonia is characteristically an opportunistic infection, occurring in people whose immune system has been profoundly impaired by cancer or by powerful immunosuppressive drugs" (cited in Heyward & Curran, 1988, p. 72). It was also reported that another opportunistic disease, Kaposi's sarcoma, which is a form of cancer, was
noted as increasing in prevalence in the 1981 CDC surveillance reports. This cancer had been previously found only in elderly men and patients receiving immunosuppressive therapy. These reports indicated that 26 homosexual men had been diagnosed as having Kaposi's sarcoma. These two reported discrepancies were the first indicators the CDC had of the existence of HIV (Heyward & Curran, 1988).

Even though many of the signs and symptoms of AIDS are not alarming, it is their persistent occurrence which makes them indicators of AIDS. Some of these are persistent fever, severe fatigue, and unexplained weight loss of greater than 10 pounds over a period of two months or less. Swollen lymph glands and oral thrush, which is an infection of the tongue and mouth caused by a fungus, are also signs. PWA often bruise and bleed easily. Their mucus membranes may bleed without the presence of an injury and cuts may take longer to heal (Gong & Rudnick, 1987).

The National Academy of Sciences reported:

Some investigators suggested that these illnesses represented the early stages of AIDS, but at the time there was little understanding of whether all persons who manifested such symptoms would ultimately progress to clinical AIDS. Gradually the term AIDS-related-complex (ARC) began to be employed to describe all of the clinical signs and symptoms that seemed to be related to AIDS but did not fully meet the CDC's criteria for the disease. (Institute of Medicine, 1986, p. 38)

According to the World Health Organization no study to date has found HIV resistance among any particular racial
group. The progression of AIDS varies. Some persons may remain symptom-free while others, infected with HIV, may experience a brief mononucleosis-like illness with fever, malaise, and possibly skin rash. These symptoms appear at a time when the body is producing antibodies to fight the virus, usually two weeks to three months after it has been contracted. On the average it will take eight to nine years for AIDS to fully develop. "The fatality rate for AIDS, once it has developed, is very high; it may reach 100 percent" (Mann, Chin, Piot, & Quinn, 1988, p. 82).

The exact nature of the transmission of the HIV is often misunderstood. According to the Iowa Department of Public Health, HIV may be transmitted in three ways: through blood or semen being exchanged during anal intercourse, vaginal intercourse, oral-genital sex or oral-anal sex; through blood to blood contact between the infected person and someone else; and from mother to child during pregnancy, childbirth, or possibly through breast feeding. Why some infants whose mother's are infected with HIV do not contract the virus is still unknown (Edwards et al, 1987).

Heyward and Curran (1988) concluded that HIV cannot be transmitted by casual contact. The HIV virus has been recovered from saliva but the virus concentration was found to be lower than the concentration found in blood. Within families who have a member infected with HIV, they found the
transmission rate between the PWA and others living in the household to be zero. Thus Heyward and Curran concluded that actual risk of contraction in even crowded households is extremely low.

Also, the issue of contracting the HIV from kissing or an insect bite have been addressed by Tolsma (1988) and Heyward and Curran (1988). Tolsma (1988) said "Although no transmission from deep, open-mouth (i.e., "French") kissing has been documented, such kissing theoretically could transmit HIV from an infected to an uninfected person through direct exposure of mucus membranes to infected blood or saliva" (p. 9). It is the opinion of Heyward and Curran (1988) that evidence is lacking to support the supposition that it is possible to contract the HIV through contact with insect vectors. "Studies in the U.S. and other countries throughout the world show no patterns of HIV infection consistent with transmission by insect vectors" (p. 80).

There is evidence being uncovered that may explain the differences in susceptibility to HIV. The CDC reported that the most common mode of transmission of HIV in the heterosexual population is through vaginal intercourse. Two small studies, done on transmission within the heterosexual population, suggest that anal intercourse with an HIV infected sexual partner, increases the risk of HIV infection in women. Also, it has been shown that PWA, who are
exhibiting symptoms of AIDS, are more likely to transmit the infection than asymptomatic PWA (Heyward & Curran, 1988).

The World Health Organization suggests that it may also be possible that persons who either experience chronic infections or at the time of contact have a sexually transmitted disease may be at higher risk of contracting the HIV. "Studies in the U.S. show that HIV infection is positively correlated with the presence of genital or anal lesions in homosexual men" (Mann et al., 1988, p. 86).

Soon after HIV was discovered, a test for detecting HIV antibodies in the bloodstream of victims was developed. This development has led to more understanding of the epidemiology of HIV and also has assisted in developing surveillance techniques for measuring incidence and prevalence. It is now possible, as a result of the HIV Antibody Test, to diagnose the disease in asymptomatic carriers and persons with AIDS Related Complex (ARC). Donated blood supply can now be screened to protect the public from contaminated blood products (Heyward & Curran, 1988).

Our knowledge about AIDS and HIV transmission is increasing but the epidemic is still continuing its course. AIDS has become the leading cause of death in certain geographic areas. It is the only cause of death in the
United States where mortality is increasing substantially (Batchelor, 1989).

AIDS is a global health problem. According to Mann, et al. (1988), reports and seroprevalence data suggest three distinct HIV behavior patterns in the world. Pattern I behavior is found in industrialized areas such as the United States, Mexico, Canada, Australia, New Zealand, Western Europe, and parts of Latin America. In these areas most AIDS cases occur either in homosexual or bisexual males and urban intravenous (IV) drug users. Although heterosexual transmission is responsible currently for only a small number of cases, such transmission is increasing. Few women have been infected in these geographic regions.

Pattern II behavior is observed in Central, Eastern and Southern Africa, and in some Latin American countries. Most of the AIDS cases in these areas occur among heterosexuals, and the ratio of infected males to females is approximately one to one.

Pattern III behavior is found in Eastern Europe, Northern Africa, the Middle East, Asia, and most of the Pacific. These areas have reported very few cases of AIDS. Those cases that have been reported have occurred in persons who have traveled to Pattern I or II areas and while there had sexual contact with a PWA.
Summary of the Nature and Epidemiology of AIDS

Knowledge about HIV and AIDS indicates the disease is constantly increasing. Because of advances in medicine a test has been developed that has helped to increase knowledge about the epidemiology of HIV and made it possible to predict its future prevalence. Through the ability to collect surveillance data it has been possible to study transmission patterns in many other areas of the world. All of this information should be of value in planning and implementing national policies related to issues dealing with HIV transmission.

Confidentiality Issues as Related to AIDS

Since neither a cure for AIDS nor a drug that will effectively destroy the HIV have been found, the focus of future plans of attack against AIDS centers in changing high risk sexual behaviors. In the United States in 1981, the HIV hit a nation complacent in its faith that modern medicine and technology could solve all health problems (Watkins, 1989).

Since 1981, many legislative proposals have suggested antibody testing as the solution to solving the problem of the further spread of HIV.

Antibody testing programs need to be developed in such a way that they promote, reinforce, and maintain individual and community norms of voluntary behavior change. The first question is how to stop
infection, and the secondary question is how antibody testing can assist that process.  
(Coates, Stall, Kegeles, Lo, Morin, & McKusick, 1989, p. 859)

For Walters (1988), the epidemic proportions of the HIV infection poses a major ethical question: "How can we control the epidemic and the harm that it causes without unjustly discriminating against particular social groups and without unnecessarily infringing on the freedom of individuals?" (p. 597). Walters' answer to this question is:

The ethical principles of beneficence, justice, and respect for autonomy relate to the epidemic of HIV infection in the United States. I will argue that, because these three principles are all of importance, none of them should be ignored in the formulation of public policy.

Until more effective medical therapies and preventive measures are developed, public education is likely to be one of the most important means for controlling the epidemic. If education appeals to the rational hearer, it respects his or her autonomy.  
(p. 598)

Bennett, the Secretary of Education from 1985-1989 stated, "The task of adults is to show responsible sexual behavior. Adults must be truthful about the risks and dangers—moral, physical, and psychological—of irresponsible sex, of heedless, careless use of one's own or another person's body" (House Committee on Energy & Commerce, 1988, p. iv). Placing responsibility upon individuals to be truthful about their private sex lives has raised differing opinions regarding confidentiality issues as they relate to
the HIV. It is Dickens' (1988) opinion that there may be legal liability involved in the sexual transmission of HIV. Sexual transmission lies within the unclear framework of legal liability for spreading disease. Protecting a sexual partner against a contagious disease is every person's duty. If a party wished to seek compensation, it would have to be shown that the infection was caused by a breach of duty.

In the opinion of Gray and Harding (1988):

It is at the expense of the uninformed sexual partner's safety to keep confidential the information that the client has the AIDS virus. In our opinion, a sexually active, seropositive individual places an uninformed sexual partner (or partners) at peril, and the situation therefore falls under the legal spirit of the Tarasoff case and the ethical tenets of 'clear and imminent danger.' (p. 220)

Confidentiality is not an absolute legal right, nor should it be viewed strictly as an end in itself. It is important to evaluate confidentiality beyond its contribution to its original ethical purposes: to promote client disclosure during counseling, to protect clients from stigmatization for participating in therapy, and to safeguard client rights. Expecting confidentiality to protect the public against dangerous behavior may well exceed these original intentions.

There is another faction that believes the confidentiality rights of PWA should be protected. According to Herek and Glunt (1988), an individual's HIV
status must remain confidential because of the societal stigma of being identified; any unauthorized disclosure should carry stiff penalties for the informer.

It is the CDC's (1988) recommendation, in the area of disclosure, that persons who believe they may be infected by the AIDS virus should take precautions not to infect others and to protect others by advising previous and current sexual or drug-use partners of their possible HIV status. In order to maintain individual freedom, vigorous education efforts in the area of public and school health are necessary. The responsibility of education is to prepare the listener to clearly see how his/her behaviors affect others (Walters, 1988). The CDC, National Academy of Sciences, U.S. Surgeon General, and U.S. Department of Education have all taken the stance that educating individuals about actions they can take to protect themselves and others from becoming infected represents the most effective means available for controlling the epidemic in light of the fact there is no cure available (CDC, 1988).

Summary of Confidentiality Issues as Related to AIDS

Public policy issues, regarding issues of confidentiality as related to PWA, are in the process of being formulated. Again, education efforts are the means of informing the public of their responsibility. The ultimate hope is that this will lead to truthful disclosure.
Currently the best hope of curbing the AIDS epidemic in this nation is effective AIDS education programs that lead to changes in sexual behavior and in IV drug use practices.

**School Curriculum/Methods Development Issues**

Education systems are in the process of developing AIDS education programs and materials that will be effective in curbing the AIDS epidemic. There are many AIDS related topics that are being suggested for inclusion in these program designs. The CDC (1988) has formulated objectives focused on changes in sexual behaviors as the central goal of all AIDS education programs in the hope that these programs will lead to curbing the spread of the HIV. The CDC suggests that educational programs provide young people with the knowledge, attitudes, values, and skills that will help them adopt and maintain behaviors that virtually eliminate the risk of HIV infection.

Control of communicable diseases is usually the responsibility of public health professionals. However, the virulent nature of AIDS and the fact that it is primarily a young people's disease has made education in the schools a primary line of defense. (Levy, 1988, p. 18)

It is the opinion of both the Iowa Department of Public Health and the Iowa Department of Education that "Education about AIDS should be directed toward student acceptance of the possibility of exposure and the need to practice preventive behavior" (Edwards et al., 1987, p. 4).
Instruction should emphasize that exposure to HIV results from risky sex and IV drug behaviors, and not from being of a particular sex orientation.

Curricular material designs are also being planned that will be directed toward educating populations considered at high risk of HIV infection such as IV drug users. It is the opinion of Des Jarlais and Friedman (1989) that "Basic information about AIDS and the transmission of HIV is needed by IV drug users to generate motivation for risk reduction" (p. 869).

Twenty-five percent of clinical AIDS cases involve illegal use of IV drugs. The sharing of needles and syringes together, seems to be the principal mode of transmission among IV users. People who become infected through sharing contaminated needles and syringes may, in turn, infect non-drug users through sexual intercourse. (Walters, 1988, p. 598)

It is the opinion of both the Iowa Department of Public Health and the Iowa Department of Education that misunderstandings about the contagiousness and methods of transmitting the HIV have led to unnecessary alarm and fear about AIDS. These two state agencies advocate that AIDS education programs include skills instruction that provides mock situational practice in behaviors that lead to decision making and problem solving techniques related to HIV transmission prevention (Edwards et al., 1987).

According to the CDC (1988):

Information about the biology of the AIDS virus, the signs and symptoms of AIDS is not essential knowledge that students must acquire in order to
prevent being infected with HIV. Schools should assure that students have opportunity to learn about emotional and social factors that influence types of behaviors associated with HIV transmission (p. 5).

There is a dispute concerning the degree sexual behavior practices are to be changed. Gochros (1988) disagrees with the recent U.S. Department of Education guide for parents and teachers that advocates the following:

The AIDS epidemic has brought forth an avalanche of dogmatic traditional morality cloaked in public health terms so that even the surgeon general has had to justify offering alternatives to abstinence. Indeed, sexual practices that conform to "safer sex" guidelines often are presented as second best. Such approaches begrudgingly accept sex in the belief that people just cannot be stopped from having sex no matter how much we would like to stop them. (p. 254)

It is Gochros' opinion that one sexual standard cannot be adopted for all. Sexual expression is a personal part of people's lives. Each person should think through their own responsible sexual choices.

There are those who are in favor of integrating moral and values clarification issues into AIDS curricula. Opposition to values clarification in health education curricula is based on the concern that if adolescents explore their own values, they may disagree with prevailing morality. Admonishments to say "no" place responsibility on the adolescent to make the right decision and remove the responsibility of making a wrong choice from the adults in their lives. "If adolescents are to cope with today's
world, they will need a repertoire of skills. They will need to be critical thinkers, and they will need to know what it is they value" (Sharpe, 1988, p. 49).

AIDS education ideally should be integrated into existing comprehensive health or sexuality education programs. AIDS prevention information should be discussed following units on such topics as self-esteem, family and personal values, decision-making, communication skills, drug abuse prevention, STDs, and peer pressure. Programs should provide opportunity for behavioral skill development, ranging from how to say "no" to pressure related to sex and drug use, to talking about the decision to have sex with a partner and how to obtain condoms if needed. All education programs should include a variety of activities to increase knowledge, explore attitudes, and facilitate desired behavioral outcomes. (Haffner, 1988, p. 155)

It is the opinion of Piot et al. (1988) that before sexually transmitted disease programs are designed, it is necessary to examine the success of previous programs in this area to determine their effectiveness. This re-evaluation process could eliminate repeating those same mistakes within current AIDS education program design.

Stout and Rivara (1987) express growing concern that the threat of AIDS may likely call for more sex education programs. Evidence has indicated that traditional sex education programs at Junior High and Senior High School levels have had little or no effect in altering either the age sexual contact begins or the frequency of sexual contact.

Reinisch, Sanders, and Ziemba-Davis (1989) stated if behavior change programs are to be effective in curbing
behaviors that lead to HIV transmission, we must obtain a precise understanding of sexual behavior. These researchers drew from 16 studies, done between 1948 and 1988, in order to estimate the prevalence of AIDS risk-related behaviors of white, middle class, educated Americans between the ages of 20 to 45. The results of this study revealed that approximately 37% (range 26-50%) of married men have had at least one additional sex partner during their marriage. Based on these studies the estimate for married women, who engage in extramarital sexual relations, is 29% (range 20-54%). From 75 additional studies, they determined that more women than men participate in oral intercourse. Using data from a 1978 study, these researchers concluded 81% of the lesbian women, participating in the research, had engaged in heterosexual sex at least once. Also it was revealed 26% of the self-identified homosexual males, who had participated in the study, had been married as well as 20% of the lesbian women. In a study done by Richwald et al. (1988), 807 men were interviewed as they left seven bathhouses located in Los Angeles County. The results of this study indicated that 91% of these men were single. Seventy-nine percent had sex with male partners only and 8% with both male and female partners. Six percent of these men had sex with female partners in the past month.
One of the issues being addressed by school boards throughout the nation is at what grade levels should AIDS education programs be included in the curricula. The General Assembly of the State of Iowa (1987) in the Human Growth and Development-Instructional Requirement, has mandated that AIDS education be included in grades one through 12. It is Miller's (1987) opinion that the progression of AIDS education curriculum content should be based on student development and taught in grades kindergarten through 12.

The literature search revealed very little information about the desired characteristics and qualifications that teachers who will be implementing AIDS curriculums in the classroom should possess. The CDC (1988) has the most comprehensive recommendations in this area. They recommend that the regular classroom teacher provides AIDS education at the elementary level because of his/her training and experience in both child development and age appropriate methods for teaching. The CDC recommends that a school health educator provide AIDS education at the secondary level because of his/her training and experience with adolescent development and age appropriate teaching methods with older students.

It is Kain's (1987) opinion that AIDS education should be taught by sociology teachers in human sexuality classes
because of the social, cultural, and historic factors related to all sexually transmitted diseases. Miller (1987) advocates that the major content of AIDS education should be taught in health education, science, and family life classes. The CDC's (1988) Center for Health Promotion and Education, advocates AIDS education be developed with active parental involvement.

According to the U.S. Department of Health and Human Services, school personnel who will be involved in designing and implementing AIDS education programs must be fully aware of the nature of the AIDS epidemic and the means for controlling its spread. To accomplish an effective program it is suggested that teachers involved in the design of materials and instructional methods should be provided with in-service training and outside resources. School personnel, especially those who teach AIDS education, must have the most current information about epidemic control and health alternatives (CDC, 1988).

Summary of School Curriculum/Methods Development Issues as Related to AIDS

The amount of AIDS-related information which authorities in the area of AIDS indicate should be included in AIDS education programs is plentiful. Designing programs that are effective will require skillful evaluation of all opinions and information available.
AIDS School Board Policy Issues as Related to AIDS

Public school systems are being asked to formulate policies relating to issues that may arise in their schools as a result of the AIDS epidemic. "Schools should prepare for the possibility" that "a child with infectious hepatitis, AIDS, or other contagion . . . may require education services. To be prepared, develop a districtwide or statewide written policy for dealing with contagious diseases in the classroom" (Cole & Faust, 1987, p. 294). In Kirp and Epstein's (1989) opinion this assignment has caused school districts a dilemma:

Each school district has to take up the AIDS question largely on its own. Even in a country that stresses localism in education, it is striking how much each community has been left to sink or swim; there is nothing approaching a national vision or national consensus. (p. 584)

According to Essex (1988), "The school administrator's dilemma stems from the court's decree that, where the state has undertaken the task of providing educational opportunities for its citizens, all students must be afforded an opportunity to receive an education on equal terms" (p. 14). It is the opinion of Cole and Faust (1987) that the Education for All Handicapped Children Act of 1975 affects service options for health impaired special education students. The Act mandates education in the least restrictive environment with normal developing students to the maximum extent possible. Parents of these students have
the right to challenge the placement decisions of school personnel and a right to a panel or hearing if there is a dispute. Among the decisions facing school board policy makers is what to do about students in their building who have contracted the HIV.

The National Education Association endorses a policy that decisions about placement of students with AIDS be made on a case by case basis. The decisions should be made by a team composed of qualified health care professionals, school officials, representatives of the local associations, the student's physician, and the child's parent or guardian (Wechsler, 1987). In a 1987 court case, Ray v. School District of DeSoto County, the court ordered the school to admit three hemophiliac boys infected with HIV and directed the parents to comply with certain safeguards. The ruling was based on Section 504 of the Federal Rehabilitation Act of 1973, which prohibits federal funding recipients from discriminating against individuals with physical or mental impairment that may limit one or more major life activity (Sendor, 1988).

The CDC (1988) proposes that the benefits of an unrestricted setting for the student outweigh the risk of harmful infections to the HIV infected student or transmission to other children. A more restricted educational setting is advised for infected pre-schoolers
and neurologically handicapped school children who have no control of their body functions. A restricted setting may also be advisable for infected children who have weeping lesions (Kirkland & Ginther, 1988).

Another important legal issue involves the school faculty's right to know if there is a PWA enrolled. The CDC (1988) recommends confidentiality of school records be maintained. According to Cole and Faust (1987), many employee groups have federal regulations to protect them from what are perceived to be hazards in the workplace:

Though relevant state and federal regulations originally were drafted to protect workers in asbestos plants and other industries from environmental and safety hazards, teacher groups can use the regulations to force districts to reveal the identity of students with contagious diseases in their classrooms. Some state laws provide individuals with a right to know the risks they have on the job so they can make informed decisions about their employment and living conditions. (Cole & Faust, 1987, p. 295)

Recommendations have also been made by the CDC (1988) for the handling of body fluids in education settings. They suggest schools adopt routine procedures for handling blood or body fluids.

The Montana Department of Health and Environmental Sciences has established guidelines for persons coming in contact with HIV. It is recommended that disposable gloves be worn when a person makes contact with blood, urine, feces, semen, or saliva emitted by PWA. Also,
recommendations have been made that surfaces that have been contaminated be thoroughly disinfected with a chemical germicide approved by the U.S. Environmental Protection Agency (Montana AIDS Project, 1987).

Educational policy decisions are also being made in regard to employees in the school building who may have contracted the HIV. The National Education Association has taken the stance that:

Employees shall not be fired, nonrenewed, suspended (with or without pay), transferred, or subjected to any other adverse employment action solely because they have tested positive for the AIDS antibody or have been diagnosed as having AIDS or AIDS related complex (ARC). (Wechsler, 1987, p. 15)

School boards are understandably concerned about their duty in protecting students and employees. The current lack of information about HIV has bred distrust of professional assessment of risk. There is little evidence, at this point, that the virus can be contracted through bites or contact with body fluids that do not enter the blood stream. Courts are interpreting the law and public agencies are enforcing it, all being guided by medical assessments of probability. School boards must become leaders, not reluctant followers of the courts, in developing school policies and education programs that enlist team efforts of school officials, parents, and local professionals (Sender, 1988).
Summary of School Board Policy Issues as Related to AIDS

Education systems are being asked to create school policies that will be enforced in their individual schools using, primarily, opinions of authorities in the area of AIDS and court decisions based on laws that do not directly address the AIDS issue. The policy decisions they make may have a great impact on lives of employees and students who have contracted HIV within their individual districts.

Implications for Research

The AIDS epidemic is one of the most perplexing problems facing the U.S. and the world today. Public education is the means by which the nation plans to curb the spread of AIDS.

AIDS education curricula and school policies are presently being developed nationwide by individual school districts. Identifying the similarities and differences of the opinions of present and future providers of health education regarding both AIDS education and school policies related to PWA could have important ramifications for dealing effectively with educational issues in this area.
CHAPTER 3
METHODS AND PROCEDURES

The Target Population

There were 200 subjects that participated in this study. One hundred and sixty-five home economics and physical education teachers in-practice and 35 home economics and physical education teachers pre-service. Ninety-two AIDS and AIDS Education Opinion and Knowledge Surveys were completed and returned by physical education teachers in-practice. Ninety-one of these subjects gave permission for their survey to be used in the research. Seventy-four surveys were completed and returned from home economics teachers in-practice. All these subjects gave permission for use of their survey in the research. Twenty surveys were completed and returned by physical education teachers pre-service. All physical education teachers pre-service had university level course contact with information about AIDS and gave permission for their survey to be used in the research. Sixteen surveys were completed and returned from home economics teachers pre-service. Fifteen of the home economics teachers pre-service had university level course contact with information about AIDS. All of these gave permission for their survey to be used in the study. None
Development of the Survey

A survey of the AIDS literature led to a pool of questions about HIV, AIDS, HIV transmission, policy issues, and personal preferences in dealing with the AIDS threat. From this information pool a questionnaire was developed that contained 14 questions dealing with opinion about AIDS education policies, seven questions dealing with personal opinion regarding AIDS and AIDS education policies and nine questions dealing with knowledge about AIDS and its transmission (see Appendix A). The marking system gave the subject three choices of answers, (a) "Yes," (b) "Don't Know," (c) "No." The survey was piloted by asking six University of Northern Iowa professors and six University of Northern Iowa students, who had course work in the area of AIDS, to assess the content and clarity of meaning of the questions selected for use in the survey.

For the purpose of easy identification of subjects by group, the survey was printed in four different colors. The survey forms were color coded as follows: home economics teachers in-practice group--violet; physical education teachers in-practice group--orange; home economics teachers
A research proposal was submitted to the University of Northern Iowa Human Subjects Review committee. The proposal was approved and permission was granted to administer the survey by the Graduate College on March 15, 1989.

Administration to Home Economics Teachers Pre-service

A differential procedure for administration to home economics teachers pre-service was developed within the study. Permission was granted by the instructor of 31:057 Human Relationships and Sexuality to administer the survey to the home economics teachers pre-service in three sections of the course. The researcher had determined that this course was required by the Department of Home Economics for all major and minor pre-service home economics students and contained AIDS information in its course content. The survey was administered by the course instructor on March 23-24, 1989, which was after the AIDS information portion of the course content had been covered in three classrooms. Administration consisted of the instructor reading the cover letter to all students. He then laid the copies of the cover letter, survey and a return addressed envelope on a chair and directed students enrolled in a home economics
teaching major or minor, who wished to volunteer, to pick up and return either by mail or to him personally after class. The attached envelope was addressed to SURVEY, University of Northern Iowa, Education Center 617, Cedar Falls, Iowa 50614. Secretaries in the Educational Psychology Department of the University of Northern Iowa were notified that the survey would be coming to the office and were instructed to place it in the researcher's office mailbox. Nine subjects returned the survey, five to the instructor and four by mail, in this group.

This initial return did not meet the criteria of 10 completed surveys which was set as the minimum number to be used in the study. Thus a mailing list, with names and addresses of the 18 home economics majors, was obtained from the Registrar's Office. A mailing was sent to these 18 subjects on April 5, 1989. The mailing included the cover letter, the survey form, and a return addressed envelope with the same address as stated previously. There was an additional cover letter enclosed informing subjects of the anonymity of their participation in the study and directing them to disregard the survey if they had been asked to complete it in a classroom setting on the University of Northern Iowa campus (see Appendix A). Fifty cents was enclosed at the bottom of the cover letter, with a caption that read, "Have a coke on me." This mailing was coded for
identification by placing a pink dot on the edge of the envelope. A black slash was placed on the back of the second page of each survey. Identification of subjects who had course work in AIDS was made through the demographic question on the cover page of the survey which asked their primary source of AIDS education, as a check had to be made in the box indicating university level course work. Seven of these surveys were returned by mail and six met the criteria for use in the study. All surveys returned through this mailing contained permission for use in the research.

Administration to Physical Education Teachers Pre-service

Permission was granted by the instructor of 42:176 Administration and Curriculum Development in Physical Education to administer the survey to the physical education teachers pre-service on the University of Northern Iowa campus in one section of this course. The administration of the survey consisted of the course instructor reading the cover letter to all 23 students. He then distributed copies of the survey and directed students to place the survey on a designated table when completed. Students were told if they did not wish to participate, they were to return the survey uncompleted when the rest of the students had finished. Twenty of the surveys were completed and returned for use in the study.
Administration of Survey to Home Economic and Physical Education Teachers In-Practice

Principals of 81 public high schools which lie north of Interstate 80 and east of Highways 63 and 21 in the state of Iowa were personally contacted by telephone and asked if they would allow the survey to be placed in the school mailboxes of home economics and physical education teachers on their faculty. One hundred and eighty-one surveys were placed in the mailboxes of physical education teachers in-practice and 90 surveys were placed in mailboxes of home economics teachers in-practice.

The surveys mailed to participating schools contained the cover letter, the survey form, and a return envelope with the same address used previously (see Appendix A). Secretaries in the Educational Psychology Department at the University of Northern Iowa were notified that the survey would be coming to the office. They were instructed to place the mailing in the researcher's office mailbox. The mailing was done during the week of March 17, 1989. One hundred and sixty-six surveys were returned from this mailing. Of these returned surveys, 165 of the subjects gave permission for their survey to be used in the research.
Analysis of the Data

A frequency count was taken and percentages were computed on responses given by the two groups on the three choices of answers, (a) "Yes," (b) "Don't Know," (c) "No," to each question. A computerized Chi Square analysis was conducted to determine if there was a significant difference between the teachers in-practice group and the teachers pre-service group on question response.

The Knowledge section of the survey was scored (a "Don't Know" response was scored as an incorrect answer) and group means determined. Six computerized t-test analyses were conducted to determine if there was a statistically significant difference in the knowledge level between subject groups. The t-tests were conducted between:

1. The home economics teachers in-practice and physical education teachers in-practice group vs the home economics teachers pre-service and physical education teachers pre-service group.

2. The home economics teachers in-practice subgroup and home economics teachers pre-service subgroup vs the physical education teachers in-practice subgroup and physical education teachers pre-service subgroup.

3. The home economics teachers pre-service subgroup vs the physical education teachers pre-service subgroup.
4. The home economics teachers in-practice subgroup vs the physical education teachers in-practice subgroup.

5. The home economics teachers in-practice subgroup vs the home economics teachers pre-service subgroup.

6. The physical education teachers in-practice subgroup vs the physical education teachers pre-service subgroup.
The purpose of this study was to identify similarities and differences between home economics and physical education teachers in-practice in Northeast Iowa and home economics and physical education teachers pre-service at the University of Northern Iowa (UNI) with respect to knowledge and opinions concerning AIDS and AIDS education. One hundred and sixty-five teachers in-practice and 35 teachers pre-service participated in the study. This chapter presents the data analysis results and the discussions of the 97 questions contained in the AIDS and AIDS Education Opinion and Knowledge Survey (see Appendix A).

Instructions for Reading Results and Discussions

The analysis and discussion is divided into the six categories of the survey, (a) Demographic Information, (b) Opinions: School Curriculum Policies/Methods, (c) Opinions: AIDS Education Teacher Characteristics, (d) Opinions: School Board Policy Issues, (e) Opinions: Personal, and (f) Knowledge. The results will be presented in the following sequence under each category title.

1. Agree--a question or item discussed under this heading means (1) agreement level is discussed as
(a) relatively high—75% or above, (b) relatively moderate—50% to 74%, or (c) relatively low—49% or lower; (2) there is agreement between the teachers in-practice group and teachers pre-service group on the same answer choice, (a) "Yes," (b) "Don't Know," (c) "No," or (d) all three answer choice areas on the question or item; or (3) data analysis results of the question or item were not significant.

2. Mixed—a question or item discussed under this heading means (1) agreement level is discussed as (a) relatively high—75% or above, (b) relatively moderate—50% to 74%, or (c) relatively low—49% or lower; (2) there is a difference between the teachers in-practice group and teachers pre-service group on the answer choice, (a) "Yes," (b) "Don't Know," (c) "No," or (d) all three answer choice areas on the question or item; or (3) data analysis results of the question or item were not significant.

3. Significant—a question or item defined under this heading means (1) results were significant at the .05 level; (2) answer choice and agreement level will be discussed using the terms as stated above in (1) "Agree" and (2) "Mixed;" or (3) a contingency table follows each question or item discussed under this heading.
4. Discussion—a limited discussion of the implication of the data analysis for each individual question and its items.

5. Between—a term that is used when referring to the result of responses between the (1) home economics and physical education teachers in-practice group and the (2) home economics and physical education teachers pre-service group.

6. Within—a term used when discussing the results within (1) home economics and physical education teachers in-practice group, (2) home economics and physical education teachers pre-service group, (3) home economics teachers in-practice subgroup, (4) physical education teachers in-practice subgroup, (5) home economics teachers pre-service subgroup, and (6) physical education teachers pre-service subgroup.

**Demographic Information**

On the question, "Have you ever been involved in curriculum development for teaching a subject that had sexually transmitted disease information in its curriculum," analysis revealed that 113 teachers in-practice have been so involved. On the question, "Number of years you have taught any course that involved sex education or sexually transmitted disease information in its curriculum," 111
teachers in-practice indicated the number of years they had been so involved. The home economics teachers in-practice subgroup indicated 0 to 26 years of having been so involved. The physical education teachers in-practice group indicated 0 to 20 years of having been so involved. The average number of years the teachers in-practice group had been involved in development of curricula that had sex education or "sexually transmitted disease" information in its content was 5 years. The home economics teachers in-practice subgroup averaged 8 years and the physical education teachers in-practice subgroup averaged four years of involvement. The results suggest that home economics teachers in-practice have had more years, on the average, of developing and teaching curricula that contained "sexually transmitted disease" information in its content than physical education teachers in-practice.

On the question, "My main source of information about AIDS EDUCATION came from," 4 subjects indicated conversations about AIDS, 16 subjects indicated University training, 18 subjects indicated in-service training, 33 subjects indicated workshops, 39 subjects indicated media (TV, newspapers, magazines) and 51 subjects indicated personal reading. On the question, "My main source of information about AIDS came from," 4 subjects indicated conversations about AIDS, 13 subjects indicated university
training, 17 subjects indicated in-service training, 21 subjects indicated workshops, 49 subjects indicated personal reading, and 56 subjects indicated media (TV, newspapers, magazines). These results suggest that one of the primary sources of information about AIDS for both teachers in-practice and teachers pre-service lies outside of their educational training and in mass media.

Opinions: School Curriculum Policies/Methods

Question 1

The two groups agreed on 10 items of Question 1, "Which of the following topics should be included in your school district's AIDS curriculum." There was no mixed agreement on any item and one item was found to be significant.

Agree. The results indicate there was relatively high agreement between the two groups on Item a, "general information about AIDS;" Item b, "symptoms of AIDS;" Item c, "homosexual transmission of HIV virus;" Item d, "transmission of HIV virus;" Item e, "IV drug-related transmission of HIV virus;" Item f, "condom and spermicide use as related to HIV virus transmission;" Item g, "other safe sex practices;" Item h, "values clarification concerning human sexual behaviors as related to HIV virus transmission;" Item i, "communication skills aimed at preventing transmission of HIV virus;" and Item k, "decision
making skills related to preventing transmission of HIV virus."

**Significant.** The results of Item j, "how to resist sexual persuasion," differed significantly at the .05 level between groups (see Table 1). The teachers in-practice group indicated relatively high "Yes" agreement within group. The teachers pre-service group indicated relatively moderate "Yes" agreement within group.

**Table 1**

<table>
<thead>
<tr>
<th></th>
<th>In-practice</th>
<th>Pre-service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>84%</td>
<td>66%</td>
</tr>
<tr>
<td>Don't Know</td>
<td>13%</td>
<td>26%</td>
</tr>
<tr>
<td>No</td>
<td>3%</td>
<td>8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Chi Square \( (2, N = 197) = 6.88623, p < .05 \)

**Discussion.** The results suggest that the two groups agree that all item topics in Question 1 (see Appendix A) should be included in their school district's AIDS education curriculum.

**Question 2**

The two groups agreed on three items of Question 2, "AIDS instruction should be included in," there was mixed
agreement on two items, and none of the items were found to be significant.

**Agree.** The results indicate there was relatively high "Yes" agreement between groups for "upper elementary (4,5,6)," "junior high (7,8,9)," and "high school (10,11,12)." The results of Item b, "lower elementary (1,2,3)," indicate there was relatively low agreement in all three answer choices.

**Mixed.** The results indicate there was mixed response between groups to Item a, "kindergarten." There was relatively low agreement in all three choice areas within the teachers in-practice group. There was moderate "No" agreement within the teachers pre-service group.

**Discussion.** The results suggest that both groups agree there should be AIDS instruction in grades four through 12. The two groups have not reached a consensus as to whether AIDS instruction should be included in grades one through three. The teachers in-practice group did not reach a consensus of agreement but the teachers pre-service group did indicate AIDS information should not be included in kindergarten instruction.

**Question 3**

The results of Question 3, "The best way to provide AIDS Education is to include it in a," indicate the two
groups agreed on five items. There was mixed agreement on one item, and two items were found to be significant.

Agree. The results indicate there was relatively high "Yes" agreement between groups on Item a, "a unit dealing with serial listing of sexually transmitted diseases" and Item h, "a unit dealing with general sex education." There was relatively low agreement between groups on all three answer choice areas of Item d, "a unit dealing with blood chemistry." There was relatively moderate "Yes" agreement within the teachers in-practice group and a relatively high "Yes" agreement within the teachers pre-service group on Item f, "unit dealing with all the issues related to AIDS." There was relatively moderate "Yes" agreement between groups on Item g, "a unit dealing with substance abuse."

Mixed. The results indicate there was mixed response between the two groups to Question 3, Item e, "a unit dealing with the psycho-social aspects of human intimacy." There was relatively moderate "Yes" agreement within the teachers in-practice group and relatively low agreement in all three choice areas within the teachers pre-service group.

Significant. The results indicate response to Item b, "a unit dealing with the risks involved in human
sexual activity" differed significantly at the .05 level (see Table 2). There was relatively high "Yes" agreement between the two groups.

Table 2

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Don't Know</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-practice</td>
<td>91%</td>
<td>5%</td>
<td>4%</td>
<td>100%</td>
</tr>
<tr>
<td>Pre-service</td>
<td>76%</td>
<td>12%</td>
<td>12%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Chi Square (2, $N = 193$) = 6.18000, $p<.05$

There was a significant difference between group responses, at the .05 level on Item c, "a unit dealing with cell pathology" (see Table 3). There was relatively low agreement in all three choice areas between the two groups.

Discussion. The results suggest that the two groups agree that AIDS education should be included in units dealing with serial listing of sexually transmitted diseases, general sex education, AIDS-related issues only, and risks involved in human sexual activity. There seems to be no consensus between groups that AIDS education should be included in science units dealing with cell pathology and blood chemistry.
Table 3

Contingency Table for Question 3, Item c

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Don't Know</th>
<th>No</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>In-practice</td>
<td>25%</td>
<td>46%</td>
<td>29%</td>
<td>100%</td>
</tr>
<tr>
<td>Pre-service</td>
<td>28%</td>
<td>23%</td>
<td>49%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Chi Square \((2, N = 190) = 7.74432, p < .05\)

Question 4

The results of Question 4, "Should school boards mandate the use of the following AIDS education programs," indicate the two groups did not agree on any of the items. There was mixed agreement on one item and two items were found to be significant.

Mixed. The results indicate there was relatively low agreement in all three areas within the teachers in-practice group and a relatively moderate "Yes" response within the teachers pre-service group on Item a, "AIDS Resource Manual for Educators, produced by both the Iowa Department of Public Health and the Iowa Department of Education."

Significant. The results indicate there was a significant difference at the .05 level between groups response on Item b, "AIDS: What Young Adults Should Know, produced by the Department of Applied Health Science,
Indiana University, and promoted by the American Red Cross" (see Table 4). There was relatively low agreement in all three answer choice areas within the teachers in-practice group. There was high "Yes" agreement within the teachers pre-service group.

Table 4

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Don't Know</th>
<th>No</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>In-practice</td>
<td>40%</td>
<td>45%</td>
<td>15%</td>
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</tr>
<tr>
<td>Pre-service</td>
<td>78%</td>
<td>16%</td>
<td>6%</td>
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</table>

Chi Square (2, N = 169) = 15.03805, p<.05

The results indicate there was a significant difference at the .05 level between group responses on Item c, "Both of the above" (see Table 5). There was relatively low agreement in all three choice areas within the teachers in-practice group. There was relatively high "Yes" agreement within the teachers pre-service group.

Discussion. The results suggest the teachers pre-service subgroup agrees that school boards should mandate the use of both of the pre-designed AIDS education programs. The teachers in-practice group has not reached consensus as
to whether school boards should mandate the use of these two pre-designed AIDS education programs.

Table 5

Contingency Table for Question 4, Item c

<table>
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<th></th>
<th>Yes</th>
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<th>Total</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>Pre-service</td>
<td>75%</td>
<td>22%</td>
<td>3%</td>
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</table>

Chi Square (2, N = 169) = 7.26366, p<.05

Opinions: AIDS Education Teacher Characteristics

Question 5

The results of Question 5, "Educator's teaching AIDS education programs need," indicates the two groups agreed on six items. There was no mixed agreement on any item and two items were found to be significant.

Agree. The results indicate there is relatively high "Yes" agreement between groups on Item b, "to be well versed in sexuality language;" Item c, "knowledge of contraceptive information;" Item d, "knowledge of anatomy and reproduction;" Item e, "to be comfortable addressing the topic;" and Item g, "knowledge of substance abuse and HIV transmission." There was relatively moderate "Yes"
agreement between the two groups on Item h, "knowledge about research in human sexual behavior."

Significant. There was a significant difference at the .05 level between groups on Item a, "group counseling skills" (see Table 6). There was relatively moderate "Yes" agreement within the teachers in-practice group. There was relatively high "Yes" agreement within the teachers pre-service group.

Table 6

Contingency Table for Question 5, Item a

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Don't Know</th>
<th>No</th>
<th>Total</th>
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</thead>
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<tr>
<td>In-practice</td>
<td>59%</td>
<td>29%</td>
<td>12%</td>
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<tr>
<td>Pre-service</td>
<td>80%</td>
<td>9%</td>
<td>11%</td>
<td>100%</td>
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</tbody>
</table>

Chi Square (2, N = 191) = 6.7007, p<.05

There was a significant difference at the .05 level between the two groups on Item f, "a university level course dealing with AIDS in the curriculum" (see Table 7). There was relatively low agreement in all three answer choice
areas within the teachers in-practice group. There was relatively moderate "Yes" agreement within the teachers pre-service group.

Table 7

Contingency Table for Question 5, Item f

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Don't Know</th>
<th>No</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>In-practice</td>
<td>29%</td>
<td>40%</td>
<td>31%</td>
<td>100%</td>
</tr>
<tr>
<td>Pre-service</td>
<td>71%</td>
<td>12%</td>
<td>17%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Chi Square (2, N = 194) = 22.84687, p < .05

Discussion. The results suggest that both groups agree that educator's teaching about AIDS need current, factual knowledge of contraceptive information, anatomy and reproduction, and substance abuse as related to HIV transmission. The two groups also agreed an educator, teaching the topic of AIDS, needs to be well versed in sexuality language and be comfortable teaching the topic. Teachers in-practice did not reach consensus as to whether educators dealing with curricula that have AIDS information in their content need a university level course that deals with the topic of AIDS. The teachers pre-service group response indicated they agreed a university level course
which included AIDS in its content was necessary for educators who teach AIDS programs.

**Question 6**

The results of Question 6, "Which of the following individuals are qualified to provide AIDS Education in public schools," indicate the two groups agreed on four items. There was mixed response on one item, and three items were found to be significant.

**Agree.** The results indicate there was relatively high "Yes" agreement; between the two groups, on Item c, "Health education teacher." There was relatively high "Yes" agreement within the teachers in-practice group and relatively moderate "Yes" agreement within the teachers pre-service group on Item f, "Public health nurse." There was relatively low agreement in all three answer choice areas between the two groups, on Item d, "Physical education teacher" and on Item i, "School counselor."

**Mixed.** There was mixed agreement on Item b, "Science teacher." There was relatively moderate "Yes" agreement within the teachers in-practice group and a relatively low agreement in all three answer choice areas within the teachers pre-service group.
Significant. Three items were found to be significant on Question 6. There was a significant difference between the group responses at the .05 level to Item a, "School nurse" (see Table 8). There was relatively high "Yes"

Table 8

Contingency Table for Question 6, Item a

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Don't Know</th>
<th>No</th>
<th>Total</th>
</tr>
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<tbody>
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<td>In-practice</td>
<td>86%</td>
<td>8%</td>
<td>6%</td>
<td>100%</td>
</tr>
<tr>
<td>Pre-service</td>
<td>57%</td>
<td>26%</td>
<td>17%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Chi Square (2, N = 190) = 14.96456, p<.05

agreement within the teachers in-practice group. There was relatively moderate "Yes" agreement within the teachers pre-service group.

There was a significant difference at the .05 level between the group responses to Item e, "Home economics teacher" (see Table 9). There was relatively moderate "Yes" agreement within the teachers in-practice group. There was relatively low agreement in all three answer choice areas within the teachers pre-service group.
Table 9

Contingency Table for Question 6, Item e

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Don't Know</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-practice</td>
<td>67%</td>
<td>25%</td>
<td>8%</td>
<td>100%</td>
</tr>
<tr>
<td>Pre-service</td>
<td>26%</td>
<td>37%</td>
<td>37%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Chi Square (2, N = 192) = 27.37340, p<.05

There was a significant difference between the groups at the .05 level on Item g, "AIDS victim" (see Table 10). There was relatively moderate "Don't Know" agreement within the teachers in-practice group. There was relatively low agreement in all three answer choice areas within the teachers pre-service group to this item.

Table 10

Contingency Table for Question 6, Item g

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Don't Know</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<td>In-practice</td>
<td>30%</td>
<td>51%</td>
<td>19%</td>
<td>100%</td>
</tr>
<tr>
<td>Pre-service</td>
<td>37%</td>
<td>29%</td>
<td>34%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Chi Square (2, N = 184) = 6.13401, p<.05
There was a significant difference between groups at the .05 level on Item h, "Medical doctor" (see Table 11).
There was relatively high "Yes" agreement within the teachers in-practice group. There was relatively high "Yes" agreement within the teachers pre-service group.

Table 11
Contingency Table for Question 6, Item h

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Don't Know</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-practice</td>
<td>75%</td>
<td>19%</td>
<td>6%</td>
<td>100%</td>
</tr>
<tr>
<td>Pre-service</td>
<td>80%</td>
<td>3%</td>
<td>17%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Chi Square (2, N = 190) = 8.52033, p<.05

**Discussion.** The results suggest both groups agree that health education teachers, medical doctors, school nurses, and public health nurses are the most qualified persons to provide AIDS education.

**Opinions: School Board Policy Issues**

**Question 7**

**Agree.** The results indicate there was agreement between groups on Question 7, "Should parental permission be required prior to AIDS Education class attendance." There
was relatively moderate "No" agreement between the two groups.

Discussion. The results suggest that both the teachers in-practice and the teachers pre-service groups agree parental permission need not be required before a student can be exposed to information about AIDS in a classroom situation.

Question 8

Mixed. The results indicate there was mixed agreement between groups on Question 8, "Should all school personnel be informed if there is someone in the building who has AIDS." There was relatively moderate "Yes" agreement within the teachers in-practice group and relatively low agreement in the three answer choice areas within the teachers pre-service group on this item.

Discussion. The results suggest that there was no agreement between groups as to whether school personnel should be informed if there is someone in the building who has AIDS.

Question 9

Agree. The results of Question 9, "Should routine screening be done in schools if there is someone working in the building who has AIDS," indicate relatively low agreement in all three answer choice areas between groups.
Discussion. Results suggest there was no agreement within or between groups as to whether routine screening should be done in schools in which PWA are employed.

**Question 10**

Agree. The results of Question 10, "Should all school personnel be instructed in procedures for cleaning up internal fluids (including blood) which may be externally emitted by students," indicate relatively high "Yes" agreement between groups.

Discussion. The results suggest both groups agree that school personnel should have instruction for cleaning up body fluids emitted by students.

**Question 11**

Agree. The results of Question 11, "Should a teacher with AIDS be allowed to continue to teach," indicate relatively moderate "Yes" agreement between groups.

Discussion. The results suggest both groups agree a teacher with AIDS should be allowed to continue to teach.

**Question 12**

Agree. The results of Question 12, "Should an administrator with AIDS be allowed to continue to be employed by the school system," indicate relatively moderate "Yes" agreement between the two groups.
Discussion. The results suggest both groups agree that a school administrator with AIDS should continue to be employed within the school system.

Question 13

Agree. The results of Question 13, "Should a student with AIDS be isolated from the general public in a self-contained classroom," indicates relatively high "No" agreement within the teachers in-practice group, and relatively moderate "No" agreement within the teachers pre-service group.

Discussion. The results suggest both groups agree a student with AIDS should not be isolated in a self-contained classroom.

Question 14

Agree. The results of Question 14, "Should a student with AIDS be allowed only home-based instruction," indicates relatively high "No" agreement within the teachers in-practice group and relatively moderate "No" agreement within the teachers pre-service group.

Discussion. The results suggest that both groups agree students with AIDS should have an alternative to home based instruction.
Opinions: Personal

Question 1

Agree. The results of Question 1, "A person with HIV should let others know he/she is a carrier" indicate there was relatively moderate "Yes" response between both groups.

Discussion. The results suggest the two groups agree a person with HIV should tell others that he/she is a carrier.

Question 2

Agree. The results of Question 2, "A person with AIDS should let others know he/she has the disease" indicate relatively moderate "Yes" agreement between groups.

Discussion. The results suggest that the two groups agree a PWA should tell others that they have the disease.

Question 3

Significant. The results of Question 3, "A person with AIDS should be required to let others know," was significant at the .05 level, (see Table 12). There was relatively low agreement in the three answer choice areas between groups.

Discussion. The results suggest that there was no agreement between or within the two groups on whether PWA should be required to let others know.
Table 12

Contingency Table for Question 3

<table>
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<tr>
<th></th>
<th>Yes</th>
<th>Don't Know</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-practice</td>
<td>33%</td>
<td>37%</td>
<td>30%</td>
<td>100%</td>
</tr>
<tr>
<td>Pre-service</td>
<td>46%</td>
<td>8%</td>
<td>46%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Chi Square (2, N = 199) = 10.56376, p<.05

Question 4

Agree. The results of Question 4, "I would tell others if I had AIDS," indicate there was relatively low agreement in all three choice areas between the two groups.

Discussion. The results suggest that there was no agreement between or within the two groups as to whether the individual participants in this research would tell others if he/she had AIDS.

Question 5

Agree. The results of Question 5, "A person with AIDS should tell their sexual partners," indicate relatively high "Yes" agreement between groups.

Discussion. The results suggest both groups agree PWA should tell their sexual partners.
Question 6

Agree. The results of Question 6, "The AIDS issue is grossly overstated," indicate there was relatively high "No" agreement between groups.

Discussion. The results suggest both groups agree the AIDS issue is not grossly overstated.

Question 7

Agree. The results of Question 7, "Demand for AIDS education in schools is exaggerated," indicate relatively high "No" agreement between the two groups.

Discussion. The results suggest both groups agree AIDS education is needed in schools.

Knowledge

Question 1

Agree. The results of Question 1, "AIDS is fatal," indicate relatively high "Yes" agreement between the two groups.

Discussion. The results suggest both groups agree AIDS is a fatal disease.

Question 2

Agree. The results of Question 2, "As of January 1, 1989, there were less than 100 reported cases of AIDS in Iowa," indicate relatively low agreement in all three answer choices between the two groups.
Discussion. The results suggest there is no agreement between or within groups on the number of reported cases of AIDS in Iowa.

Question 3

Agree. The results of Question 3, "As of January 1, 1989, there were less than 1,000 reported cases of children with AIDS in the nation," indicate there was relatively low agreement in all three answer choice areas between groups.

Discussion. The results suggest there was no agreement between or within groups as to the number of reported cases of children with AIDS in the nation.

Question 4

Agree. The results of Question 4, "Positive results on the HIV antibody test means the person will develop AIDS," indicate relatively moderate "No" agreement between groups.

Discussion. The results suggest both groups agree a positive HIV antibody test does not mean a person will develop AIDS.

Question 5

Agree. The results of Question 5, "The symptoms of AIDS may appear in diseases that are not associated with AIDS," indicate relatively moderate "Yes" agreement within the teachers in-practice group and relatively high "Yes" agreement within the teachers pre-service group.
Discussion. The results suggest both groups agree symptoms of AIDS may appear in diseases not associated with AIDS.

**Question 6**

There are nine items within Question 6, "Are the following likely to spread AIDS." The results indicate the two groups agreed on eight items, there were no mixed response items, and one item was found to be significant at the .05 level.

**Agree.** The results indicate there was relatively high "Yes" agreement between groups on Item b, "children born to an HIV infected mother;" Item d, "sharing hypodermic needles;" Item e, "having sex with a person who uses IV-drugs and looks healthy;" Item h, "having sex with many partners;" and Item i, "having sex with someone who has had many sexual partners."

There was relatively high "No" agreement between groups on Item a, "living in a home with an AIDS victim;" Item f, "kissing a person with AIDS;" and Item g, "using a public toilet after someone who has AIDS used it."

**Significant.** The results indicate there was a significant difference between group responses at the .05 level on Item c, "children born whose natural father was infected with HIV at the time of conception," (see Table 13). There was relatively low agreement in all three answer
choice areas within the teachers in-practice group and a relatively moderate "Yes" agreement within the teachers pre-service group.

Table 13

Contingency Table for Question 6, Item c

<table>
<thead>
<tr>
<th></th>
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<th>Don't Know</th>
<th>No</th>
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</tr>
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<tr>
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<td>36%</td>
<td>36%</td>
<td>28%</td>
<td>100%</td>
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<tr>
<td>Pre-service</td>
<td>60%</td>
<td>26%</td>
<td>14%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Chi Square (2, N = 195) = 7.33849, p<.05

Discussion. These results suggest that teachers in-practice and teachers pre-service agree that HIV is likely to spread to children born to an HIV-infected mother and also to persons who share hypodermic needles with persons who are infected with HIV. The two groups agree that having sex with a person who uses IV-drugs but looks healthy, having sex yourself with many partners, and having sex with someone who has had many sexual partners are each likely to spread HIV. The two groups agree that you cannot contract HIV by living in a home with PWA, kissing PWA, or using a public toilet after PWA. There was no within or between
group agreement that a child whose father alone was infected with HIV at the time of conception will contract HIV.

Question 7

There are four items within Question 7, "AIDS is caused by." The results indicate the two groups agreed on three items, there were no mixed response items, and one item's response was found significant at the .05 level.

Agree. The results of Item b, "a virus," and Item c, "a fungus," indicate relatively high "Yes" agreement between groups. The results of Item a, "poor health habits," indicates a relatively moderate "No" response between groups.

Significant. The results of Item d, "a bacteria," indicate a significant difference at the .05 level between group responses (see Table 14). There was relatively high

Table 14

Contingency Table for Question 7, Item d

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Don't Know</th>
<th>No</th>
<th>Total</th>
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<tbody>
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<td>7%</td>
<td>8%</td>
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<td>100%</td>
</tr>
<tr>
<td>Pre-service</td>
<td>20%</td>
<td>14%</td>
<td>66%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Chi Square (2, N = 192) = 7.92981, p<.05
"No" agreement within the teachers in-practice group and relatively moderate "No" agreement within the teachers pre-service group.

Discussion. The results suggest the groups agree both that AIDS is caused by a virus and that AIDS is not caused by poor health habits, bacteria, or a fungus.

Question 8

There are nine items within Question 8, "AIDS can be transmitted through." The results indicate the two groups agreed on seven items, there was mixed response on one item, and one item response was found significant at the .05 level.

Agree. There was relatively high "Yes" agreement between groups in response to Item f, "contaminated blood products;" Item g, "semen;" Item h, "vaginal fluids;" and Item i, "across placenta, mother-to-fetus." There was relatively high "No" agreement between groups in response to Item a, "coughing;" Item b, "sneezing;" and Item d, "fleas."

Mixed. There was mixed response between groups to Item e, "saliva." There was relatively low agreement in all three answer choice areas within the teachers in-practice group and relatively moderate "No" agreement within the teachers pre-service group.

Significant. In regard to Item c, "mosquitoes," the between group response was found significant at the .05
level (see Table 15). There was relatively high "No" agreement within the teachers in-practice group. There was relatively moderate "No" agreement within the teachers pre-service group.

Table 15

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Don't Know</th>
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<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-practice</td>
<td>-11%</td>
<td>11%</td>
<td>78%</td>
<td>100%</td>
</tr>
<tr>
<td>Pre-service</td>
<td>14%</td>
<td>26%</td>
<td>60%</td>
<td>100%</td>
</tr>
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</table>

Chi Square (2, N = 197) = 6.14523, \( p < .05 \)

Discussion. The results suggest both groups agree that HIV cannot be transmitted through coughing, sneezing, fleas, saliva, and mosquitoes. The two groups agree HIV can be transmitted through contaminated blood products, semen, vaginal fluids, and from mother to fetus through the placenta.

Question 9

There are 11 items within Question 9, "Is each of the following a possible sign or symptom of AIDS." The two groups agreed on seven items, there was mixed agreement on
two items, and responses to two items were found to be significant at the .05 level.

Agree. The results indicate relatively high "Yes" agreement between groups on Item e, "greater than 10 pound weight loss," and Item h, "constant fatigue." There was relatively moderate "Yes" agreement between groups to Item c, "open sores or lesions on body," and Item j, "unexplained bleeding." There was relatively low agreement in all three answer choices between groups on Item b, "blurred or double vision."

The results indicate on Item a, "sore throat," there was relatively moderate "Yes" agreement within the teachers in-practice group and relatively low "Yes" agreement within the teachers pre-service group. On Item g, "persistent fevers or night sweats," there was relatively high "Yes" agreement within teachers in-practice and relatively moderate "Yes" agreement within teachers pre-service.

Mixed. The results indicate mixed agreement between the two groups on Item d, "fine red rash." There was relatively low agreement in all three answer choice areas within the teachers in-practice group and relatively moderate "Don't Know" agreement within the teachers pre-service group. On Item i, "easily bruised," there was relatively low agreement in all answer choice areas within
the teachers in-practice group and a relatively moderate "Yes" agreement within the teachers pre-service group.

Significant. The results indicate there are two items in Question 9 that were significant. The results of Item f, "change in personality," indicate responses differed significantly at the .05 level (see Table 16). There was relatively low agreement in the three answer choice areas within the teachers in-practice group and relatively moderate "Don't Know" agreement within the teachers pre-service group.

Table 16

<table>
<thead>
<tr>
<th>In-practice</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Yes</strong></td>
<td>29%</td>
</tr>
<tr>
<td><strong>Don't Know</strong></td>
<td>41%</td>
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<td><strong>No</strong></td>
<td>30%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
</tr>
</tbody>
</table>

Chi Square (2, N = 196) = 6.75055, p<.05

The results indicate Item k, "persistent dry cough," differed significantly at the .05 level (see Table 17). There was relatively moderate "Yes" agreement within the teachers in-practice group and relatively moderate "Don't Know" agreement within the teachers pre-service group.
Table 17

Contingency Table for Question 9, Item k

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Don't Know</th>
<th>No</th>
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<tbody>
<tr>
<td>In-practice</td>
<td>57%</td>
<td>31%</td>
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<td>100%</td>
</tr>
<tr>
<td>Pre-service</td>
<td>46%</td>
<td>51%</td>
<td>3%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Chi Square (2, N = 196) = 6.50957, p<.05

Discussion: The results suggest the two groups agree that open sores or lesions, more than 10 pound weight loss, persistent fevers or night sweats, constant fatigue, unexplained bleeding, and sore throat are all signs or symptoms of AIDS. The two groups did not reach a consensus of opinion on blurred or double vision, change in personality, fine red rash, or persistent dry cough being signs or symptoms of AIDS.

Discussions of Knowledge Scores t-test Results

Six t-tests were conducted on the mean scores between and within the home economics and physical education teachers in-practice group, and the home economics and physical education teachers pre-service group, on the Knowledge section of the survey. Two of the knowledge scores differed significantly at the .05 level. The knowledge level of the home economics teachers in-practice
subgroup \( (M = 28.4595) \) was significantly greater than the physical education teachers in-practice subgroup \( (M = 25.7174, t(164) = 3.02, p<.05) \). The knowledge level of combined home economics teachers in-practice subgroup and home economics teachers pre-service subgroup \( (M = 28.5056) \) was significantly greater than the combined physical education teachers in-practice subgroup and physical education teachers pre-service subgroup \( (M = 25.8036), t(199) = 3.46, p<.05 \).

The results suggest that the home economics teachers in-practice subgroup scored significantly higher on the "Knowledge" category of the survey than the other three subgroups. The combined home economics teachers in-practice and teachers pre-service subgroups scored significantly higher on the "Knowledge" category of the survey than the physical education teachers in-practice and teachers pre-service subgroups.
CHAPTER 5
SUMMARY AND IMPLICATIONS

Summary of Results and Discussions

A review of the data analyses suggested the following:

1. Overall responses to the 97 questions of the survey indicate there was a greater similarity than difference in responses between the home economics and physical education teachers in-practice group and the home economics and physical education teachers pre-service group. There were only 17 questions in which group responses differed significantly at the .05 level.

2. That the home economics teachers in-practice subgroup had the highest knowledge level score of the four subgroups. That the combined knowledge scores of the home economics teachers in-practice and teachers pre-service subgroups were significantly higher than the physical education teachers in-practice and teachers pre-service subgroups on the knowledge portion of the survey. However, one must question the practical significance of the three point difference in the two means, especially when the average accuracy was less than 75% for both groups.

3. The items selected for Question 1 of the Opinions: School Curriculum Policies/Methods category of the survey were chosen because they were topics that would increase
both knowledge level about HIV and AIDS and would lead to development of skills and discussion about sexual behavior changes. The results suggest both groups were in agreement that all these topics should be included in AIDS curricula. The results suggest the two groups are in favor of AIDS education curriculum design that will both increase knowledge level and increase awareness of sexual behavior as it relates to AIDS.

4. That both groups were in high agreement that AIDS education should be taught in grades four through 12. The two groups did not reach consensus on inclusion of the topic of AIDS in kindergarten through third grade curricula.

5. That both groups were in high agreement that AIDS education should be included in units that deal with sexually transmitted diseases, human sexual activity, and general sex education. The two groups did not support the science curricula as being the best area to present AIDS education programs in schools.

6. That the teachers in-practice group was not in favor of school boards mandating the use of the two pre-designed AIDS curricula suggested in the survey. This could mean either the teachers in-practice group was not familiar with the two curricula or that the teachers in-practice group was in favor of each school district's AIDS curricula meeting individual school and community needs.
7. That the two groups were in high agreement that educators teaching the topic of AIDS need knowledge about contraceptive information, anatomy and reproduction, substance abuse, and research in human sexual behavior as it relates to HIV transmission. The two groups placed high importance on educators teaching AIDS education programs needing to be well versed in sexuality language and to be comfortable dealing with the topic of AIDS. There was no consensus between groups that a university level course with AIDS in its curricula is necessary for an educator teaching AIDS information.

8. That both groups indicated health education teachers, medical doctors, school nurses, and public health nurses were the most qualified to teach AIDS education in schools. The teachers in-practice group agreed 100% and teachers pre-service group agreed 97% that health education teachers were the most qualified to teach AIDS education.

9. As a health precaution, both groups agree that school personnel should be instructed in proper procedures for cleaning up body fluids which may be externally emitted by students.

10. That both groups agree that persons with HIV and PWA should tell their sexual partners, but the two groups did not reach a consensus on whether informing others should be required. There was no consensus, within or between
groups, as to whether subjects would tell others if they had AIDS.

11. That both groups were in high agreement that the AIDS issue is not grossly overstated and the need for AIDS education in schools is not exaggerated.

12. That both groups could not reach consensus within or between groups as to whether AIDS could be transmitted through saliva.

13. That both groups were in high agreement that a 10 pound weight loss and constant fatigue are signs or symptoms of AIDS. These were the only two items of the 15 possible AIDS signs or symptoms, to which there was over 75% agreement in both groups.

Implications

The results of this study suggest that survey research could be a method of discovering areas of similarities and differences within and between teacher groups on knowledge, values, curriculum, and policy issues related to AIDS. Also, survey research could be a useful method of monitoring changes over time.

The results of this research suggest that updated AIDS information may be needed by teachers in-practice and teachers pre-service in the areas of surveillance counts, modes of transmission, and signs and symptoms of AIDS. The
results of the data analysis on the knowledge scores indicate that physical education teachers in-practice and teachers pre-service subgroups scored significantly lower than home economics teachers in-practice and teachers pre-service subgroups. This result suggests universities might need to examine the AIDS education content within their physical education teachers pre-service curricula. However, a three point difference in the mean leaves one very cautious about claiming practical significance for this result. Neither mean had a percentage correct out of possible higher than 75% and one could conclude both groups could benefit from more accurate knowledge of AIDS and HIV transmission.

The results suggest that both groups agree AIDS education program content should include information that increases knowledge level about both transmission and symptoms of AIDS. The two groups agree that values clarification, communication skills, and decision making skills as related to AIDS should also be included in AIDS education programs.

The results suggest the subjects of this research were in agreement that persons with HIV and PWA should tell others. However, the results also indicate that 49% of the subjects in both groups answered either they "Don't Know" or "No" to the personal question which asked "I would tell
others if I had AIDS." These findings suggest future AIDS research may need to be directed in the area of public opinion in regard to attitudes toward PWA and issues of confidentiality as related to AIDS. If PWA are unwilling to disclose their infection, unwitting partners continue to be vulnerable to infection and the epidemic continues.

The literature review revealed that school districts are currently involved in formulating AIDS curricula and school policies. However, more needs to be done. The CDC have prepared a manual with suggested guidelines for schools to use in designing policies in regard to AIDS education. The Iowa Departments of Public Health and Education has prepared an AIDS resource guide which is available to school districts. The General Assembly of the State of Iowa has mandated that AIDS education be included in grades one through 12. These efforts help provide a foundation on which to build individual school policy decisions. The use of opinion surveys administered to teachers in-practice and teachers pre-service may be an expedient way of obtaining additional information of value in making AIDS education policy decisions. Tiny steps, if repeated, can lead to goal attainment.
REFERENCES


APPENDIX A

Sample Survey
AIDS AND AIDS EDUCATION OPINION AND KNOWLEDGE SURVEY

Following the demographic information below is a questionnaire which has two components. The first component surveys opinion about AIDS and AIDS Education. The second portion surveys knowledge about AIDS and its transmission. Many schools are now in the process of formulating AIDS curriculum and school policies that will address the needs of the community they serve. Your opinion is important to this study.

The questionnaire has been designed to take from 10-15 minutes to complete. The survey is color-coded by group so your identity is totally protected. Thank you for your participation.

(If you are in a classroom and asked to take this survey, if you do not wish to participate, close the survey and return to proctor blank.)

Demographic Information

Do you have a major/minor in: (check one)

___ Home Economics _______________________________ ___ Physical Education

___ Other ____________________________

Have you ever been involved in curriculum development for teaching a subject that had sexually transmitted disease information in its curriculum?

___ Yes  ___ No

Number of years you have taught any course that involved sex education or sexually transmitted disease information in its curriculum: ______ years.

My main source of information about AIDS EDUCATION came from: (check one)

___ University training  ___ workshops

___ Personal reading  ___ conversations about AIDS

___ In-service  ___ Media (TV, newspapers, magazines)

My main source of information about AIDS came from: (check one)

___ University training  ___ workshops

___ Personal reading  ___ conversations about AIDS

___ In-service  ___ Media (TV, newspapers, magazines)

Do you give permission for your answers in this survey to be used in a research project? (Check one)

___ Yes  ___ No
I. OPINIONS: School Curriculum Policies/Methods

1. Which of the following topics should be included in your school district's AIDS curriculum? (CHECK ONE IN EACH CATEGORY)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Yes</th>
<th>Know</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. general information about AIDS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. symptoms of AIDS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. homosexual transmission of HIV virus</td>
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<td></td>
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<tr>
<td>d. transmission of HIV virus</td>
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<td></td>
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<tr>
<td>e. IV drug-related transmission of HIV virus</td>
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<td></td>
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<tr>
<td>f. condom and spermicide use as related to HIV virus transmission</td>
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<tr>
<td>g. other safe sex practices</td>
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<tr>
<td>h. values clarification concerning human sexual behaviors as related to HIV virus transmission</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>i. communication skills aimed at preventing transmission of HIV virus</td>
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<td></td>
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<tr>
<td>j. how to resist sexual persuasion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>k. decision-making skills related to preventing transmission of HIV virus</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

2. AIDS instruction should be included in: (CHECK ONE IN EACH CATEGORY)

<table>
<thead>
<tr>
<th>School Level</th>
<th>Yes</th>
<th>Know</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. kindergarten</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>b. lower elementary (1, 2, 3)</td>
<td></td>
<td></td>
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<tr>
<td>c. upper elementary (4, 5, 6)</td>
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<tr>
<td>d. junior high (7, 8, 9)</td>
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<tr>
<td>e. high school (10, 11, 12)</td>
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</table>
3. The best way to provide AIDS Education is to include it in a:
(CHECK ONE IN EACH CATEGORY)

a. in a unit dealing with serial listing of sexually transmitted diseases □ □ □
b. in a unit dealing with the risks involved in human sexual activity □ □ □
c. in a unit dealing with cell pathology □ □ □
d. in a unit dealing with blood chemistry □ □ □
e. in a unit dealing with the psycho-social aspects of human intimacy □ □ □
f. in a unit dealing with all the issues related to AIDS separately □ □ □
g. in a unit dealing with substance abuse □ □ □
h. in a unit dealing with general sex education □ □ □

4. Should school boards mandate the use of the following AIDS education programs?
(CHECK ONE IN EACH CATEGORY)

a. AIDS Resource Manual for Educators, produced by the Iowa Department of Health and the Iowa Department of Education □ □ □
b. AIDS: What Young Adults Should Know, produced by the Department of Applied Health Science, Indiana University and promoted by the American Red Cross □ □ □
c. Both of the above □ □ □
### OPINIONS: AIDS Education Teacher Characteristics

5. Educator's teaching AIDS education programs need: (CHECK ONE IN EACH CATEGORIES)

<table>
<thead>
<tr>
<th></th>
<th>a. group counseling skills</th>
<th>b. to be well versed in sexuality language</th>
<th>c. knowledge of contraceptive information</th>
<th>d. knowledge of anatomy and reproduction</th>
<th>e. to be comfortable addressing the topic</th>
<th>f. a university level course dealing with AIDS in the curriculum</th>
<th>g. knowledge of substance abuse and HIV transmission</th>
<th>h. knowledge about research in human sexual behavior</th>
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<td></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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</table>

6. Which of the following individuals are qualified to provide AIDS Education in public schools?

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<tr>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Please specify:</td>
</tr>
</tbody>
</table>
OPINIONS: School Board Policy Issues

7. Should parental permission be required prior to AIDS Education class attendance?

8. Should all school personnel be informed if there is someone in the building who has AIDS?

9. Should routine screening be done in schools if there is someone working in the building who has AIDS?

10. Should all school personnel be instructed in procedures for cleaning up internal fluids (including blood) which may be externally emitted by students?

11. Should a teacher with AIDS be allowed to continue to teach?

12. Should an administrator with AIDS be allowed to continue to be employed by the school system?

13. Should a student with AIDS be isolated from the general public in a self-contained classroom?

14. Should a student with AIDS be allowed only home-based instruction?

OPINIONS: Personal (CHECK ONE IN EACH CATEGORY)

1. A person with HIV should let others know he/she is a carrier.

2. A person with AIDS should let others know he/she has the disease.

3. A person with AIDS should be required to let others know he/she has the disease.

4. I would tell others if I had AIDS.

5. A person with AIDS should tell their sexual partners he/she has the disease.

6. The AIDS issue is grossly overstated.

7. Demand for AIDS education in schools is exaggerated.
II. KNOWLEDGE (CHECK ONE IN EACH CATEGORY)

1. AIDS is fatal.  

2. As of January 1, 1989, there were less than 100 reported cases of AIDS in Iowa.

3. As of January 1, 1989, there were less than 1,000 reported cases of children with AIDS in the nation.

4. Positive results on the HIV antibody test means the person will develop AIDS.

5. The symptoms of AIDS may appear in diseases that are not associated with AIDS.

6. Are the following likely to spread AIDS? (CHECK ONE IN EACH CATEGORY)

   a. living in a home with an AIDS victim
   b. children born to a mother infected with HIV
   c. children born whose natural father was infected with HIV at the time of conception
   d. sharing hypodermic needles
   e. having sex with a person who uses IV-drugs and looks healthy
   f. kissing a person with AIDS
   g. using a public toilet after someone who has AIDS has used it
   h. having sex with many partners
   i. having sex with someone who has had many sexual partners
7. AIDS is caused by: (CHECK ONE IN EACH CATEGORY)
   a. poor health habits
   b. a virus
   c. a fungus
   d. a bacteria

8. AIDS can be transmitted through: (CHECK ONE IN EACH CATEGORY)
   a. coughing
   b. sneezing
   c. mosquitoes
   d. fleas
   e. saliva
   f. contaminated blood products
   g. semen
   h. vaginal fluids
   i. across placenta, mother-to-fetus

9. Is each of the following a possible sign or symptom of AIDS? (CHECK ONE IN EACH CATEGORY)
   a. sore throat
   b. blurred or double vision
   c. open sores or lesions on body
   d. fine red rash
   e. greater than 10 pound weight loss
   f. change in personality
   g. persistent fevers or night sweats
   h. constant fatigue
   i. easily bruised
   j. unexplained bleeding
   k. persistent dry cough
APPENDIX B

Second Cover Letter
Enclosed is a AIDS and AIDS Education Opinions and Knowledge Survey. This survey has been administered in selected classrooms to pre-service teaching students in the areas of physical education and home economics on the University of Northern Iowa campus. The survey has been designed for use in a research project to gather opinion information on AIDS education and school policy issues, from teachers in-practice and teachers in pre-service training in Northeast Iowa.

Participation in this project is on a volunteer basis. If you have already been asked to complete the survey in a classroom on the UNI campus or do not wish to participate in the research, please disregard this mailing. A stamped return envelope is enclosed for your convenience. If you wish a copy of the results, please forward your request in a separate envelope to the address enclosed.

HAVE A COKE ON ME!!!!