SELECTED MIDDLE SCHOOL AND HIGH SCHOOL EDUCATORS' PERCEPTIONS OF HIV/AIDS INSTRUCTION

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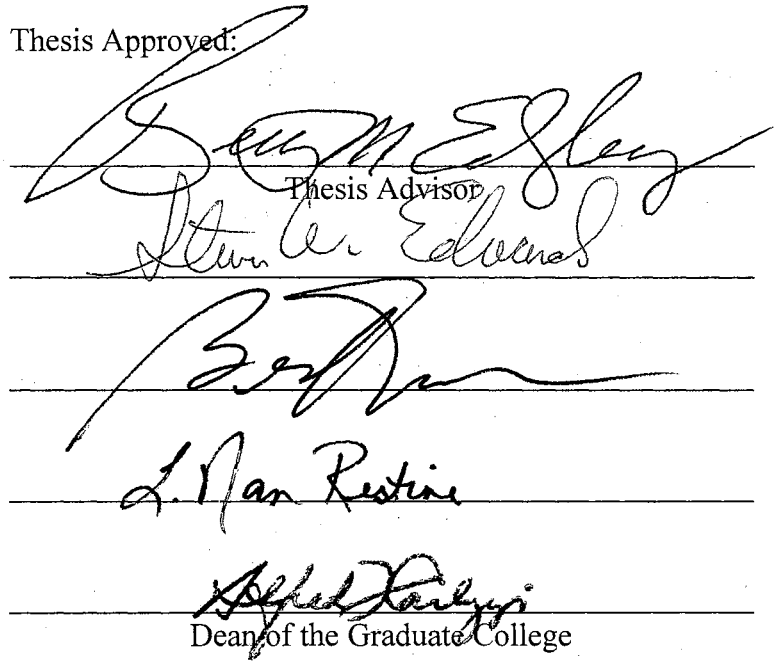

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CHAPTER I

INTRODUCTION

> If the current HIV (human immunodeficiency virus) epidemic could, by some unimaginable miracle, be totally halted tomorrow, more Americans would still end up dying from AIDS than were killed in the Vietnam, Korean, World War II, and the Civil War combined.
>
> (Popham, 1993)

The Surgeon General (Surgeon General's Address, 1999) has reported that worldwide, more than 33 million adults and children are living with HIV/AIDS. In 1998 alone, 5.8 million men, women and children were reportedly infected. Nearly 14 million people have died since the epidemic began; 2.5 million of those deaths occurred in 1997, which was more than ever before in a single year. Infection of the world's younger populations is a growing concern worldwide, as well as in the United States. About half of all new infections in the United States are occurring in people between the ages of 15 and 24 (Surgeon General's Address, 1999). About 7,000 young Americans in the 15-24 age group, are infected with HIV every day, which computes to five new people every minute. Heterosexual involvement with this disease has changed over the years as more teenagers than adults currently contract HIV through heterosexual contact. In 1998, HIV was the leading cause of death for Americans between the ages of 25 and 44. The health, economic, and social toll of this disease on the world is a major concern. In fact, the total number of U.S. military personnel who lost their lives in four military conflicts is approximately 560,000. Conservative estimates suggest that by the end of the next

decade, all but a small percentage of the more than one million Americans currently infected with HIV will die because of AIDS (Popham, 1993).

The first cases of acquired immunodeficiency syndrome (AIDS) were reported in the United States in 1981 (Popham, 1993). An epidemic of AIDS, and the human immunodeficiency virus (HIV) which causes AIDS and other HIV-related diseases, has occurred worldwide, affecting some countries (e.g. Africa and Mexico) and specific ethnic groups in varying degrees. In the United States, African Americans and Hispanics have been disproportionately affected by HIV. HIV infection has been the leading cause of death for African American men in the 25-44 age group since 1991. In 1998, the third leading cause of death among black women 25-44 years old was HIV infection. Hispanics are contracting the disease in monumental numbers as well (Surgeon General, 1999).

The Healthy People 2000 Report (1992) noted that without treatment, about 50 percent of the people infected with HIV will develop AIDS within a ten- year time span. By the end of 1989, more than 115,000 cases of AIDS had been reported. This number more than tripled by 1993 when it was estimated that 390,000 to 480,000 cases of AIDS had been diagnosed in the United States, and 285,000 to 340,000 people will soon die from the disease (Healthy People 2000, 1992). As of June 30, 1999, the Centers for Disease Control and Prevention (CDC) reported that 711,344 AIDS cases have been reported in the United States, and 62% of those diagnosed (420,201), resulted in death. In 1999, 1,813 young people (ages 13-24) were reported with AIDS, bringing the cumulative total to 29,629 cases of AIDS in this age group of Americans. Among young men aged 13-24 years, 50% of all AIDS cases reported in 1999 were among men who had sex with men, 8% were among injection drug users, and 8% were among young men infected heterosexually. In 1999, among young women the same age, 47% of all AIDS cases reported were acquired heterosexually while 11% occurred through injection drug use.

The statistics for Kansas (Bureau of Epidemiology and Disease Prevention, 2000) show that, as of June 30, 1999, 2,163 AIDS cases had been reported since 1983. There were 914 reported persons living with AIDS, and 104 reported persons with HIV who were presumed to be living in Kansas. The Kansas Department of Health and Environment has records of 1,250 deaths related to HIV or AIDS. Ethnic minorities represent a disproportionate number of Kansans diagnosed with AIDS. African Americans represent only 6% of the Kansas population, but they contract 21% of the AIDS cases. The rate of AIDS has decreased in nearly every racial or ethnic group in Kansas. The AIDS infection rate among Hispanics continues to increase and it has tripled relative to what it was before 1990. Hispanics currently represent 5% of the Kansas population and 7% of total AIDS cases as reported by the Bureau of Epidemiology and Disease Prevention 2000 report. The prevalence of AIDS is highest among 30-39 year olds in all racial/ethnic groups. Since 1983, there have been 12 cases of HIV and AIDS diagnosed and reported among Kansas children under 13 years of age, which is a very small proportion since there are 568,495 children under age 13 living in Kansas.

Background of the Problem

Healthy People 2010 (2000) identifies the following objective specific to HIV/AIDS education for school age children. Objective 7-2 states:

> Increase the proportion of middle, junior high, and senior high schools that provide comprehensive school health education to prevent health problems in the following areas: unintentional injury; violence; suicide; tobacco use and addiction; alcohol or other drug use; unintended pregnancy,

HIV/AIDS, and STD infection; unhealthy dietary patterns; inadequate physical activity; and environmental health.

The specific objective 7-2g intends to increase the number of schools providing comprehensive school health education related to unintended pregnancy, HIV/AIDS, and STD infection from the 1994 baseline of 65% to the 2010 target 90%. Healthy People 2010 documents a reference to HIV/AIDS educators as a specific objective is further evidence that this topic continues to be a national health concern.

Many parents do not address sexuality education, or they are not comfortable addressing this topic with their children (Blendon, Donelan & Knox, 1992; Gruen, Hayes, Fritsch-deBruyn, 1991; Rutt, 1996). A large portion of our nation's children and youth, approximately 95%, spend a minimum of 6 hours a day for 12 years in school (National Center for Education Statistics, 1997). Schools, therefore, are in an appropriate position to address quality HIV/AIDS prevention education. Nationwide, most school districts are mandated by their state departments of education to teach K-12 HIV/AIDS education. However, this researcher has found that many school districts fail to implement this mandate. Those districts that do provide HIV/AIDS education in the curriculum often fail to provide adequate education and training for their teachers on this issue. Adequate in-service training for teachers may assist America's adolescents in reaching the goals related to HIV risk-reducing behavior as identified in Healthy People 2010. Many studies have suggested that a need exists for continued in-service training (Calamadis, 1990; Division of Adolescent and School Health, 1996; Gingiss & Basen-Engquist, 1994; Holtzman, Greene, Ingraham, Daily, Demchuk & Kolbe, 1992; Remafedi, 1993; Robinstine, 1993; Wilfert, Beck, Fleischman, Mofenson, Pantell, Schonberg, Scott,

Sklaire, & Whitley-Williams, 1998). It cannot be assumed that a mandated curricular area has appropriately educated teachers delivering the HIV/AIDS curriculum. Several studies reported that teachers stated they were not adequately prepared to teach the subject of HIV/AIDS education (Gingiss-Bassen, 1994; Hamilton & Levenson-Gingiss, 1993; Quinn, Thomas & Smith, 1990; Richter, 1997). Two thirds of the teachers interviewed in the Gingiss study (1994) indicated the need for additional training.

Teachers are often uncomfortable discussing sensitive issues with students and/or parents, and they lack the instructional strategies needed to address such topics (Richter, 1997; Gingiss & Basen-Engquist, 1994; Haignere, Culhane, Balsley & Legos, 1996). Many teachers are not at ease or are prohibited by local policy from teaching students various issues related to sex, such as how to effectively use condoms or information about alternate lifestyles. However, educators and administrators should realize that many teenagers place more trust and credence in HIV/AIDS information coming from teachers than that which comes from family, friends and the media (Brzozowski-Gardner, 1995).

Teacher beliefs toward HIV/AIDS education have been shown to directly impact the quality of instruction regarding HIV/AIDS education (Gingiss & Basen-Engquist, 1994; Hamilton & Levenson-Gingiss, 1993; Remafedi, 1993; The AIDS Knowledge Base, 1999). Attitudes and beliefs of individual teachers serve as barriers to quality instruction for two reasons (Greene, 1997; Hamilton & Levenson-Gingiss, 1993; Wolff & Schoeberlein, 1999). One, educators with negative attitudes toward HIV/AIDS education will probably not deliver a quality, comprehensive program to their students. Two, teachers that believe they are not able to impact the future behaviors of their students will

probably not be motivated to search for current HIV/AIDS statistics and teaching methods for HIV/AIDS education.

In an attempt to help our nation reach the Healthy People 2010 objective, effective school-based HIV prevention programs must continue to demand the attention and effort of school districts across the nation. Effective prevention programs must adequately prepare the instructors of such curricula. Several studies summarized the impact that HIV/AIDS prevention programs had on students (Dixon, 1994; Dunn, Ross, Caines & Howorth, 1998; Gruen, Hayes, Fritsch-deBruyn, 1991; Hamilton & Levenson-Gingiss, 1993). Other studies suggested specific methods for improving prevention programs (Calamidas, 1990; Iverson & Popham, 1993; Popham, 1993).

Purpose, Problem and Research Questions

The purpose of this study was to explore the perceptions of middle school and high school teachers responsible for teaching HIV/AIDS education. Hamilton and Levenson-Gingiss (1993), Ramafedi (1993), and Richter (1997) explored the knowledge level of HIV/AIDS educators. The CDC (1999) and Remafedi (1993) studied teacher beliefs related to HIV/AIDS education. Instructional confidence, attitude and comfort level, was researched by Gingiss and Basen-Engquist (1994), Maigener, Culhane, Balsley and Legas (1996), Hamilton and Levenson-Gingiss (1993) and Richter (1997). All of the studies mentioned above used a quantitative approach. This study proposed to utilize the qualitative method in order to develop an understanding of teacher perceptions, comfort levels, beliefs and perceived challenges related to the delivery of an HIV/AIDS

curriculum. The following five research questions were proposed: (a) how does teacher preparation and knowledge affect implementation of an HIV/AIDS curriculum? (b) to what degree are teachers comfortable teaching HIV/AIDS education? (c) what are teacher beliefs regarding effectiveness of an HIV/AIDS curriculum? (d) what challenges and barriers have provided positive and/or negative results in regards to implementation of an HIV/AIDS curriculum? (e) what curriculum was employed in each respective school district?

Methodology

In order to better understand the perceptions of HIV/AIDS educators in this study, a qualitative approach was utilized. Merriam (1988, p. 17) stated that, "Qualitative research assumes there are multiple realities that are a function of personal interaction and perception." Three methods were utilized to gather the data. First, the researcher examined the curricula taught at each of the ten schools. Second, the long, personal interview was the qualitative method used to collect specific information from the participants. Third, the results of a survey, completed by 455 HIV/AIDS educators, were examined. These three sources of data collectively were instrumental in gaining a thorough and specific understanding of the perceptions of HIV/AIDS educators. The personal interviews assisted in clarifying the comfort levels, beliefs, confidence levels and curricular issues that were examined in the survey and curricula reviews.

Data for the study under investigation were collected from 10 individuals who represented males and females teaching in both large and small middle schools and high

schools within ten state school board regions in the fall, 2000. After obtaining administrative approval, prospective interviewees were initially contacted via a letter that briefly explained the study and ascertained their interests in participating in the study. Individual interviews were transcribed, then analyzed using a coding-category methodology. This methodology of developing coding categories was a means of sorting the collected descriptive data so that material, which addressed similar topics, were physically separated from other data.

The objectives of data analysis were to identify patterns of relationships, categories, and themes about: (a) how teacher preparation and knowledge affected implementation of an HIV/AIDS curriculum, (b) comfort levels of teachers with regards to teaching the subject, (c) teacher confidence levels regarding teacher influence on student behavior, (d) teacher beliefs about HIV/AIDS education, (e) challenges and barriers that provided positive and/or negative results in regards to implementation of an effective HIV/AIDS curriculum and (f) various issues related to a comprehensive HIV/AIDS curriculum development.

Significance of the Study

The results of this study will provide information to public school administrators, HIV/AIDS education teachers, state school board members, parents, and health educators in higher education. The knowledge, beliefs, comfort levels and challenges HIV/AIDS educators face can improve the quality of programming presented to students. The importance of HIV/AIDS education can be conveyed to administrators responsible for

supporting quality HIV/AIDS education in order to meet the needs of their students. Further, the results of this study can challenge administrators to use these results in planning for HIV/AIDS in-services for their teachers.

The information gathered from this study may also have a direct impact on the future direction of HIV/AIDS education programs in the State of Kansas. In the past, the Kansas State Board of Education (BOE) has seriously considered abolishing the sexuality education mandate that also includes HIV/AIDS education. The current Kansas State BOE has also recently held discussions with regards to the fate of the current mandated sexuality curriculum. The results of this study could provide important information that will aid the board with its decision- making process as it relates to Kansas students.

It is extremely important that adolescents receive quality human sexuality and HIV/AIDS education. It was reported by the Kansas Department of Health and Environment in their Human Sexuality and Sexually Transmitted Disease Education Manual (1999) that 47% of 9-12th graders in Kansas have had sexual intercourse. The document also reported that, of the Kansas students who have had sex within the last three months, only 56% used a condom during their last sexual intercourse. Alcohol has been tried by 79% of 9-12th graders in Kansas. This is a major concern, since alcohol and drug use can play a critical role in sexual behaviors and decisions. These statistics reinforce the contention that Kansas educators must do a better job of preparing the children in their schools to make responsible decisions about sexual health issues. Teenagers are the future of our society, and everything possible should be done to safeguard their lives.

Most studies have found that parents do, in fact, want HIV/AIDS education taught at their child's school (Blendon, Donelan & Knox, 1992; Rutt, 1996). The interviews conducted in this study included summaries about teachers' perceptions of the parental and administrative support involved in educating children on this sensitive subject. The results of the study will also be used to educate teachers regarding the importance of involving parents and administrators in this educational process. Local control and local decision- making affect the programming offered in the schools. Parents, administrators, teachers and the community must work together in order to deliver an effective program in HIV/AIDS education.

Finally, health educators in higher education will hopefully benefit from the results of this study. The results will assist educators in determining the content and emphasis of HIV/AIDS education curricula involving teacher preparation programs in higher education. Thorough preparation of future HIV/AIDS teachers will positively impact the quality of education received by their future students. "While HIV/AIDS continues to infect and affect without a cure, health educators throughout the nation believe prevention represents the only viable way to control the HIV/AIDS epidemic." (Wolff & Schoeberlein, 1999, p. 240)

CHAPTER II

REVIEW OF LITERATURE

Research has shown that adolescents engage in high-risk behaviors (Jones, Ellis, Tappe, Lindsay, 1991; Robinstine, 1993). Students are having sex and many of those sexually active adolescents have multiple partners either of different sexes or from the same as their own. They are using intravenous drugs, sharing needles, smoking, and drinking alcohol. It is known that behavior is altered when individuals participate in these risk-taking activities. American adolescents need to be educated, not only about the facts related to HIV/AIDS, but they also must be taught communication skills which will assist them in resisting the temptations placed before them. AIDS is a behavior-bound disease; thus, to be effective, education must lead to changes in behavior that eliminate or substantially reduce the risk of HIV infection.

AIDS is a huge threat to American adolescents, as approximately 25% of all people with HIV contracted the disease when they were teenagers (HIV Prevention Among Adolescents, 5/25/99). Because of the long clinical latency period, most AIDS cases reported by people in their twenties reflect HIV infections acquired during adolescence. Human immunodeficiency virus (HIV) infection was the seventh leading cause of death among persons aged 15-24 years in the United States during 1997 (Ventura, Anderson, Martin, & Smith, 1998). The Centers for Disease Control and

Prevention (CDC) has estimated that 200,000 individuals under the age of 20 are currently HIV positive. The CDC also estimates that one-fourth of all new HIV infections occurs among persons between ages 13 and 21 (Office of National AIDS Policy, 1996).

The 1997 Youth Risk Behavior Survey (1998) reported that 48% of high school students have had sexual intercourse. The percentages of sexually active students in grades 9-12 are: 38% of 9th graders, 43% of 10th graders, 50% of 11th graders and 61% of 12th graders (1997 Youth Risk Behavior Survey, 1998). This survey also reported that 22% of black students claim to have had sexual intercourse for the first time before age 13, as compared to 7.8% of Hispanics, and 4% of white students. Eighteen percent of all students claim to have had four or more partners. Many in these age groups are at risk for contracting HIV because they engage in high-risk behaviors and believe that they are invulnerable to infections. Large numbers of adolescents are faced with HIV infection, STDs and unintended pregnancies, as sex without protection is rampant among teenagers. The 1997 Youth Risk Behavior Survey (1998) also reported that only 57% of students used a condom during their last sexual intercourse. During the three months prior to being surveyed, 64% of black students, 57% of white students, and 48% of Hispanic students used a condom during their last sexual intercourse. These high percentages reflect an uninformed populace making risk-related decisions.

The Healthy People 2000 Objectives (1992) included three objectives that were specific to reducing the incidence of HIV in adolescents. First, objective 18.3 intends to "reduce the proportion of adolescents who have engaged in sexual intercourse to not more than 15 percent by age 15 and not more than 40 percent by age 17." The baseline

data suggests that in 1988, 27% of girls and 33% of boys had engaged in sexual intercourse by age 15. By age 17, these numbers increased to 50% of girls and 66% of boys (Healthy People 2000, 1992). As reported in the Healthy People 2000 Midcourse Review (1995), sexual activity of 15 and 17 year old males and females had continued to increase, thus moving away from the year 2000 target.

Second, the risk reduction objective 18.4 included in Healthy People 2000 (1992) hopes to "increase to at least 50% the proportion of sexually active, unmarried people who used a condom at last sexual intercourse." The 1988 baseline data of this objective found that only 19% of sexually active, unmarried women aged 15-44 reported that their partners used a condom during their last sexual intercourse. Correct condom usage does not guarantee protection against sexually transmitted diseases, including HIV; but risk can be reduced greatly if condoms are used properly. To most effectively reduce the spread of HIV, condom users, which include adolescents, must be provided with information on how to correctly use them. Thoroughly designed HIV/AIDS education programs in the schools can be effective vehicles to be used in delivering this message. It has been reported that condom usage among sexually active teens has been on the rise (Healthy People 2000: A Midterm Review).

The third objective (19.12), to "increase at least 95% the proportion of schools that provide age-appropriate HIV and other sexually transmitted disease (STD) curricula for students in grades 4-12." Public knowledge and attitudes toward HIV/AIDS can improve via educational programs. If people are provided the necessary information that can assess their own infection risk, chances are increased they will change individual behavior, if needed. Since the virus is transmitted almost exclusively by behavior that

individuals can control, educational programs encouraging safe behavior can be effective in preventing the spread of HIV.

Effective December 27, 1996, the Kansas State Board of Education requires each local board of education to provide a comprehensive education program in human sexuality. Each program should present information to K-12 students about STDs and HIV/AIDS, as mandated by the Kansas Academic Regulations (K.A.R.) 91-31-20 (g). As stated by the mandate, each of the above mentioned programs shall:

A. include instruction at the elementary and secondary levels;

B. require that teachers and building administrators have appropriate academic preparation or in-service training designed to develop a basic knowledge of and a sensitivity to the area of human sexuality;

C. require that all teachers who teach courses in human sexuality hold appropriate certification to provide such instruction; and except that until September 1, 1992, teachers assigned to teach human sexuality education shall hold any valid certification appropriate for the level; and

D. include procedures whereby any pupil, whose parent or guardian so requests, shall be excused from any or all portions of the program without any penalty resulting from the action. (KDHE, 1999)

If this mandate is implemented as intended, educators should be prepared to provide quality HIV/AIDS educational and counseling programs to their students. Quinn, Thomas and Smith (1990, p. 92) suggested that HIV/AIDS educators must be knowledgeable about issues related to "complex biomedical information, legal, ethical,

political, economic, and social problems, cultural and ethnic diversities, stigmatized behavior such as homosexuality, bisexuality and substance abuse, moral and religious values and death and dying." This same article suggested that in order to work comfortably and effectively in AIDS education, educators much be tuned into their personal feelings, biases, prejudices and values.

In 1994, the CDC commissioned a nationwide survey, the School Health Policies and Programs Study (SHPPS), which was directed to examine school health at the state, district and school levels (Allensworth, Lawson, Nicholson, Wyche, 1997). This report found that 79% of the states required HIV prevention to be taught, 83% of school districts nationwide required HIV prevention to be taught, and 86% of the schools in this study required HIV prevention to be taught. The SHPPS survey reported that 44% of health education teachers claimed to have received training on HIV education, and 23% expressed an interest in receiving training; and 39% of health education classroom teachers had received training within the past two years, and 31% wanted further training. This study also found that only 5% of health teachers in the secondary classroom majored in health education; thus, the majority of students receive instruction from teachers who do not have formal training in teaching HIV/AIDS education.

The factors investigated in this study relate to knowledge and preparation, comfort level of teaching the subject, confidence level of student impact, teacher beliefs about HIV/AIDS instruction, challenges/barriers that influence HIV/AIDS curricula and curricular issues faced by HIV/AIDS educators. The intent of this chapter is to provide the reader with previous research that relates to the six factors listed above.

Teacher Knowledge and Preparation

This section will investigate research that addressed teacher knowledge and preparation for teaching HIV/AIDS education. Specific studies that were reviewed included the following topics: (1) knowledge of teachers, (2) impact of HIV/AIDS training, (3) amount of training received, (4) undergraduate training, and (5) student knowledge and perceptions of HIV/AIDS education.

Richter (1997) found that respondents in her study indicated some mastery of knowledge related to HIV/AIDS education but they also revealed significant inadequacies. The respondents were knowledgeable about the sexual transmission of HIV but were grossly uncertain about how HIV cannot be transmitted. Many of the participants believed that casual contact was adequate in order to transmit the disease. It had not been brought to the attention of these educators that breast milk and menses are other possible modes of transmission. It is worthy to note that 9% of the respondents did not believe that a person could become infected with HIV by having unprotected sexual intercourse (no condom) with an HIV infected partner. Approximately twenty percent (19.8%) believed that a person could become HIV infected by donating blood. Sixteen percent (15.9%) thought that a person could become HIV infected by being bitten by an insect. Twenty-one percent (20.6%) were under the impression that there is NOT a period of time when a person infected with HIV can test negative on an HIV antibody test. A staggering 19.9% believed that, when condoms are used during sexual intercourse, those involved are 100% protected from a partner from becoming HIV infected. Another finding was that 5.1% did not believe that males who were HIV

infected could give HIV to another person through their semen. Current teachers of HIV/AIDS education were incorrectly informed on many issues related to HIV/AIDS.

Ramafedi (1993) measured the impact of training on school personnel's knowledge, beliefs and behaviors regarding HIV/AIDS and adolescent homosexuality. The majority of the participants in this study were female (72%), were older than the controls (45.6 versus 41.2 years of age), and were more likely to have a graduate school degree. Surveys were sent to phase 1, phase 2 and phase 3 trainees, with each respective phase receiving further instruction than the previous phase(s). Eighty-four percent of the subjects believed the training improved their awareness level of gay and lesbian students. Those who had received training performed better than controls on AIDS-related knowledge questions. Phase 2 and phase 3 participants regularly answered questions correctly about rates of HIV infection, suicide attempts and HIV antibody serodetermination among gay youth. These same two groups noted they were more likely than the controls to include discussions in their lectures covering the topic of homosexuality. It was also found that the phase 2 and phase 3 participants were more likely than others to refer students to community AIDS prevention services. Overall, those receiving training reported using a greater variety of instructional methods than controls (i.e., discussion groups, community resources).

The amount of training and in-service provided to teachers is lacking. The limited educational opportunities for educators have been shown to impact the quality of instruction they provide to their students. Hamilton and Levenson-Gingiss (1993) found that teachers identified as "more influential" on their students were significantly more knowledgeable than "less influential" teachers. Gingiss and Basen-Engquist (1994)

found 54% of the educators in their study to be self-taught, with no formal training; 41% had been provided a district/school in-service, and 23% had attended a workshop at an educational service center. Few suggested they had received training through professional meeting workshops, college or university courses, or through community-based training programs. On the average, the teachers in this study received a total of six hours of training on this topic annually. Robinstein (1993) suggested that the most frequent methods of preparing educators to implement HIV/AIDS education merely involved providing them with written information or guidelines. It was noted by Holtzman, Greene, Swendolen, Ingraham, Daily, Demchuk and Kolbe (1992) that more than 40% of the districts that required HIV/AIDS instruction provided no in-service training, and even those that did on average only provided three hours of such instruction. Ten percent of the school districts responding in this study were found to provide absolutely no preparation for their HIV/AIDS educators.

Several studies suggested the need for continued in-services to be essential in supporting current teachers and preparing future educators (Calamadis, 1990; Division of Adolescent and School Health, 1996; Gingiss & Basen-Engquist, 1994; Remafedi, 1993; Robinstine, 1993; Wilfert, Beck, Fleischman, Mofenson, Pantell, Schonberg, Scott, Sklaire, Whitley-Williams, 1998). High rates of teacher and administrative turnover, reassignments, competition from other curricula sources, lack of teacher commitment, and reluctance of less innovative teachers to use new content and methods are factors which may lead to a reduced commitment to provide quality HIV/AIDS education programs. Programs fraught with one or more of the above may eventually disappear from the curriculum. Planning must take place to ensure existing programs are

maintained, and it must be made evident to the teachers that the individual school district is committed to quality HIV/AIDS curriculums. Calamadis (1990) reported that 81% of school personnel surveyed indicated follow-up workshops were necessary in order to update educators and keep them motivated to teach quality HIV/AIDS programs. The Division of Adolescent and School Health (1996), found only one third of teachers had received training during the two years preceding their survey. Current in-service training is essential because new methods constantly arise which better assist youth in developing the skills needed to prevent HIV infection.

Quinn, Thomas and Smith (1990), conducted a national survey in an attempt to determine the extent of HIV/AIDS education that future health educators were receiving in health education professional preparation programs. One hundred fourteen undergraduate and graduate programs across the United States completed the survey utilized in this study. The fact that only 24% of the colleges and universities in this study offered a separate course on AIDS clearly indicates that HIV/AIDS education was not considered a high priority at institutions offering health education programs. Of the 24% mentioned above, only two institutions targeted the course specifically to health education majors. It may be assumed that, since the other courses were designed for the general student body, the information provided was not sufficient to adequately prepare health educators. The sparse training provided to future health educators suggests that teachers will demonstrate a lack of comfort with specific sexual issues, such as homosexuality/bisexuality, sexual behavior and sexual communication. The preparation of teachers who are expected to provide HIV/AIDS instruction must be improved dramatically, both in terms of quantity and quality.

Jones, Ellis, Tappe and Lindsay (1991) surveyed ninth and eleventh graders on HIV related beliefs, knowledge and behaviors. An overwhelming majority (92 %) of these students believed that school districts have a responsibility to teach about HIV/AIDS. Knowledge levels regarding various topics indicated the following: (1) less than 50% knew where to get reliable information regarding HIV/AIDS, (2) slightly less than 50% knew where to be tested for HIV and, (3) more than 80% knew how to keep from contracting HIV. Even though 90% knew that there is currently not a cure for AIDS, 4% indicated that gay men were the only ones infected. Many were uncertain about the various modes of transmission. Less than 50% were not aware that transmission of HIV cannot occur from mosquito/insect bites and 31% believed that blood testing has potential to transmit the virus. The results of this study indicate that many high school students are not well educated on many issues relating to HIV/AIDS education.

A research project sponsored by the Centers for Disease Control and the National Network of Runaway and Youth Services conducted focus groups with runaway and homeless teens regarding their perceptions of HIV/AIDS education (Brzozowski-Gardner, 1995). Several of the findings reflect the lack and prevalence of effective HIV/AIDS communication. The study indicated that the most effective modes of HIV/AIDS instruction included health clinics, a testimonial by an HIV+ person, and educational videos. Other conclusions were revealed by this study. This study also indicated that teachers were found more trustworthy on the subject of HIV/AIDS education by these teens than their own families, friends, sexual partners, television and trained outreach workers. The message is that teens do trust the information presented by

teachers. One concern mentioned by the teens was the fact that mixed messages are often taught, such as, "practice abstinence" and "use a condom." Most sexually-active teens interviewed were unwilling to consider maintaining abstinence. Defining "abstinence" was another issue presented. Several of the subjects interviewed thought it safe to engage in oral sex, while others thought that abstinence meant to abstain from having sex with a sexual partner for a couple of months. Teens surveyed also suggested they were knowledgeable regarding facts about HIV/AIDS, but still chose to engage in risky behaviors. Self-esteem discussions, as well as lessons related to refusal skills, are two topics that may influence the decisions of these high-risk teens.

Teacher Comfort Level

This section reviewed research that examined the comfort level of HIV/AIDS education teachers on the HIV/AIDS subject. Specific issues summarized were: (1) topics that teachers were not at ease teaching, (2) teaching methods utilized, and (3) the relationship between comfort level and the amount of education received.

Gingiss and Basen-Engquist (1994) found more than half of all HIV/AIDS education teachers surveyed were extremely comfortable teaching the following subjects: (a) abstinence, (b) how the HIV/AIDS virus is and is not transmitted, (c) avoidance of intravenous (IV) drug use, (d) mutual monogamy and (e) condom use. These same educators felt unprepared and, in some instances, uncomfortable teaching the following: (a) counseling and testing services, (b) compassion to AIDS patients, (c) homosexuality, and (d) the relationship between alcohol/drug use and sexual behaviors. Although high

school teachers felt more adequately prepared than middle school teachers to teach this subject, the high school teachers were significantly more likely than the middle school teachers to want future training.

The same study mentioned above explored the various teaching methods used by teachers. Videos or films (87%) were the most frequently used teaching method followed by lectures and group discussions (47%) and school and community awareness materials (34%). Less than one-third of all teachers used guest speakers, such as those living with AIDS, and were least comfortable using role-playing, peer educators, or student-handling of condoms in class. Less than one-third used teaching methods commonly used to teach decision-making, peer resistance, and communication skills. Educators who were uncomfortable and insecure teaching HIV/AIDS education were more likely to avoid using these alternative teaching methods.

Hamilton and Levenson-Gingiss (1993) found that teachers with greater comfort levels, and who felt more adequately prepared, received more positive assessments of the course's influence from their students. This same study noted that teachers who were identified as "more influential" in altering student behavior, were more comfortable teaching the topic than were "less influential" teachers. It was also found that the comfort levels of the "more influential" teachers did not change during implementation of the curriculum, while the comfort levels of the "less influential" teachers significantly increased during the course of teaching the curriculum. This study supported the fact that "teachers who had the greatest influence on their students' sexual knowledge, attitudes, and anticipated personal behaviors were those who were more comfortable presenting cognitive information, leading classroom discussions, and who felt better prepared to

teach the course" (Hamilton and Levenson-Gingiss, p. 197). These findings would suggest that a primary objective of staff development programs focus on increasing the teachers' comfort with sexuality education and teaching methods.

In a 1993-94 study (Haigner, Culhane, Balsley & Legas, 1996) involving 97 eighth-grade health teachers, researchers analyzed comfort and confidence levels, teachers' perceived value of sexuality education, perceived barriers to teaching sexuality education, the use of teaching strategies when teaching HIV/AIDS, and STD prevention education. Two-thirds of the respondents felt comfortable or very comfortable discussing nonsexual ways of displaying affection with their students. Seventy percent indicated a high level of comfort when talking explicitly about the correct method of using condoms. Sixty percent either agreed or strongly agreed they felt confident in their ability to teach sexuality education. When asked questions related to perceived value of sexuality education, the teachers ranked HIV/AIDS and pregnancy prevention as the greatest value. Teachers perceived parents and guardians to place the highest value on abstinence education. Educators felt like students placed the least value on the above three mentioned categories of HIV/AIDS, pregnancy prevention and abstinence education. The perceived barriers identified by the teachers in this study included a lack of materials, limited teaching time, and sparse subject knowledge. Newer interactive teaching strategies such as role-playing, small group discussion and problem-solving overall were not well perceived as being successful by the teachers. Two factors created barriers for the role-playing method, small group activities, as well as problem solving and decision making activities. One, it was difficult to engage students in HIV/AIDS education related activities, in part because many eighth graders were already sexually

involved, and that made it more difficult to teach refusal and abstinence skills. Two, the discomfort levels associated with the topic impeded the teacher's ease with the subject matter as well as student receptiveness.

Confidence Level and Student Impact

Two studies were found that addressed the confidence that teachers possessed regarding the impact of the HIV/AIDS curriculum on their students. Both studies suggested that teachers were not strongly confident that the curriculums they presented to their students effectively altered student behavior.

A study by Richter (1997) found that the instructional confidence levels of HIV/AIDS educators with regards to teaching self-protective skills that could influence healthy behavior choices of adolescents was somewhat lacking. Specific areas in which educators were found to be deficient were: (1) 46.2% felt they did not know how to help students develop skills to refrain from or delay engaging in sexual intercourse, (2) 39.8% did not feel that they could explain to students at an appropriate age how a condom should be used, (3) 45.3% of the teachers did not feel they could impart skills to help students refrain from drug- injecting behaviors, and (4) 32.9% felt they could not influence the negative attitudes of students towards HIV-infected people.

The Gingiss and Basen-Engquist study (1994) revealed teacher confidence levels regarding the behavioral impact on students resulting from their teaching.. This Gingess and Basen-Engquist study revealed that 19% of the middle and high school teachers believed they would have a major influence on their students' high-risk behaviors, 72%

felt their instruction would have some influence on students' high-risk behaviors, while less than 10% believed that the curriculum presented would have little to no influence on subsequent student behaviors.

Teacher Beliefs

The following studies investigated the impact of teacher beliefs on their attitudes towards teaching HIV/AIDS education. The impact that training may have on one's beliefs was also reviewed.

One characteristic that was a common theme among four effective HIV/AIDS curricula, as identified by the Division of Adolescent and School Health within the Centers for Disease Control and Prevention (The AIDS Knowledge Base), was the fact that the teachers or peer educators believed in the program. A strong belief in the curriculum that is being addressed sets the stage for quality instruction to occur. Remafedi (1993) studied the impact of training on the school professionals' knowledge, beliefs and behaviors regarding HIV/AIDS and adolescent homosexuality. This study suggested that many HIV educators found high levels of discomfort teaching about homosexuality, safe sex, and death and dying. If these instructors believed that teaching these topics would help their students better understand how to live with, or prevent, HIV infection, then they might better address these issues in their curriculum. The study found that those who were trained to teach these areas did in fact address these sensitive topics with their students on a regular basis.

Remafedi (1993) cited studies which concluded that instructors often avoid talking about AIDS because they want to avoid discussions related to attitudes and beliefs toward homosexuality. As the participants in Remafedi's research became more educated on issues related to homosexuality, they believed that these sensitive issues should be discussed with all students, regardless of individual sexual orientation.

Gingiss and Basen-Engquist (1994) surveyed middle and high school teachers regarding beliefs toward HIV instruction. Approximately one-third (34%) felt that teaching HIV instruction took more effort than those subjects taught by other teachers in their school. Middle school teachers were less prone to feel that teaching about preventive behaviors should be a major topic included in the curriculum. Most teachers (92%) believed it was important for students to receive HIV instruction. Hamilton and Levenson-Gingiss (1993) found that teacher beliefs and concerns were found to be directly reflected in student perceptions of the effectiveness of the course on the future behaviors of these students.

Challenges and Barriers

Unlike many of the other risks that students face, the risks associated with AIDS reflect life-or-death. Although all humans are potentially at risk of becoming infected with the AIDS virus, teens, with their inexperience and lack of knowledge, are a particularly vulnerable group. A combination of issues contributes to inadequate HIV/AIDS education in the schools. Many experts believe that most of the curriculums currently being used in the schools educate students regarding facts and various modes of

transmission, but they attempt to do little to change the risky behavior patterns of these adolescents. Teenagers often believe they are immortal and risky behaviors won't directly affect them. Many schools fear a negative reaction from the public more than they fear the potential for adolescents to become infected with HIV/AIDS. Other factors, such as poorly-designed curriculum, limited time to present the curriculum, resistance of school administrators and/or parents regarding this sensitive topic, avoidance of correct condom usage and discussions related to homosexuality, and lack of funding to provide quality resources and in-services on HIV/AIDS education for teachers, all contribute to the blocking of effective AIDS education efforts.

Unks (1996) discussed various issues related to the attitude that teens do not perceive HIV as an "equal opportunity infector" and that teens consider themselves "invulnerable." He suggested that "teens tend to think in terms of categories of people – particularly homosexuals, drug addicts and prostitutes – rather than types of behaviors". Unks encouraged the use of the following presentations to the students: (1) individuals who became infected with the virus via a variety of methods, (2) heterosexual relations, (3)drug users, and (4) HIV+ individuals from a variety of ages and social levels. Continued efforts must be made to change the common belief amongst students that they are not vulnerable to the disease.

A recent study (Wolff & Schoeberlein, 1999) asked state education agencies (SEAs) and local education agencies (LEAs) their perceptions as to barriers which impede quality middle school HIV/STD education. The SEAs identified lack of time (29%) and fear of controversy (20%) as the most significant barriers. Lack of time (50%), as well as lack of school buy-in (14%) were identified as the most significant

barrier by the LEAs. This lack of school buy-in may be related to the fact that many teachers are not comfortable with teaching this subject due to personal reasons and/or they might not feel adequately prepared to teach this subject. Other barriers identified were: non-supportive local school boards, political opposition, lack of training materials, and lack of funding.

This same study (Wolff & Schoeberlein, 1999) inquired as to the perceived need for professional preparation for the middle level HIV/STD education programs. Seventy percent of the SEAs and 60% of the LEAs felt a high or very high need for such training in schools and school districts. The perceived demand for training decreased by at least one-half for both SEAs (21%) and LEAs (35%). The demand for professional preparation was seen as low to moderate by both state and local HIV directors. Brenda Greene (1997), the manager of school health programs for the National School Boards Association, identified several barriers. She suggested that curriculum and teacher training costs may not have adequate funding. Greene also stated that schools who possess both adequate funding and enthusiasm for quality AIDS education often lack time within the school day to teach this subject.

Hamilton and Levenson-Gingiss (1993) found that teachers who exhibited a great concern about lack of support from other colleagues, administrators, and parents had less influence on the students. Perhaps these findings would suggest that educators with an excessive concern about negative repercussions from their classroom instruction may have totally avoided or minimized references to sexually specific content to the extent that their effectiveness was greatly reduced. If teachers were well educated on this subject, they might not be as influenced by the vocal minority regarding topics that

should or should not be discussed when attempting to assist students in making wise decisions about how to behave.

In a phone survey of parents in Lucus County Ohio in 1996 (Rutt, 1996), it was found that parents do support aggressive AIDS prevention efforts in schools. This survey revealed that parents were largely unaware of how many teens, particularly their own, have had sexual intercourse. It was also found that 81% of the parents interviewed favor classroom discussion on both abstinence and the use of condoms. By a 2 - 1 margin (64% vs. 33%), parents believed that schools should provide information on where students can go in the community to get condoms. Eighty-three percent of the parents would encourage their child to use condoms if they were sexually active. Regardless of the apparent parental interest in educating children in the area of HIV/AIDS, most parents did not want information on how to talk to their children about AIDS prevention. The study clarified that it is not known whether parents feel comfortable with the information they have, if they do not see added information as relevant, or whether parents simply do not want to talk to their kids about AIDS prevention (Rutt, 1996). A summary of public opinion about AIDS, which reviewed several different surveys conducted on attitudes towards AIDS, found that an overwhelming majority of Americans (94%) support education about AIDS in the schools, and approximately 80% want that education to include information about condoms as a preventive measure (Blendon, Donelan & Knox, 1992).

Another barrier to successful HIV/AIDS education for the middle-school- age student was the fact that few HIV/AIDS education programs have been written for the middle school age student. The Centers for Disease Control and Prevention (CDC) has

identified a number of prevention programs, called "Programs that Work," aimed at the high-school-level student. However, to date, no school-based, middle level curricula are included in "Programs that Work." (Wolff & Schoeberlein, 1999). As a result, Wolff and Schoeberlein (1999) found that most school districts implement locally developed programs with middle school students. Since youth engage in high-risk behavior at an early age, middle schools across the nation should address critical risk- reduction skills for students at a time when they may need these skills the most.

Condom use is an effective preventive measure for avoiding the HIV virus. Christ, Raszka and Dillon (1998) attempted to determine which factors were most significantly associated with planned condom use. They found that only 47% of the adolescent females that completed the questionnaire had used condoms during their most recent sexual encounter. Eighty-five percent reported negative experiences with condom use such as: (1) condoms had an unpleasant smell or taste, (2) condoms fall off or break during intercourse, and (3) some females believed that condoms reduced their own sensation. Even though 90% reported that they were confident that they could use condoms effectively, only 78% felt they could actually buy condoms in a store. This lack of purchasing ability may be a significant barrier to use of condoms.

Brown, Pennyegion and Hillard (1997) found that school condom programs did not increase student use of condoms. Concerns about school condom programs, as identified by the student population included: (1) condoms should be made available in private locations, and vending machines are not located in private places, (2) females are more likely to obtain condoms because they are more responsible, and they suffer the consequences of pregnancy, (3) students do not use condoms because of perceived

invulnerability, concern about effectiveness and breakage, technical difficulties and perceptions of poor condom quality. The students felt that the teachers, administrators and parents did not have a favorable attitude toward condom use by students, and the students also felt that adults did not understand the sexual issues facing students. Schuster, Bell, Berry and Kanouse (1997) found that students were strongly against requiring parental consent in order to get condoms via a school condom program. Discreet availability was important to the students in order to avoid embarrassment.

Some opponents of sexuality education and condom availability programs argue that these programs violate the right of parents to educate their children about moral behavior and religious values. Singer (1994, p. 78) stated that "no sex education program in the United States removes a parent or religious leader's right to teach teenagers the values that they consider to be important, including sexual abstinence." Few educators would argue that schools should not be involved in teaching values. Singer further suggested the need for the involvement of schools:

> Sex education and condom availability programs are an ideal way to teach responsibility for self and others, for exploring the meaning of human relationships, and for addressing "male machismo" and the lack of respect for women in our society. A sex education curriculum also helps students to understand their science lessons on human sexuality, reproduction, and the spread of disease; and to understand their social studies lessons on social relationships, the development of cultural norms and the role of responsible citizens. (Singer, 1994, p. 78)

The American Medical Association (AMA) Council on Scientific Affairs (Kirby, p. 149) recently concluded that "there are no published studies that measure behavioral effects of the 'abstinence-only' curricula," that "evaluations of safer-sex sexuality education show inconsistent but promising results," and that programs that make condoms available in schools "usually demonstrate increased condom use." A barrier that exists for sexually active students who receive the "abstinence-only" approach in their school curriculum is that these students need the knowledge, motivation, skills and access to condoms and contraceptives in order to avoid STDs, HIV, and unintended pregnancies. The AMA Council on Scientific Affairs found no good evidence that any abstinence-only programs actually delay the onset of sexual intercourse. Singer (1994) stated, "Teenagers who are sexually active need to be able to get condoms without feeling awkward. Remember, pregnancy and disease, not abstinence, are the consequences of such embarrassment."

Curricular Decisions

In an attempt to help our nation reach the objective identified by the CDC, effective school-based HIV prevention programs must continue to demand the attention and effort of school districts across the nation, and most certainly in Kansas, the state under investigation in this study. Effective HIV/AIDS education prevention programs must adequately prepare the instructors of such curriculums. Inadequate preparation is one factor responsible for causing many teachers to feel uncomfortable teaching this controversial topic (Hamilton and Levenson-Gigiss, 1993). Circumstances have changed

since the early 80's when this epidemic was first identified. The fastest growing infected population is no longer the gay community; it is the heterosexual population. Treatments have changed. Educational tools have changed. Educators should continually be updated on the new medical advances involved in treatment of the disease. They should also be made aware of new educational advances, as well as the latest statistics regarding high-risk behaviors of their students. Without continual updating and implementation of HIV/AIDS prevention programs, American adolescents will remain a generation in jeopardy.

Studies have shown that knowledge about risk factors for obtaining HIV or STD's does increase after a sexuality education course has been taught in the schools; however, facts alone do not change behavior. Even though most programs have not been successful at delaying the onset of sexual intercourse, many have been effective in reducing sexual risk-taking behavior (Coyle, Basen-Engquist, Kirby, Parcel, Banspach, Harrist, Baumler, & Weil, 1999; Hubbard, Giese, and Rainey, 1998; Trends in HIV related Sexual Risk Behaviors, Journal of School Health, Sept. 1999). Several resources (Dixon, 1994; Gingiss, Basen-Engquist, 1994; and Unks, 1996) have suggested the need to address behavior change when presenting a comprehensive HIV prevention program to students. Teaching students knowledge about what HIV/AIDS is and how it is and is not transmitted, including information about how infection can be avoided, is not sufficient in protecting the spread of this fatal disease. As Unks (1996, p. 207) pointed out:

> If information about the consequences of unhealthy or risky behaviors were sufficient to motivate people to adopt healthy behaviors, no one would smoke, everyone would wear a seat belt, all doctors'

> recommendations about diet and exercise would be followed, and there would be no drunk driving. Obviously, this is not the case, and most adults know how difficult the struggle can be to change entrenched, often pleasurable, behaviors. It is illogical, then, to expect young people to change their behavior based on information alone, even if that information included knowledge of their own HIV status.

Effective behavioral change will not come from lecturing to students on HIV/AIDS facts. The strategy must include an exploration of personal values and attitudes and must also provide skill-building opportunities in decision-making and refusal techniques; and it must continue to address the issue of self-esteem.

The American Academy of Pediatrics Committee on Pediatric AIDS (1998) has identified specific topics they believe should be presented to middle and high school students. It is the belief of the Academy that intensive exposure to students should occur due to the potential participation in high-risk behaviors that lead to HIV infection. The curriculum they suggest should include:

1. the spectrum and natural history of HIV/AIDS infection as an infectious disease,
2. the effect of HIV/AIDS on the human immune system,
3. methods of transmission of HIV,
4. testing issues,
5. the prevention and treatment of HIV/AIDS infection,
6. an understanding of the relationship of substance abuse and HIV transmission, and

7. social and psychological aspects of HIV/AIDS infection, including legal and discrimination issues.

The 1997 Youth Risk Behavior Survey (1998) summarized implementation of HIV education programs. Nationwide, 91.5% of students claimed to have been taught HIV/AIDS education. It was reported that 93.3% of white students, 89.7% of black students and 85.9% of Hispanic students received HIV/AIDS education. Hispanic female students (85.1%) reported receiving a significantly less intensive HIV curriculum than their while female counterparts (92.8%). Black males (89.1%) and Hispanic male students (86.6%) also reported less instruction than white males (93.6%). These results certainly make a case for being sensitive to the unequal presentations provided to various ethnic groups.

One common argument against HIV/STD education programs is that the exposure of teens to information about sex will encourage them to engage in sexual activity. But a comprehensive review of 23 school-based programs found quite the opposite to be true. Teens who received specific AIDS education were less likely to engage in sex, and those who did were more likely to have sex less often and practice safer sex. Elements of successful programs were identified as: (1) possessing a narrow, specific focus, (2) instruction on social influences and pressures, (3) age and experience, (4) appropriate reinforcement of values and (5) norms against unprotected sex and skills-building activities. (http://www.ahn.com/community/hiv_aids)

Several studies investigated the impact of HIV/AIDS education programs on students. Studies that were shown to have a significant impact on the knowledge base of students were completed by Dixon (1994), Gruen, Hayes and Fritsch-deBruyn (1991),

and Hamilton and Levenson-Gingiss (1993). Greun, Hayes and Fritsch-deBruyn (1991) reported the knowledge base in regards to HIV/AIDS to significantly increase when comparing pre and post-test scores of students. "Research has clearly shown that the most effective programs are comprehensive in nature and include a focus on delaying sexual behavior and provide information on how sexually active young people can protect themselves" (CDC, Young People at Risk).

Dunn, Ross, Caines and Howorth (1998) found that two one-hour interventions led by community health nurses and trained peer educators both produced significantly higher scores on an HIV/AIDS prevention knowledge questionnaire than did the controls. Subjects in the peer educator group also scored significantly higher than the controls on the HIV/AIDS prevention attitudes, self-efficacy, and behavioral intentions.

Calamidas (1990) reviewed the statistics related to several high risk behaviors of adolescents in the state of New Jersey, and chose to implement a study designed to assess the degree to which AIDS and STD education programs were incorporated into the curriculum of the school districts in an eight-county region in New Jersey. A questionnaire was completed by 32 supervisors responsible for AIDS and STD education programs within their school districts. The results indicated that one of the primary objectives was to disseminate accurate and complete information to the students, thereby attempting to dispel myths and misconceptions related to the topics. The need to address personal responsibility, behavior change and/or decision-making was only identified by 15% of those responding. Only a small percentage of respondents felt that behavior change should be taught, since it is known that one of the main modes by which transmission can be decreased is by changing behavior. This study also recognized that

only one person identified the Sex Information and Education Council of the United States (SIECUS) as being a valuable resource for teachers of sex education related topics. It was further suggested that a more concerted effort should be made by various professional educational organizations to network regarding available resources. It was also noted that 65% of teachers had attended workshops or in-services specific to AIDS and STD education. Eighty-one percent of respondents indicated that additional workshops were necessary to provide current information and innovative teaching methods which address these serious issues.

Iverson and Popham (1993) recommended six program design suggestions in order to increase effectiveness of school-based HIV education programs. They are the following:

1. Focus the program's content on HIV-risk behaviors. The curriculum must deal directly with the various high-risk behavior issues that students face on a day-to-day basis. Educators must be allowed to discuss these sensitive topics with their students.
2. Help students make more realistic risk estimates. Student perceptions may be that of invulnerability. Showing videos or providing a personal appearance of an HIV positive individual may assist in convincing students they may be at high risk if they make unhealthy decisions.
3. Emphasize skill development relevant to HIV-risk situations. Students must be provided the opportunity to practice refusal skills, and they should be provided a variety of interpersonal and assertiveness skills which will serve as options as they attempt to deal with threatening situations.

4. Use data on normative behavior of peers. Adolescents may overestimate the number of classmates who are actually involved with high-risk behaviors. This skewed perception may influence one's decision whether or not to do what everyone else is doing. Peer educators have been shown to be successful in promoting sexual abstinence, condom use, and drug-free living.
5. Devote at least 12 hours of class time to HIV education. It takes time to adequately address the areas related to sexuality education. Educators cannot expect students to become comfortable discussing such personal topics in a short time period. Time must be sufficiently devoted to educating students about safe practices in order to save lives.
6. Provide HIV-relevant staff development for educators. It is a mistake to assume that all educators are comfortable with the content of an HIV curriculum.

Iverson and Popham (1993) stated that educators need to understand how their personal attitudes toward sexuality and the AIDS epidemic may influence the education presented to their students. Teacher attitudes affect their comfort with, and capacity to teach, specific subject matter. In addition, for teachers to become familiar with the subject matter, they must also examine their methods of relating to students and they must also learn to implement new teaching strategies. They must continually examine their personal attitudes and biases toward the topics covered, as well as be sensitive to how the students, their parents, administration and peers are reacting. Teacher attitudes and beliefs influence both the scope and emphasis of health instruction.

A national study conducted by the National School Boards Association, American Association of School Administrators, and CDC (Popham, 1993) concluded that HIV prevention education tends to decline after seventh grade. However, this is the time when students become more sexually active and are placed in situations of higher risk for contracting HIV. It was found by Robinstine (1993) that although two-thirds of the districts in his study required HIV education, the percentages that required instruction by grade level varied from 30% in first grade, 80%in seventh grade and then declined to 37%in tenth grade. Robinstine (1993) reported that specific topics pertinent to reducing the risk of HIV infection were more likely to be addressed in the older grade levels, which is when required instruction is less prevalent. This decrease in HIV prevention education may relate to several factors: the lack of opportunity for an appropriate fit for HIV prevention within core classes, lack of funding, lack of teacher preparation or lack of support by the administration and/or local school boards.

The CDC research has shown that early, clear communications between parents and young people about sex is an important step in helping adolescents adopt and maintain protective sexual behaviors (CDC, 2001). CDC research (CDC, 2001) has clearly shown that the most effective programs are comprehensive ones that include a focus on delaying sexual behavior and provide information on how sexually-active young people can protect themselves. Data obtained from the Youth Risk Behavior Survey (YRBS), which was conducted over an 8-year period, revealed evidence of prevention success by a decline in sexual risk behaviors and an increase in condom use among sexually active youth. The percentage of sexually experienced high school students decreased from 54.1% in 1991 to 49.9% in 1999, while condom use among sexually

active students increased from 46.2% to 58.0%. These findings represent a reversal in the trend which began in the 1970's, toward increased sexual risk among teens. Research has revealed the success of comprehensive prevention efforts to both delay first intercourse among teens, as well as an increase condom use among young people who are sexually active.

Summary

This review focused on six major areas. The first section discussed the knowledge and preparation of HIV/AIDS educators. The second section addressed the comfort level of teachers with regards to various topical issues related to HIV/AIDS education, which was followed with information regarding the confidence level of student impact as perceived by teachers. Beliefs of teachers as related to HIV/AIDS education was then presented. The challenges and/or barriers that impede the development and implementation of a quality HIV/AIDS curriculum were addressed. Finally, a variety of HIV/AIDS education curriculum issues were outlined.

CHAPTER III

METHODOLOGY

The purpose of this study was to investigate the perceptions of middle school and high school teachers in Kansas who were responsible for HIV/AIDS education in their respective schools. This chapter describes the research methodology utilized in this study. It begins with a rationale for using qualitative approaches to research. Other areas addressed in this chapter include: participant selection, data collection procedures, data analysis, procedures used to establish trustworthiness, and researcher bias.

Rationale for the Method

Qualitative research strives to understand behavior from the subject's own frame of reference (Merriam, 1988). This research method is appropriate for use in this study since the investigator sought to understand the perceptions of HIV/AIDS educators with regards to HIV/AIDS education. This researcher was curious about how HIV/AIDS educators are influenced by the following: preparation and knowledge, comfort and confidence levels, beliefs, challenges and barriers, and curricular issues. The researcher felt confident that by listening and conversing with the participants, and respecting their

opinions, much could be learned. The intent of this research project was to expand, not confine, the understanding of this topic.

Design characteristics of this qualitative research study were flexible, evolving, and emergent. Since each school site and the participants involved in this study had potential for being extremely different from one another, flexibility was allowed during the questioning. During each individual inquiry, the direction of each conversation evolved while the interview was taking place. Due to the manner in which questions were answered by the interviewees, probing questions were asked in order to gain further clarification and understanding. Since the nature of qualitative research is one of constant change, the research literature review needed to be revisited because topics arose which had not been previously reviewed. Two areas that needed further investigation were teaching coeducational health education classes and how to teach condom usage.

Merriam (1988) suggests that a literature review may help investigators identify what has already been researched in a specific area. It also provides evidence about how one's study is different from previous research. Several research projects, as described in Chapter II (Blendon, Donelan & Knox, 1992; Calamidas, 1990; Gingiss & Basen-Engquist, 1994; Holtzman, Greene, Ingraham, Daily, Demchuk & Kolbe, 1992; Jones, Ellis, Tappe, & Lindsay, 1991; Quinn, Thomas, & Smith, 1990; Remdafedi, 1993; Richter, 1997; Rutt, 1996; Wolff & Schoeberlein, 1999), utilized surveys as their method for collecting data. Brzozowski-Garner (1995) utilized teen focus groups to gain a better understanding of knowledge. Program intervention was used by Dunn, Caines and Howorth (1998). None of the studies reviewed utilized a qualitative approach, thus creating a need for such a method to be conducted as proposed for this project.

In this study, perspectives of HIV/AIDS education teachers was described and analyzed. The study of the teachers' preparation and knowledge, comfort and confidence levels, beliefs, challenges and barriers faced, and curriculum delivered was best served through a descriptive design. Merriam (1988, p. xiii) stated that "the best methodology for addressing these problems in which understanding is sought in order to improve practice is qualitative in nature. The intent of this study was to analyze and understand the issues related to HIV/AIDS education in order to improve HIV/AIDS curriculum content and delivery.

Participant Selection

In order to obtain participants for the interviews in this study, the investigator conducted multistage sampling. The various characteristics considered in selecting individuals were: (1) size of school, 1A being the smallest and 6A being the largest, (2) state school board district - Kansas is divided into ten districts, (3) middle schools and high schools, and (4) gender of those interviewed. In order to determine school size, ranging from 1A-6A, reference was made to a list of classifications and enrollments for 1999-2000 of Kansas schools, which was obtained from the Kansas State High School Activities Association. A listing of all HIV/AIDS educators in Kansas middle schools and high schools was obtained from the State HIV/AIDS Human Sexuality Education Program consultant. This document was organized by school districts. In order to identify which of the ten state school board districts a school was located in, the investigator obtained a copy of the 1999 Kansas State Board of Education Directory.

After obtaining these three documents, the following procedures were implemented in order to select the participants for this study:

1. Using the list of KSHSAA classifications of schools by size, starting with the 1A classification, each 3rd school district was selected, continuing through the list of classifications for 1A-6A. The total number of Kansas school districts equaled 366, therefore, the number of districts selected was 122 school districts.
2. The state school board district was then identified for each of these 122 school districts.
3. The list of HIV/AIDS educators was organized by school districts. Using this educator list, the classification number (1A-6A) was written beside each of the 122 school districts identified in step #1.
4. Using the directory of all identified HIV/AIDS educators in the state of Kansas with the size classification indicated next to each of the 122 selected school districts, the investigator began with the first 1A school district and counted down each third school in the 1A classification. This procedure was carried out for each of the six size classifications. The state school board district was then written beside each of these identified school districts.
5. Beginning with the first district on the list mentioned in step #4, the investigator identified each fifth school district. The size classification was noted as well as the state school board district. This process continued throughout the 122 school districts. Twenty-four school districts were selected, but only seven different school board districts were represented. In

order to obtain two school districts from each of the state school board districts, the same procedure was repeated, this time beginning with the second identified school on the list. The second time through the list, all ten school board districts were represented. Even though only ten school districts were needed for this study, twenty school districts were selected, in anticipation of some districts not wishing to participate.

6. After 20 school districts were identified, representing two districts in each of the 10 state school board districts, the task then became one of identifying the middle school and high school in each district that would be chosen. Beginning at the top of the list, the 20 school districts were numbered 1-20. The even-numbered school districts provided the high schools, and the odd-number school districts provided the middle schools for the study. The first school listed in each district was the school identified for the study.
7. The final selection process included identifying ten male and ten female teachers. Of the twenty selected schools, the first female listed on the even-numbered schools was sent a letter of invitation, and the first male on the odd-numbered schools was sent a letter of invitation.
8. The principal of each selected teacher was then sent a letter requesting an interview with that HIV/AIDS educator (Appendix A). Principals were asked to respond to the investigator only if they objected to the participation of their employees. Since none of the principals responded to the initial letter, it was assumed that all principals agreed to allow their teachers to be interviewed.

9. The twenty teachers were then sent a letter requesting them to consider participating (Appendix H). If they were interested, they were asked to return a postcard confirming their phone number and e-mail. The first five females and first five males who responded and fulfilled the criteria listed previously were selected. Fourteen out of the twenty individuals contacted expressed interest in participating - five males and nine females. The four females that were the last to return their postcards were not chosen to participate. They were each sent a letter thanking them for offering to participate in the study and informed that the study participants had already been chosen.
10. The selected teachers were then contacted via phone and/or e-mail to confirm their willingness to participate in the study. All contacted agreed to participate, and at that time an interview date and time was established for each participant.

Permission to conduct this research project was granted by the Oklahoma State University Institutional Review Board (Appendix E). The interview protocol and an outline of sample questions used to guide the interviews are included in Appendix C. Each participant completed a consent form prior to being interviewed (Appendix B); this assured confidentiality to the best of the researcher's ability, for the individual participant, as well as, for each respective school and school district. A copy of the completed consent form was provided to each participant. The interviewees were provided the final data analysis and findings, if requested.

Data Collection Procedures

Three data collection procedures were used for this study: (1) curriculum reviews of the HIV/AIDS programs taught by the interviewees, (2) interviews, and (3) written survey results. The methodology used to gather each set of data is outlined in the following sections.

Curriculum Reviews

Prior to each interview, the investigator reviewed the curriculum materials used to teach HIV/AIDS education at each respective school. While viewing the documents, the researcher was looking for, but was not limited to, the following:

1. goals and objectives of the curriculum,
2. assessment tools,
3. abstinence-only or abstinence-based curriculum,
4. parental involvement, and
5. community involvement.

The researcher also determined if the following content areas were taught:

1. HIV/AIDS facts,
2. transmission of HIV,
3. prevention of HIV,
4. refusal skills,
5. testing information,

6. available community services, and
7. providing support to friends and families of AIDS patients.

The curriculum review utilized at each site is found in Appendix D.

Interviews

Prior to the interview, each participant provided information related to his or her professional experience, and was briefed on several issues related to the research study. Longevity information collected from each individual included: (1) total number of years teaching and (2) total number of years teaching HIV/AIDS education. Each participant also signed a consent form (Appendix B), and was verbally reminded that the investigator would utilize confidentiality throughout the study. The teachers were informed that the tapes and transcriptions would be destroyed after the dissertation was defended. The interviewees were also assured the right to refuse to answer any questions asked of them.

The investigator scheduled an individual topical interview with each of the participants. The interviews were conducted at the school site where each teacher was employed. Eight of the ten interviews took place in each respective teacher's office. One took place in a classroom and one took place on a stage in an auditorium. Each interviewee was asked to allow at least one hour for the interview. The actual length of the interviews ranged from 25 minutes to 55 minutes. The average interview time was 40 minutes. The first interview was conducted on September 1, 2000, and the last interview was completed October 6, 2000. All of the interviews were tape recorded and then

transcribed verbatim as soon as possible after each interview. In most cases, the transcriptions were completed within 48 hours of the interview. During the interview, the investigator took notes in order to further capture the thoughts of the interviewee. These notes related to comments made by the participant or thoughts that occurred to the investigator during the interview.

The interviewer asked open-ended questions on the HIV/AIDS topic to provide the opportunity for the teachers to share information on each topic they felt comfortable addressing. The interviews were carried out as ordinary conversations in order to put the person being interviewed at ease. As suggested by Rubin and Rubin (1995), the interview should be limited as to the number of main topics covered. The major categories of questions and probes that guided the interview were as follows: (1) teacher preparation and knowledge of HIV/AIDS, (2) comfort and confidence level teaching HIV/AIDS education, (3) beliefs about HIV/AIDS education, (4) challenges and barriers which influence the delivery of the HIV/AIDS curriculum, and (5) a description of the current curriculum being used and how it was developed. The interview protocol was piloted on two HIV/AIDS educators from school districts different than the ones involved in the study. One was a middle school teacher, and the other taught at a high school. Each of the educators had taught HIV/AIDS education for several years - one with six years experience teaching HIV/AIDS education and the other with nine years of teaching HIV/AIDS education. It became evident during these two pilot interviews that school districts address the state mandate in entirely dissimilar fashions. One district was more aggressive and direct with the subject matter and offered district support to its teachers,

while the other district took a conservative approach, and restricted the topics that the teachers could address with their students.

Immediately following each interview, the interviewer retreated to her car and took necessary measures to further capture the content and process of the interview. She spoke into a tape recorder and commented on issues that arose during the interview. Comments reflected issues related to the interviewees, their overall attitude towards HIV/IADS education, their school districts, as well as thoughts that emerged from the interviewer. At this time, a record was kept for the audit trail, which included who, when, and where the interview took place.

In order to ensure confidentiality during data collection and reporting, several procedures were employed. Only the researcher and the transcriber had access to the interview tapes. It should be noted that the researcher transcribed the two pilot interviews and first two study interviews, while the transcriber transcribed the remaining eight study interviews. The researcher marked each tape by numbering each interview in the order it took place to keep the name and school confidential so the transcriber was not able to identify the participant or the school. The transcriber signed an agreement stating she would keep all comments transcribed confidential (Appendix F). Pseudonyms for schools, school districts, and interviewees were used in order to maintain confidentiality. Participants were sent copies of their interview transcriptions and they were asked to review the transcriptions and make any necessary changes to further clarify their comments. Only two of the interviewees made revisions to their transcriptions.

Surveys

The third aspect of data collection involved a 61 question written survey (Appendix G) that the Kansas State Department of Education distributed to all 972 identified middle school and high school HIV/AIDS educators in Kansas. It had a 47% return rate. This survey, which consisted of questions written by the Centers for Disease Control and Prevention (CDC), measured knowledge levels, instructional confidence levels, teacher comfort levels and attitudes towards HIV/AIDS education. HIV/AIDS educators received the survey in March of 2000 and all completed surveys were returned by June 1, 2000. They were then statistically analyzed by December 22, 2000. The results of this survey provided a standard against which the interview results of this project could be compared.

Data Analysis

Various techniques, which will be specifically describe in this section, were utilized prior to data collection, during data collection and after the collection was completed in order to assist with data analysis. Bogdan and Biklen (1998) provided the following suggestions for analyzing data in the most complete way possible:

1. Narrow the study. These decisions will enable the research to focus on a specific topic and explore the issues related to the topic in detail. The focus of the study was narrowed by: (1) investigating the public school levels of middle school and high school teachers as opposed to elementary school and

private school teachers, and (2) to researching how teachers, not students, relate to issues involving HIV/AIDS education.

2. Develop analytic questions. Identify the research questions that will be useful to practitioners, administrators and those who prepare future teachers. Analytic questions provide specific guidance for analysis of the problem at hand. Interviewees in this study were asked specific questions regarding the quality and amount of preparation they received prior to teaching HIV/AIDS education. The challenges and barriers faced were also addressed. The results of these two issues will be used in educating administrators, school board members and university professors in regards to methods and procedures that could be improved to better prepare educators and future educators on the topic of HIV/AIDS education.
3. Review field notes, and use them in future data collection sessions. Directly after completing an interview, the transcriptions were produced, analyzed, and the questions modified, if needed, in order to better prepare the investigator for the next interview. Immediately after an interview was transcribed, the researcher read the interview and looked for issues that should be addressed in the subsequent interviews. After reviewing the transcripts of the first interview, the interviewer noticed that several references were made to the fact that the "community members didn't seem very knowledgeable" about HIV and AIDS. This concern for "community lack of knowledge" led the researcher to specifically ask the rest of the interviewees their opinions regarding the knowledge base of their community regarding HIV and AIDS.

4. Frequently write "observer comments" during data collection. As the interviews took place, the researcher made written comments to complement other observations noted during the interview. These comments provided a thick, rich description of the individual being interviewed. During each interview, the interviewer recorded her thoughts in a notebook, and they ranged from the overall attitude of the person being interviewed, to the facilities and resources available, or to reference a probe that could be asked later on during the interview.
5. Write memos to self-summarizing emerging thoughts. During the interview, and/or directly after the interview, the investigator wrote a summary of the interview. Unexpected thoughts were noted as well as those that agreed or disagreed with the literature review and/or the other individuals interviewed for the study. For instance, in the very first interview, the interviewee asked the researcher if she would like to know the total number of years she has taught. The original intent was to request the number of years teaching HIV/AIDS education but thought it might be interesting to note the total years of teaching experience as well. So, as a result, the rest of the interviewees were asked how many total years they had taught.
6. Explore the literature while collecting data. As the interviews transpired, issues arose that were unforeseen. It was critical for the interviewer to return to the literature to explore the territory that was not anticipated. Two such issues were related to teaching coeducational sexuality education classes, which included HIV/AIDS education, and the degree to

which teachers had been prepared and their comfort level with teaching students the correct way to use a condom. Those two issues were further researched and not included due to lack of availability.

Rubin and Rubin (1995) suggested that data analysis begins during the process of interviewing. While having conversations with the interviewees, the investigator listens and analyzes what was just stated and chooses future questions based on the previous answers. Throughout the study this process was used with interviewees as they individually responded to questions. Upon hearing how the interviewee responded to each statement or question, further probing questions were asked in order to clarify what was meant or to further investigate a topic which was not expected. After each interview, the collected data was examined in order to better prepare for the next interview. Topics addressed in previous interviews were often addressed in subsequent interviews. One interviewee stated his concern for the use of the phrase "safe sex." So, subsequent interviewees were asked for their views on that subject.

In order to examine the data and attempt to summarize categories and themes, each individual interview transcript was coded. The coding categories chosen reflected the topics that had been identified prior to the interviews and also guided the research questions. These categories were in alignment with the categories of the survey that was also utilized in the final analysis of this study. These categories also were found to repeat themselves throughout the interviews. The margins of the transcripts were such that the right third of the page was left blank in order to provide space for the investigator to write comments or categories and themes. For example, if an interviewee stated something related to barriers, the word "barriers" was written in the margin to notate that topic as

being addressed in that particular place during the interview. Rubin and Rubin (1995, p. 238) have defined coding as "the process of grouping interviewees' responses into categories that bring together the similar ideas, concepts, or themes discovered, or steps or stages in a process." Once all of the interviews were coded, the transcriptions that represented the same category were literally cut and pasted together using the computer so they could then be analyzed within and across categories. For instance, all the "barriers" comments across all interviews were grouped together.

The final goal of analysis was to discover themes that both explained the research conducted and described the results in a manner that could be understood. Information gathered from categories, which was directly related to the research questions, was useful in establishing themes. Rubin and Rubin (1995) suggest that themes provide explanations for how or why people behave in certain ways. The results of the interviews conducted in this study provided explanations with regards to educators and their roles in HIV/AIDS education. One unplanned observation of the data analysis relates to the identification of similarities and differences among those interviewed. Even though addressing similarities and differences was not one of the research questions for this study, these relationships are still worth noting. The information gathered from this study will be shared with state school board members, district administrators, teachers and others interested in HIV/AIDS education.

Trustworthiness

Research is considered valid if it closely reflects the world being investigated. Rubin and Rubin (1995) suggest three factors should be addressed in establishing credibility or internal validity: (1) transparency, (2) consistency-coherence; and (3) communicability. Transparency describes the basic processes of data collection. "A transparent report allows the reader to assess intellectual strengths and weaknesses, the biases, and the conscientiousness of the interviewer" (Rubin & Rubin, p. 85). In order to maintain transparency in this study, notes were taken during each interview. A record was kept as to how the transcripts were organized and analyzed, a running file was kept as ideas emerged, and the comments and feelings of the investigator were kept as the data was collected.

Consistency may or may not be present between and during individual interviews. The goal in qualitative research is not to eliminate inconsistencies, but to explain why these inconsistencies occur (Rubin & Rubin, 1995). The investigator provided credibility when reporting responses given, even though comments differed between interviewees. Coherence means that one can offer explanations for why apparent contradictions in the themes occurred and what the contradictions mean. The investigator of this study attempted to seek out why interviewees provided differing viewpoints. In order to detect if an interviewee inconsistently responded to the issues posed, the investigator of this study attempted to use sincere, focused listening skills. When inconsistencies occurred during an interview, the interviewer repeated the topics, to give the interviewee the

opportunity to respond again. The fact that the investigator did recognize and report inconsistencies provided credibility to the analysis.

The credibility of qualitative research is reliant upon the communication skills of the researcher. During the interviews, the interviewees hopefully provided honest, descriptive accounts, and this was probably enhanced if they felt comfortable during the interview. The interviewer of this study attempted to implement quality skills in conversing and listening. The written communication skills of the investigator used prior to the interview, during the interview, after the interview, and during the transcript analysis, attempted to capture the essence of what the participants tried to convey.

The following strategies, as suggested by Merriam (1988), were also used to ensure internal validity: (1) triangulation, (2) member checks, (3) peer examination; and (4) researcher bias. Triangulation is the process of using multiple sources of data to confirm emerging findings. This study used information gathered from a review of the curriculum taught at each school, teacher interviews and survey results of HIV/AIDS educators conducted across the state. Member checks are defined as requesting each interviewee to review the transcription of his/her interview, and asking them to comment regarding the accuracy of the results (Rubin & Rubin, 1995). This procedure was carried out as mentioned previously. As the interviews and analysis emerged, a colleague of the investigator was asked to review the transcriptions and the analysis in an attempt to uncover themes not identified by the investigator. This process is known as peer examination. From this colleague's review no new categories and/or themes were detected. Researcher bias was addressed in order to maintain credibility. If the researcher possesses a strong viewpoint regarding the issues discussed during an

interview, this bias may create interviewing problems. Bias may also cause the results to be reported inaccurately. The investigator's bias towards this study will be addressed thoroughly in the next section of this chapter.

Confirmability or objectivity assures that collected data are factual and reliable. Baumgartner and Strong (1994) stated that confirmability can be increased by (1) being explicit about observations during the analysis; and (2) providing several interpretations for collected observations. Objectivity is also related to the integrity of the researcher and the honesty with which the facts are reported. The researcher's bias was clearly stated, therefore, the manner in which the facts from this study were reported was not distorted.

External validity implies the degree to which the findings of one study can be applied or transferred to other situations (Merriam, 1988). Baumgartner and Strong (1994) suggested that transferability, or external validity, may be improved by (1) intricate explanations of the individuals involved and the research setting; and (2) providing thorough descriptions of data. Typically in qualitative research, a small sample size is utilized, thus creating one of the arguments that this type of research should not be generalized. Transferability from a qualitative researcher point of view may think more in terms of "kinds of people or units that are examined, rather than number of people or units studied." (Baumgartner & Strong, 1994, p. 188).

The extent to which one's findings can be replicated is known as reliability (Merriam, 1988). Qualitative research is unlikely to be replicated with identical results due to the interpretive nature of the methodology. Three techniques have been identified by Lincoln and Guba (1985) to assist in the establishment of dependability or reliability:

(1) explanation of the researcher's position, or researcher bias, (2) use of triangulation, which was also identified earlier as being utilized to establish internal validity, and (3) the development of an audit trail. Each of these techniques was utilized in this study. A thorough description of the researcher's bias is described in the following section. Triangulation was met via the use of three methods of data collection in this study and will be described below in detail. The procedures used to develop an audit trail will be outlined in the latter part of this chapter.

Researcher Bias

The potential for researcher bias is present in both quantitative and qualitative studies. "Researcher's biases, angers, fears and enthusiasms influence their questioning style and how they interpret what they hear" (Rubin & Rubin, p. 18). Because of the subjectivity that is apparent in qualitative research, these researchers are often times charged with greatly influencing the interviewing process and data analysis by inserting their personal prejudices and attitudes. However, Rubin and Rubin (1993, p. 33) state that qualitative researchers attempt to "objectively study the subjective states of their subjects."

Several personal biases of this researcher that relate to teachers and people in general will be shared prior to discussing biases that are specific to the topic of HIV/AIDS education. As a single woman, this researcher has learned to respect individuals of both genders and hold high regard for those individuals who are qualified, conscientious and perform their jobs well. This researcher realizes that not all of the

interviewees will possess these characteristics. However, the statements made represent the opinion of each interviewee, and therefore, must be given serious consideration. The researcher appreciates humor, and she must respect the individuals interviewed who choose to live their lives in a more serious fashion. It must also be understood that middle school teachers and high school teachers typically interact a bit differently than elementary school teachers. The researcher of this study spent 19 years in an elementary school setting and she must be understanding, respectful and non-judgmental toward attitudes, methods and techniques used by those who teach adolescents.

The investigator of this study also holds high expectations of students and fellow teachers, especially those in physical education and health. Teachers who do not prepare adequately for their classes, do not keep current on latest teaching trends, are unmotivated, and do not respect their students are not held in high regard by the researcher. One challenge of this study was for the investigator to develop an understanding of why teachers continue to function at a sub-standard level relative to the expectations of the investigator.

A conscientious qualitative researcher must take a personal inventory of his/her personal feelings and attitudes toward the topic being studied. One bias of this investigator was the belief that a quality educator should have command of the topic being taught. It is also believed by the investigator that if the school district where the teacher is employed does not provide the resources to update the educator then the teacher should take the initiative to search out the necessary tools needed to provide quality, current information for his/her students. Possible sources which may provide current details related to HIV and AIDS may be obtained from attending workshops or

conferences, reading journals or books, or utilizing the latest developments posted on the internet. The fact that most school districts did not offer in-service opportunities on this state-mandated topic was somewhat disturbing. The investigator needed to realize that the teachers were not at fault, because their administrations chose not to provide educational opportunities for their employees. Some educators chose not to take advantage of existing in-services, or did not seek out workshops in order to better prepare themselves for HIV/AIDS education. The investigator was sensitive to the fact that such individuals did in fact exist. The challenge was to uncover why they choose to avoid experiences that may improve their knowledge in the subject area.

A second bias this researcher had regarding HIV/AIDS education dealt with the topics of "abstinence-based" and "abstinence-only" curriculums. The curriculum, which the investigator believed best meets the needs of today's youth, is abstinence-based sexuality education. However, it is widely known that many educators, administrators, parents and school board members do not support this same viewpoint. The investigator sought to understand why these individuals choose to hold this stance.

The researcher bias in this study was addressed by fulfilling the trustworthiness criteria stated previously. The use of multiple data sources assisted in minimizing the researcher's influence. Completion of detailed field notes and reflections written during and after the interviews increased the validity of the reported data. The intent of the study was to add to the knowledge base, not to pass judgment on an individual or try to change his/her way of thinking.

Triangulation

Triangulation was used in this study in order to develop a fuller, more descriptive understanding of HIV/AIDS education. The researcher believed that three sources of data provide a broader picture than just one data source. The three data sources utilized in this study were: (1) a review of curriculum materials, (2) interviews of ten HIV/AIDS educators and (3) the use of data from a statewide survey completed by 455 HIV/AIDS educators. The results of each data source were then intertwined in hopes of developing a thorough description of HIV/AIDS education that will benefit the profession, the students and the community.

Audit Trail

In order to provide another form of reliability, an audit trail was kept throughout the course of this study. The purpose of an audit trail, as described by Merriam (1988, p. 183), is to "assure consistency in one's findings." The audit trail describes in detail how the study was conducted and how the findings were derived from the data. The audit trail for this study included notation of the following events:

1. Describing the multistage sampling methods used in identifying subjects.
2. Contacting the principals, via letter (Appendix A), of the subjects identified using multistage sampling.

3. Mailing letters (Appendix H) to the prospective interviewees after receiving administrative approval and asking them to return postcards if they were interested in participating in the study.
4. Contacting interested interviewees via e-mail and/or phone and establishing date and time for the interview.
5. Reviewing the HIV/AIDS curriculum at each respective school. Prior to each interview the investigator allowed 30 minutes to review the curriculum materials used at each site. Comments were recorded on the curriculum review sheet (Appendix D).
6. Conducting the interviews. The interviews were conducted between September 1, 2000 and October 6, 2000. The interviews ranged in length from 25 minutes to 55 minutes.
7. Making "observer comments" during the interviews. During each interview the researcher recorded comments on a legal pad. The comments provided a guide for further questioning of the individual being interviewed and also assisted in preparing questions for future interviews
8. Writing "memos to self" after each interview. After each interview the investigator retreated to her car and recorded appropriate thoughts on a cassette recorder which further described the perceptions gained from the interview.
9. Reviewing field notes and making changes for future data collecting sessions. Field notes were revisited within 24 hours of each interview and comments were clarified to further capture information to be utilized in data analysis.

10. Conducting peer examination of the transcripts. Two colleagues read the ten transcripts, then reviewed Chapters 4 and 5, and noted their personal perceptions regarding the intent of the interviewees.
11. Providing interviewees with transcripts, and asking them to review and provide corrections as needed (i.e., member checks). Each interviewee sent their respective interview and asked to make revisions as needed.
12. Reviewing the literature to address issues not previously explored. Two subjects were researcher further – correct condom usage and coeducational health education. Neither subject was found to exist in the research literature.
13. Coding the transcripts. The transcripts were printed with a large right margin. This margin was utilized in writing the various categories and themes as they were identified.
14. Analyzing the data, searching for themes. Common themes and categories were identified, page numbers and line numbers were noted and then themes and categories were cut and pasted using the computer to group like topics.
15. Writing conclusions. Reading and re-reading the data occurred many times as the researcher attempted to dissect the data in an attempt to identify conclusions.

Summary

This chapter presented a rationale for the research method chosen. It was discovered in the review of literature that the qualitative method for obtaining

information pertaining to HIV/AIDS education had not been utilized previously. The criteria used to select the respondents and sites were described in this chapter. A review of curriculum materials used by the individual sites was conducted, topical interviews were conducted to gather data, and survey results were collectively studied to provide triangulation, which assisted in establishing reliability. Data analysis techniques were discussed, and the final section addressed trustworthiness issues, including: internal and external validity, reliability, researcher bias, triangulation, and the development of an audit trail.

CHAPTER IV

ANALYSIS AND FINDINGS

The purpose of this study was to explore the perceptions of middle school and high school teachers responsible for teaching HIV/AIDS education. These perceptions were explored via curriculum reviews, individual interviews, and by examining results from a statewide survey. This chapter summarizes participant information, presents the data, and provides an analysis of the information gathered. The three data sources for this study (curriculum reviews, interviews and survey results), are integrated into each of the research questions as they are presented and then analyzed.

The problem of this study was to address the issues related to teacher perceptions, comfort levels, beliefs, and perceived challenges related to the delivery of an HIV/AIDS curriculum. To identify the perceptions of the HIV/AIDS educators of this study and address the research questions, the investigator will discuss several common themes that emerged from the transcripts.

Participant Information

The interviewees' teaching experience ranged from 5-36 years. Seven of the interviewees had 22 or more years of teaching, and three of the participants had fewer

than ten years of experience. The years of teaching HIV/AIDS education ranged from 3-17 years. One teacher had taught HIV/AIDS education for 17 years, and three teachers had taught HIV/AIDS education for 15 years. The remaining teachers had the following experience with HIV/AIDS education: two – 8 years, one – 6 years, two – 4 years and one – 3 years. Six of the interviewees taught physical education only. One participant taught physical education and was also the school's principal, one taught physical education, health and English, and two taught science. Six schools taught coeducational HIV/AIDS classes. Three high school programs were coed, and three middle schools were coed. The other four schools taught boys and girls in separate classes.

The Participants

Anne

Anne, a physical educator, had the most experience (36 years). She was extremely anxious and willing to share her experiences teaching HIV/AIDS education in her small community. Several times she voiced how pleased she was that the topic of HIV/AIDS education was being researched in Kansas. She expressed her desire for the results of this project to be shared with her school board members. Upon viewing her HIV/AIDS files and the teaching notebook she had prepared, it was apparent that her lessons were very well organized. Anne used many alternative assessment projects during the HIV/AIDS units, which will be discussed in detail later in this paper. Her biggest concern was the abstinence-only philosophy mandated by her local school board.

Greg

Greg had taught HIV/AIDS education for 15 of the 30 years he had been teaching. He too was very comfortable discussing HIV and AIDS during the interview, and he shared the topics of many frank conversations he had held with his own children, which then created topics to be addressed with his students at school. None of the questions asked during the interview seemed to cause him any level of discomfort. Greg was committed to teaching kids about making good choices; in fact, he designed several role-playing situations, related to sexual encounters, for his students to experience. His philosophy was to be honest and straightforward in sharing the facts with his students. He believed that one should be realistic in talking with students about situations they will confront. It was obvious he had developed a sense of trust with his students, as evidenced by the stories they shared with him.

Diane

This interviewee had the most experience teaching HIV/AIDS education, 17 years. She stated that her interest in this topic came about because as a teenager she had "a tough time growing up" and she hoped to better prepare her students for uncomfortable situations. Diane claimed to be very open and direct when answering questions because she felt the students were extremely curious about issues related to HIV and AIDS. She said that "over the years students speak more openly about issues related to sex" and she also believes that students are more cautious now due to the

attention the media has given to HIV and AIDS. Diane has taught physical education for 26 years.

Barb

One of the least experienced physical education teachers, Barb claimed to be totally self-directed in preparing her HIV/AIDS lessons. Throughout the interview it became evident that Barb truly cares for her students. Her students obviously respect and trust her as a teacher given the number of students that confide their personal issues with her. Due to coaching and family responsibilities she has chosen not to attend workshops on HIV/AIDS instruction. It was made very clear that should she wish to attend HIV/AIDS workshops, her district would support her. Her enthusiasm and passion for sharing her thoughts on the subject was evident by the openness in which she related her experiences.

Deanna

Deanna had both the fewest overall years of teaching and the least number of years teaching HIV/AIDS education. Her duties at this small high school were divided among being a physical education teacher, a health teacher and an English teacher. Deanna claimed to teach sexuality education, which included HIV/AIDS education, over a nine-week period of one lesson per week. However, she admitted that guest speakers, who were nurses from a nearby university, actually presented the factual information

related to HIV and AIDS to her students. The copyright date of the health book utilized by her students was 1982. She admitted to having little knowledge on the subject of HIV/AIDS education; she was short with her answers, did not appear to appreciate probing questions, and seemed relieved when the interview was over.

Brian

Even though Brian had 22 years of teaching in physical education, he was a relative newcomer to HIV/AIDS education, having taught the subject for only four years. At the beginning of the interview he appeared a bit nervous about answering the questions, as he would not look at the interviewer, shifted frequently in his chair, and continuously played with a pencil throughout the interview. In fact, his interview was by far the longest ,as his answers became very verbose in an obvious attempt to cover up his nervousness. He was a bit tentative about teaching this subject and admitted to being ultra conservative with regards to discussing sensitive issues with the students. He was extremely concerned with making parents and the board of education unhappy, and he was fearful he might accidentally offend some of these individuals.

Jeff

Jeff served as both the principal and physical education teacher for his middle school, which housed 123 students in the 6^{th}, 7^{th} and 8^{th} grades combined. This district was the only one in this study that purchased a specific HIV/AIDS curriculum to be

taught to the students. The abstinence-only approach was employed, as teachers and administrators believed this approach was most appropriate for this age student. Jeff stated that the health nurse for the district basically taught the HIV/AIDS unit. He assisted her wherever appropriate, but felt more comfortable with a person with medical education addressing the factual issues. Despite the purchased curriculum, the smallest number of content areas was covered in his program when compared to others interviewed. Jeff stated that the topics covered with his middle school students revolved strictly around HIV/AIDS facts and various modes of transmission.

Dennis

Dennis was a science teacher with 27 years of teaching experience. He started teaching HIV/AIDS education in California 15 years ago. He stated that he was very determined to present the subject to his students in a manner that would most benefit them. The investigator had the opportunity to see Dennis teach part of a class prior to the interview. His actions showed that he is very compassionate toward his students, and as a teacher is committed to assisting them in learning to make good choices. He frequently asked his students, "Is that a productive way to solve that problem?" His comfort level with the topic was outstanding, partly due to the extensive conversations he had on the subject with his own two children, as well as his frequent attendance at workshops and seminars on HIV and AIDS education. Many times he commented on the high quality of HIV/AIDS in-services provided to the teachers in his district.

Max

Max was a middle school science teacher with 29 years of teaching experience. The last eight years have included teaching HIV/AIDS instruction. He stated that he was not comfortable teaching the subject and was not pleased with the fact that the state mandated the teaching of this topic, yet provided few in-services to educate teachers on how and what to teach. When asked about the resources he uses to obtain recent information on HIV/AIDS he stated, "I don't intend to acquire anything personally, it is up to my district to provide me with current resources." His overall demeanor was very serious, and his attitude toward education in general seemed a bit negative. Several comments suggested he viewed the behavior of his students to be troublesome. Max's interview took place on a hot day in a building that was not air-conditioned; therefore, Max kept his answers short and to the point.

Kelly

Kelly had taught physical education for 27 years, and HIV/AIDS education to high school girls for 15 years. Her district had just purchased a health book with a 2000 copyright that had an entire chapter on HIV and AIDS, which she was excited about using. She felt strongly that the best method to teach sexuality education and HIV/AIDS instruction was to boys and girls separately. It was her belief that girls would talk more openly if boys were not present. The discussion with her indicated she did a superb job of covering a wide variety of subjects with her female students. In addition to the

HIV/AIDS facts and transmission methods, she also discussed refusal skills, HIV testing information, and she did an excellent job of educating the girls about specific community services available to them if needed.

Curricular Issues

The review of the individual HIV/AIDS curriculums for each of the ten schools showed a broad assortment of offerings. Objectives for some of the curriculums accompanied the program the school endorsed; school district committees wrote some objectives, and several had no identified objectives. The content of the curriculums varied drastically, as some covered most of the suggested topics, and some taught only facts related to HIV and AIDS. However, none of the schools delivered a comprehensive curriculum. Aside from facts and figures, such a curriculum would include: modes of transmission and prevention, testing services, refusal skills, legal issues, homosexuality, and how to be sensitive to family members or persons living with the disease. It was discovered that a great variability existed among the various curriculums that were reviewed, in terms of: (1) number of lessons taught, (2) assessments utilized, (3) parental involvement, (4) community involvement, and (5) resources used.

Five of the ten schools had goals, objectives and/or outcomes that were specific to HIV/AIDS education. Two of the schools used the outcomes included in the Physical Dimensions secondary physical education curriculum guide, which was written for a grant from the Kansas Health Foundation. The curriculum is currently implemented in 153 high schools in Kansas. One high school found the objectives stated in its health

book, Merki, M. (1999) Glencoe Health – A Guide to Wellness, Glencoe/McGraw-Hill, met the needs of their program. Jeff's middle school utilized the individual lesson objectives in the curriculum the district purchased, Glencoe ABC News Interaction (2000), Glencoe/McGraw-Hill. Only one school district developed its own goals and objectives. The other five schools did not have any written goals or objectives for their HIV/AIDS curriculums.

Individual teachers made most of the curricular decisions regarding their school's HIV/AIDS curriculum. Seven of the ten educators interviewed (Greg, Diane, Barb, Deanna, Brian, Jeff and Kelly) stated that they personally guided the HIV/AIDS curriculum decisions for their respective schools. Two of the programs were guided by the district health curriculum committee, and the curricular decisions of Anne's district were dictated by the local school board. When asked about their administrator's attitude toward the HIV/AIDS curriculum, the following comments were made. Anne stated, "I don't think administrators really care what we do, because it's not math, science or language arts." Diane said her administrator was unaware of what was being taught. "My administrator trusts the teacher's decisions," said Kelly. Jeff, the principal, stated, "my superintendent has no idea what I do." Dennis said his principal appeared interested, as he encouraged teacher participation in HIV/AIDS in-services provided by the district.

An interesting observation was made while reviewing the curriculum materials at each site and questioning the teachers about specific topics covered in their lessons. All ten individuals taught the content areas of HIV/AIDS facts and the various modes of transmission. Nine educators (all but Jeff) taught prevention of HIV, eight introduced refusal skills and HIV testing information (all but Jeff and Deanna), seven discussed

community services available (all but Jeff, Deanna and Anne), but only Greg and Anne discussed providing support to family and friends of those individuals afflicted with the disease. The facts and figures were easy for teachers to teach; however, the emotional and somewhat controversial side of the disease was more difficult to face.

An overview of the number of lessons, (for the purposes of this study a lesson is defined as one class session), taught each year in the ten programs analyzed for this study found one common pattern among middle schools and high schools. It appeared that high schools took the subject matter somewhat more seriously since they taught a larger number of lessons on the subject. Six of the schools identified a specific number of HIV/AIDS lessons had been taught each year. One of the middle school teachers, Max, and one high school teacher, Brian, estimated two to three lessons on HIV/AIDS were taught each year, and one middle school (Barb) and one high school (Diane) stated that their HIV/AIDS units consisted of approximately four total lessons. Two middle schoolteachers, Jeff and Anne, used five lessons to teach the HIV/AIDS curriculum. The last four schools taught a sexuality education unit, which included HIV/AIDS education. However, the number of sexuality education lessons, which included HIV/AIDS education, taught by the three high schools teachers, Greg, Kelly, and Deanna, ranged from 15 to 20 to 23 lessons, and one middle school teacher, Dennis, taught 40 lessons per year, integrating HIV/AIDS education with sexuality education.

Most interviewed teachers assessed their students over the HIV/AIDS materials covered in class. The most common assessment forms used by seven of the participants were quizzes and tests (Greg, Diane, Barb, Brian, Jeff, Dennis and Kelly). Anne and Brian used a variety of handouts, and Anne also used the alternative assessments of

journal entries, a reflection paper and a reproductive paper. One high school teacher, Deanna, and one middle school teacher, Max, did not administer any form of assessment on the HIV/AIDS lessons presented.

Eight of the teachers did not involve parents in the curriculum (Anne, Greg, Barb, Deanna, Brian, Dennis, Max and Kelly). However, seven of the educators did send home notes informing parents that the sexuality education/HIV/AIDS unit was going to be taught (Anne, Barb, Deanna, Brian, Dennis, Max and Kelly). Diane's high school assigned students to interview their parents about dating. Jeff, a middle school teacher, sent home a sheet with facts and topics related to HIV and AIDS for the students to discuss with their parents.

Community involvement was quite varied, and seemed to be somewhat determined by the size of the community. Two high school teachers, Greg and Diane, did not utilize community members and/or organizations at all during their HIV/AIDS units due to the limited resources available. One middle school teacher, Jeff, did not have any community services available. Examples of community involvement in the other seven schools included: a ministerial alliance, county health nurse, teen pregnancy resource, a university nursing department, peer educators trained by the American Red Cross, a variety of speakers, and a home for unwed mothers. The County Health Department regularly sponsored a health fair at Brian's high school.

The teachers used a variety of resources when developing their HIV/AIDS lessons. Books that were used by the health classes of the schools in this study were: Merki, M., (1999). Glencoe Health – A Guide to Wellness, Glencoe/McGraw-Hill; Strong, (1999). Human Sexuality – Values and Choices, Mayfield Publishing; Hubbard,

(1997). ETR Choosing Health for High School, ETR Associates; and Murry, (1982). Health – Skills for Wellness, Morning Glory Press. One high school teacher, Diane, used the Current Health Magazine, General Learning Corporation, Curriculum Innovations. Resources from the CDC were used, as well as resources from the Kansas State Sexually Transmitted Disease (STD) office. Two teachers (Anne and Karen) used an AIDS trivia activity and a prevention game as resources.

Teacher Preparation/Knowledge of HIV/AIDS Instruction

Two of the three data collection procedures, interviews and the survey, addressed the preparation and knowledge base of teachers. It became obvious early in the interview process that the education and/or in-service opportunities for teachers on the HIV/AIDS topics were somewhat lacking. The survey identified areas in which the teachers were uninformed or uneducated on specific topics.

The first identified cases of HIV/AIDS reported in the United States occurred after seven out of ten of the interviewees in this study graduated from college. All three individuals who graduated from college in the 1990's, stated they did not receive any information in their health methods courses on the topic of HIV/AIDS education. Since the 1996 Kansas state mandate to teach sexuality education, which includes HIV/AIDS instruction K-12, many teachers who had not formally been educated on this topic were forced to teach the subject, whether or not they were adequately prepared.

When asked how they were trained or educated to teach HIV/AIDS education, the interviewees provided a wide range of responses. The following resources were each

identified as tools that were used to obtain information on HIV/AIDS, and the individual who claimed to utilize each resource is listed in parentheses: (1) the State HIV/AIDS consultant (Anne, Diane and Barb), (2) workshops (Greg, Diane, Dennis and Max), (3) Center for Disease Control and Prevention (CDC) reports (Anne, Greg, and Barb), (4) books (Anne, Barb, Max and Kelly), and (5) the Internet (Greg, Barb, and Brian). It was interesting to note that only three out of ten interviewees had attended workshops to gain information, and only three out of ten used the Internet as a resource. Some of the teachers used the following four sources as HIV/AIDS knowledge bases: (1) district in-services (Dennis and Max), (2) newspapers (Greg, Barb, and Deanna), (3) pamphlets (Barb and Deanna), and (4) human sexuality classes (Diane and Max). Although the teaching of this topic was mandated for 100% of the school districts, only 20% of those interviewed had been provided in-services by their districts on how to instruct this content area. After obtaining their undergraduate degrees, two individuals (Diane and Max) indicated they had taken a human sexuality class at a university. Other methods used to obtain information about HIV/AIDS education, as stated by the interviewees were: (1) television news (Greg), (2) magazines (Diane), and (3) attending a science camp (Dennis).

All ten subjects interviewed for this study expressed concern about their personal lack of preparation to teach HIV/AIDS education. One of the gravest concerns about the inadequate preparation of these educators was their lack of correct knowledge on the subject. Throughout the interviews it was discovered that some of the teachers lacked correct knowledge regarding HIV/AIDS facts, and most of the teachers admittedly were not aware of the resources located in their geographic area; as a result, several topics

were not addressed anywhere in the curriculum they presented to their students. Hundreds of students may have been provided incorrect information, which could possibly have increased their chances for making poor choices that will affect them for the rest of their lives. It was stated by three of the instructors (Brian, Deanna and Max) that they did not enjoy teaching the subject and had put forth little effort to become educated on the topic.

A recent survey of 455 middle school and high school HIV/AIDS educators (Appendix G), conducted by the Kansas State Board of Education, provided data which indicated that the lack of correct knowledge was a statewide concern. Eighty-nine (89%) percent were unaware that the menstrual blood of an infected female is a more efficient transmitter of HIV than clear vaginal secretions. Fifty-eight percent (58%) of those surveyed were uncertain (24%), disagreed (23%) or strongly disagreed (11%) with the statement that HIV infected males can more easily infect their sexual partners during sexual intercourse than HIV-infected females. Fifty-two percent (52%) were not aware that drug users could reduce their chances of becoming infected with HIV by cleaning needles with bleach before injecting drugs. Twenty-nine percent (29%) were unaware of the fact that the breast milk of a mother who has HIV is unsafe for her baby. Eighteen percent (18%) in this study were unaware that there is a period of time when a person infected with HIV can test negative on an HIV antibody test.

Further evidence that Kansas HIV/AIDS educators lack correct knowledge was that ten percent (10%) were not aware that a person who had a positive HIV antibody test result could give HIV to someone else. Nine percent (9%) in this study did not know that people cannot become infected with HIV after being bitten by an insect, such as a tick.

Seven percent (7%) believed only a person who is sick with AIDS can give HIV to others, and two percent (2%) were uncertain. Seven percent (7%) thought a person could become infected with HIV by donating blood. Seven percent (7%) of the educators surveyed also were unaware that a person could become infected with HIV by sharing needles that have been used to inject steroids. Six percent (6%) believed that people who have AIDS always show clear signs of being sick, and two percent (2%) were uncertain. Five percent (5%) believed, and 12% were uncertain, regarding whether or not a person can become infected with HIV by smoking the same cigarette that someone with HIV smoked. Four percent (4%) did not know that failing to use a condom during sexual intercourse with a person who has injected drugs increases a person's chances of becoming infected with HIV. Four percent (4%) also claimed to not know that men infected with HIV can give it to another person through their semen. Four percent (4%) also thought that a person could become infected with HIV by using public bathrooms, and four percent (4%) also believed that AIDS could be cured if treated early enough. It was also an unknown fact to three percent (3%) that people could reduce their chances of becoming HIV infected by using a latex condom during sexual intercourse. Fourteen of the 455 teacher respondents were uncertain whether a mother can pass HIV to her unborn child, and seven individuals believed this statement to be false.

The following information was known by 98% of the respondents: (1) people can be infected with HIV and not know they have it, (2) condoms are not 100% effective in protecting people from becoming infected with HIV, and (3) not using a condom during sexual intercourse with a person who had injected drugs increases a person's chances of becoming infected with HIV. Even though only two percent of the educators in this

study did not know these details, the numbers of students possibly misinformed could have been in the hundreds.

Comfort Level with HIV/AIDS Instruction

The interviews found that most of the teachers were comfortable teaching the topic of HIV/ AIDS education, although, some still expressed concern when addressing one or two specific topics. Seven out of the ten subjects interviewed said they were very comfortable leading student discussion about sexual attitudes and behavior (Anne, Greg, Dennis, Barb, Diane, Jeff, and Kelly). The survey revealed that 96% reported feeling comfortable discussing how HIV is transmitted; 85% felt comfortable discussing sexual intercourse with students; and 98% felt comfortable discussing sexual abstinence. Max described his comfort level as "medium." Brian stated, "this is not my favorite subject, and if I was younger I would be a lot more nervous about it," and Deanna reluctantly said she was "okay comfortable." Anne described "she gets excited about the HIV/AIDS unit because it allows kids to express themselves in a way that no other classroom teacher lets them. They talk about things that they can't talk about otherwise." "I talk with them, not at them," Barb shared. It was Greg's belief that, "the kids know I'm going to tell them the truth." As a science teacher, Dennis had a different perspective on why he was comfortable discussing factors that put a person at risk for HIV:

> I teach the subject pretty much as if it's a matter of fact, very clinical and very scientific. Because by the time I get to that unit I've sort of developed a rapport of being a science type person. They sort of believe

> what I tell them, which I think is real positive. Sometimes I think it might be good at the beginning of the year but you don't develop that type of rapport. Because you do after that unit, you have a strong rapport with the class, that's a neat thing. It's like going on field trips or something like that.

Diane shared how she used humor to remain comfortable with a sensitive topic:

> I got to teach boys health one time. They didn't think the men's coach was teaching it right, so I had a ball. This little boy in the back passed a condom up to the front. They kept passing it up and it got to the front, the boy giggled and handed it to me and I said, 'Oh, this is small, who does this belong to?' I stuck it in my pocket and just went on. That little kid slumped down in his chair. They try to embarrass you, but once they find out it backfires, they stop.

When asked if there were any topics they were uncomfortable teaching or discussing, a wide variety of answers were offered. Three individuals (Greg, Kelly and Dennis) stated they were comfortable discussing all topics. Anne said she had a difficult time talking to kids about relationships because her own marriage ended in divorce. Talking about subjects that she "is not familiar with" made Diane most uncomfortable. Birth control issues were problematic for Barb. Her middle school girls were very inquisitive about birth control, and she had been directed to avoid the topic. Deanna currently teaches ninth grade girls, and stated she would be uncomfortable if boys were in the class. Jeff's anxiety level was raised when:

> they ask questions they ought to be asking their parents. I'm afraid I will share a view of mine that might not agree with their parents. What a conflict that may cause between the student and parents, or between the parents and myself. It sounds like a cop out, but you say, you need to talk to your mom or dad about this.

Homosexuality was a topic Jeff found hard to discuss with his small town middle school students. Jeff said that most of his students came from "conservative, red-neck" type of families. Jeff was confident that should he attempt to discuss alternate lifestyles, all sorts of negative issues would result from parents and/or school board members; thus, he chose to avoid the topic with his students.

Even though Deanna was not comfortable with some aspects of sexuality education, she obviously had students who felt comfortable seeking out her advice. She stated, "in five years I've had three girls ask me to read their pregnancy tests; all three were positive." She also shared her comfort level with discussing behaviors that put a person at risk for contracting HIV.

> I'm the type of person that has my nose in my student's business. If I hear they did something on Saturday night, even if they aren't in my health class, but I have them in my English class, I'll be asking them about it. And it's like you know, what are you thinking? Is this true? Don't you think maybe you ought to be a little more careful? Some of them don't like that and some of them are like, yeah, I know, I probably shouldn't have done that.

Dennis stated that he believed "some new teachers feel inhibited because they may not know what 'some things' are." He suggested that "some things" may be nicknames that students now have for various sexual topics. It was also his belief that many teachers were uninformed on many subjects related to HIV/AIDS education due to lack of training and in-services.

The survey revealed several other "comfort" issues. Twenty-six percent of the teachers were not comfortable discussing condom use with students. This number may have been so high because 29% of the same respondents did not feel confident they could explain to students at appropriate ages how a condom should be used. Individual tutoring of a student infected with HIV was problematic to 25% of those surveyed. Four percent stated they would not be comfortable, and 7% would be uncertain about hugging a friend who had HIV/AIDS. Discussing the anatomical parts of a male was uncomfortable to 5% and discussing female genitalia was uncomfortable to 7% of the teachers. It was interesting to note that 3% were not comfortable discussing injected drug use and 2% were not completely at ease discussing alcohol with students. Alcohol and drug use can increase one's chances of becoming infected with HIV.

Level of Confidence

The level of confidence the interviewed teachers possessed about successfully influencing behaviors of their students was split. Five felt they probably influenced at least some; two were certain they had no influence; and three were uncertain as to their

effectiveness. At the conclusion of this section a comparison will be made between the confidence levels of those surveyed and those that were interviewed.

Anne felt that it would depend upon the group of students as to how influential she was as a teacher in changing student behavior and/or attitudes. "I don't know that I'm influential in changing their attitudes, but I think that the way I teach plants enough seeds, and hopefully they will use this information in the future." Barb was very confident that she was "getting through" to the middle school girls she taught. "You never really know, but you have to hope that sometimes my voice pops up in their heads." Deanna shared the following comments:

> I think I get through to a few of them because after we finished the unit last year a couple of them came up to me and said, "how can I get this stuff without my parents knowing, and how can I do this?" So I think I got through to a few of them; I doubt I got through to all of them.

Jeff and Dennis felt they had been fairly influential in altering student behavior. Jeff stated there was no evidence to prove it but "we can look at things like our frequency of pregnancy, and it is zero." Dennis made the following statement:

> Just from talking to them I am convinced they are listening. I write specific questions on the tests where they can write back to me, and it sounds like some of them say "no way." Some of them are even thinking about waiting until they get married. I have a lot of them tell me that personally and on the tests. I try to use the tests as a teaching tool. So they have to think about these issues, and it sounds like there is a positive benefit from it. If you help a couple of kids then it is worth it.

Greg found it hard to estimate how influential he is as a teacher on this topic. He thinks the students listen and believe he is telling them the truth, but how they respond when they are in the back seat of a car is hard to guess.

Diane shared the following thoughts:

> I don't know how influential the program is because kids always have this attitude it won't happen to me; but I think they are being more cautious, some of them. But that's something you really can't measure. Other teachers give me a hard time every time a girl comes up pregnant and tell me I'm not doing my job. And I laugh and say "well I wonder how many would be pregnant if I wasn't doing my job?"

Brian was uncertain how successful he has been at altering behavior. He shared the following:

> I guess one measurement is how many pregnancies we have in our high school. If we considered that, we wouldn't be able to boast a great success. I certainly would hate to not have the student know this stuff, but I'm not sure how much of a difference it makes. I'm sure it makes more of a difference than we will ever know.

Two of the teachers did not have a positive outlook regarding the effectiveness of their programs. Max stated, "I don't care how you say it and how you tell them, I just don't think they listen real well." Kelly was confident that she made her students feel guilty if they partake in risky behaviors. However, she believed high school girls tend to give into peer pressure and get "caught up in the passion" and have a hard time resisting passionate moments.

Overall, in reviewing the survey results regarding confidence levels of the responding teachers, they were somewhat confident they could help students on a variety of issues. Two percent were not confident, and 6% were unsure if they could discuss high-risk sexual behaviors with students. One percent did not feel confident they could discuss high-risk drug behaviors with students, and 5% were unsure. One percent did not feel confident they could help students reach more accurate perceptions of their own vulnerability to HIV infection and 10% were uncertain. Two percent were not confident they could obtain up-to-date information about HIV, and 4% were uncertain. One percent did not feel confident and 4%were not certain they could present accurate information about HIV infection and AIDS to their students.

Surveyed teachers were less confident they could effectively assist their students in the following topics. Fifteen percent felt they could not explain to students how a condom should be used, and 14% were unsure regarding this question. Five percent did not feel confident they could help students in refraining from injecting drugs, and 30% were not certain if they could help. Four percent were not confident they could help students develop skills needed to refrain from engaging in sexual intercourse, and 27% were unable to state they could or could not help in this area. Helping students increase their tolerance toward people with HIV/AIDS was not an issue that 2% felt they could effectively address, and 19% were uncertain regarding their effectiveness on this issue.

In summary, it appeared as though the survey-takers and the interviewees both had concerns regarding the effectiveness of their instruction. These feelings of inadequacy may have been due to teacher lack of knowledge on several of these specific

subjects. Once again, factual information regarding HIV/AIDS seemed easier for educators to present to their students than sensitive, more personal issues.

Beliefs and Attitudes About HIV/AIDS Instruction

All of the teachers interviewed for this study believed that students needed to receive HIV/AIDS instruction; however, the strength of their beliefs varied. One of the more adamant teachers, Diane, said, "Just because you're teaching about sex education doesn't mean your kids will become sexually active any more than teaching drivers ed causes them to have accidents." Anne expressed this concern: "I think it is very important that we don't wait until they're in high school to get that information to them." Barb also was concerned that the emphasis placed on this subject seems to be less than in the past:

> HIV/AIDS education has to be done, but it seems to be fading out. At first when it was this big epidemic, and it still is, and yet I don't know if it's because of the media, or I don't know what's going on, we are kind of sweeping it under the carpet all of a sudden. The resources are kind of dwindling. I don't know if they are taking money away, or what's happening. But it's not being pushed, and it's falling into the same category as the females.

Deanna thought it was very important that her students receive HIV/AIDS instruction because in her class of freshmen girls, 10 out of 11 said they were sexually

active. She also stated that at that age she is not convinced they understand the risks related to having sex. She also expressed the following:

> Because we're a smaller school, it is just unbelievable how sexually active the students here are, and they make no bones about hiding it.
>
> There are many broken homes in this area, and the girls are wanting that father figure, someone to tell them they are special. Because of that they are going into situations not really knowing what they are getting into.

Jeff and Brian were not as convinced that this topic should receive so much attention. Brian thought that students should at least receive two or three lessons on the subject. Jeff expressed his concern that "some kids are more mature and more sexually active, and in the middle school it is a hard decision what to include and what to leave out." He also shared his belief about small schools versus large schools:

> We're not as diverse as larger schools as far as the type of kids that are in our school. The kids are going here forever, we've had little turnover. A few transient people come in and out. We don't have any big manufacturing here. We don't have anything really to draw laborers. The same kids and the same attitudes. If someone does come in, the attitudes are so dominant that they almost acquire the same attitudes. Which is good if it's the right attitudes, but sometime it is not either.

Jeff seemed reluctant to admit that he believes students should receive HIV/AIDS instruction.

> I think they should probably receive it. It's always a concern when things are mandated. This is kind of a mandate, and I guess I think they should

> receive it. I would probably not let them opt out even. I guess that's my only issue with the whole thing is that you say you have to do it and then any of you that don't want to receive the education don't have to, which makes no sense to me. If it's that important, then everyone should hear the message.

Dennis expressed some interesting thoughts regarding "safe sex" that none of the other interviewees shared:

> Safe sex is a horrible term they've come up with in my opinion. Schools are teaching safe sex, and the kids hear, "oh, safe sex, that means if I use a condom I will be safe from getting a girl pregnant, from getting any STDs and my conscience will be clear." There is not such a thing as safe sex. You are dealing with your conscience. It's going to bother you. It will affect your marriage. Additional studies prove that. People who live together before they get married, the divorce rate is higher. All this stuff we talk about in class because there are a lot of kids here that come from broken homes. Most of the time I have conferences with kids from broken homes. I would say 90% of the behavior problems are from that group.

The interviewees all agreed that students seem to enjoy the HIV/AIDS unit. "Most like the fact that it is connected to sexual activity, which always excites the freshmen." Diane said, "The kids seem to really want to know, and it makes them aware of what's out there. When I first started teaching, we had a question box because they were too embarrassed to ask questions. It is not that way anymore." Diane stated that she feels teachers seem to spend a lot of time parenting. She also believed girls become

much more sexually active in 10th grade as compared with 9th grade girls. Barb felt that sometimes her students talk too openly about sex and sexual behavior. Brian said, "the students want to know this stuff. When we were talking about STDs, I remember it was completely still in the classroom. You could hear a pin drop. They wanted to know exactly what this was, how you got rid of it, and what you do for it."

Abstinence-based and abstinence-only discussions proved somewhat varied as well. Abstinence-only curriculums teach that the only birth control method that should be used is that of totally abstaining from sexual intercourse. Abstinence-based curriculums favor teaching abstinence from sexual intercourse, but they also introduce other forms of birth control methods. Most agreed that abstinence should be taught. However, some felt that other forms of prevention should be taught also. Anne felt strongly about her wish to teach abstinence-based sexuality education, even though her district only allowed her to teach abstinence-only.

> There is no doubt in my mind that I think every teenager needs to be totally abstinent until they're in a monogamous relationship – a mature monogamous relationship. I would even go further and say that I don't think that unless they're married that should happen, but I'm also realistic about it. I think that there is information out there that these young people need. They need accurate information.

The view that abstinence only works for some kids but not for all kids is held by Brian. He believes that "if you approach it with abstinence only you're going to lose some of them. It might not be very many, but hey, if it's one or two, then that's one or two that make it worth it." Max stated that the main emphasis is placed on abstinence-only, but

all of the options are presented. "I like to encourage them to use condoms," quoted Kelly. Because of their ages, Jeff supported abstinence only with middle school students.

The HIV/AIDS survey revealed some interesting beliefs and attitudes regarding this disease. The results suggested that some of the attitudes were directly related to the HIV/AIDS educators' comfort levels and/or knowledge of the disease. Four percent did not believe that a student infected with HIV should be allowed to eat lunch in the cafeteria, and 2% were uncertain. Not being comfortable with the disease was evident when 3% of the respondents stated they believed they would avoid a student whose family members have AIDS and 4% were uncertain as to whether or not they would avoid such students. Eight percent of the HIV/AIDS educators responding to the survey believed that students who have AIDS should be segregated from other students, and 3% were uncertain as to whether segregation should occur. Another indication that educators themselves are not comfortable around those with HIV or AIDS is revealed by 4% of survey responses who indicated they would be afraid to work with an HIV positive teacher and 3% were uncertain on this issue. Three percent stated they would be bothered by having students with AIDS in their classrooms, and 11% were uncertain on their feelings regarding the presence of such students.

Concerns on how HIV/AIDS-positive individuals may directly affect the health of others was somewhat varied. Thirty eight percent of the responding HIV/AIDS educators did not believe (21%) or were uncertain (17%) that their students were likely to engage in high-risk behaviors that put them in danger of becoming infected with HIV. The belief that students are not engaging in risky behaviors may have far-reaching implications for the future. Forty-seven percent of the respondents did not think (19%) or were uncertain

(28%) people who have HIV/AIDS should be allowed to work in restaurants and cafeterias. The view that HIV/AIDS positive individuals should not play sports was voiced by 13% of the educators while 24% were uncertain regarding this issue.

The belief of 28% of the survey respondents was that they prefer a certified health educator to teach sex-related topics, and 13% of those responding were uncertain. These numbers closely correspond with the 30% of the interviewees who were not comfortable teaching HIV/AIDS education. All of the individuals interviewed believed that special education students should receive HIV/AIDS education training, and 97% of the survey respondents took that same stance.

Challenges and Barriers

The interviewees shared a variety of challenges and barriers they had experienced related to the implementation of their HIV/AIDS curriculum. The concerns included administrative, school board and parental support, the State BOE mandate and lack of enforcement, television, facilities, and "antique" health books.

All interviewees were asked to comment on the level of support they received from their administration. At the building level, they all made positive comments about their principal's support of the HIV/AIDS curriculum. Greg and Diane said they were well supported by their school board members. Dennis re-emphasized that his district provided a lot of background and training to teachers. Anne was frustrated by the wishes of her conservative school board members to teach abstinence only. Deanna also stated she had a school board member that was against sexuality education.

Three educators were concerned that the State Board of Education implemented a mandate to teach sexuality education but does nothing to hold school districts accountable for teaching the topic. Jeff said,

> They don't tell you how much, how often, how many minutes, what degree; they just say you need to teach it. Nobody out there ever checks if you are doing it. So there's no accountability. Yes, they mandate it, but whoopty do. If you're not doing it, there is not an auditor, there is no testing, and there is nothing to make you accountable for it. If they are serious about it, which I'm not sure they are real serious about it; they just threw it out there.

Barb stated,

> That Quality Performance Assessment (QPA) stuff mandated by the State Board of Education, boy you don't mess with that. If they say you teach this in math, then you do it, and they hold you responsible. Why aren't they doing that with HIV/AIDS?"

Five of the teachers were concerned that students had the option to not participate in the sexuality HIV/AIDS education classes. Diane said, "one of the girls who had abstained came back a year later and talked to me because they were doing something in debate over contraceptives. She had to come back and learn the material so she could use the information in her debate. Barb said parents held their students out of health class usually for religious reasons. Brian was frustrated with organizing activities for those students who opted out.

> We had one mom that was worried about this opting out. Well, if my sons or daughter opts out, everybody will know why. You can't help that. It's well, we do it at the end of the year, and we're not gonna punish them for it. I tell them that right up front. It is not a punishment: this is your choice, and we will give you something else to do for credit in place of critical issues. Mom was concerned about that. How they look instead of anything else. That was a challenge. What to do with the ones that opted out. We can give them something to do, but it was how to handle it, where to send them. You can't have them in the class. You have to send them somewhere else, and then somebody had to be in charge of that and baby-sit them. We can at least tell the parents we will give them an alternative. We're struggling with that a little bit.

Max shared the following thoughts:

> I guess that is my only issue with the whole thing. You say you have to take it, and then any of you that don't want to do it don't have to, which makes no sense to me. If it is that important, then everyone should hear the message.

Other challenges that limited implementation of a quality HIV/AIDS curriculum were shared. Diane and Brian both stated that their parents would not support a "condom-shopping trip" as outlined in the Physical Dimensions curriculum. Anne and Barb mentioned that living in small communities limits what and how teachers can address certain topics.

> We had an educator in this district whose husband died of AIDS. Everybody knew he had it, but it wasn't acknowledged. It was not talked about. It didn't bring any more awareness into the community, which was surprising. He was viewed as an outcast. No one wanted to touch him or be around him. Since we don't have a lot of it in our community, HIV or AIDS, we do definitely talk about the consequences, but I don't know that sometimes it's reality based.

Diane and Dennis were concerned how sexually-explicit information on television influences students. The health book used at Deanna's school had a 1982 copyright, which had extremely limited information about HIV/AIDS. Barb had very limited access to a classroom in which to teach her health lessons. This challenge limited the class discussion. "Teaching health class in the gymnasium was hard. There are a lot of disruptions. People continually come through; it is a hallway basically."

Summary of Findings

This section will summarize the data as it relates to each of the research questions identified for this study. The research questions will be addressed in the following order: (1) preparation and knowledge, (2) comfort level and confidence level, (3) attitudes and beliefs, (4) challenges and barriers, and (5) curriculum issues. A final summary of the three data sources will also be provided.

Preparation and Knowledge

This section provides an analysis, with respect to the literature, of the findings pertaining to the ten individuals interviewed for this study. It focuses on their respective preparation and knowledge about HIV/AIDS education, and the knowledge base of HIV/AIDS educators identified from the survey used in this study. The teachers' general lack of knowledge and/or preparation will be discussed in relation to how this void may affect their comfort levels, levels of confidence, attitudes, and beliefs.

Several findings proved interesting with regard to the preparation and knowledge base of HIV/AIDS educators. Discussion in this section revolves around the following topics: (1) undergraduate training, (2) lack of preparation, and (3) knowledge on the topic.

Undergraduate Training None of the interviewees felt they received quality preparation during their undergraduate schooling to teach comprehensive health education, including HIV/AIDS education. Seven of the subjects graduated from college before the onset of HIV/AIDS. These seven individuals stated they had not been trained to teach about condoms, high-risk sexual behaviors or high-risk drug use. The remaining three, who graduated in the 1990's, all stated that none of their undergraduate health methods courses addressed the HIV/AIDS topic at all.

The fact that none of the ten individuals interviewed in this study received any formal HIV/AIDS education training during their undergraduate education should be a major concern. Quinn, Thomas and Smith (1990) found 24% of the colleges and

universities in their study offered a separate course on AIDS, but the course was not a requirement for any of the teacher education majors at their respective schools. This lack of teacher preparation should be alarming to administrators, parents, and the students who would benefit from a comprehensive, current HIV/AIDS education curriculum. Such a curriculum could assist students in making good choices in order to lead a safe and healthy lifestyle. Research has shown that people who are knowledgeable about AIDS are more likely to protect themselves, while those with less knowledge may be more careless (Carroll & Wolpe, 1996). Efforts should be made to encourage colleges and universities to address HIV/AIDS education in their methods courses.

Lack of Preparation Most of the interviewees expressed concern about their individual lack of preparation on this subject, which conformed to the findings of previous research. Barb stated that she would love to take a class on HIV/AIDS education, but the ones she had seen offered always conflicted with volleyball season. Deanna laughed when asked how she was educated or prepared to teach HIV/AIDS education, she said: "It was kind of like 'hello.' The assignment came with the physical education endorsement. It was like, oh, PE, health, here's the textbook." Brian shared these thoughts about his preparation: "I have not had any formal training to teach it at all. I think that's a weakness. That is part of the reason I am so uncomfortable teaching it." Attending a Mennonite college had its limitations Jeff said, " Mum's the word; sex was never mentioned. It didn't exist. When I went through college, getting my health and physical education degree, no one told me I would be teaching human sexuality."

The Gingiss and Basen-Engquist study (1994) found that 41% of the teachers had been provided at least one district/school in-service on HIV, and they also noted that the teachers in their study received on average six total hours of training on the subject. The Ramafedi (1993) results found that quality in-services did improve the teachers' knowledge base. Those receiving training were also more likely to use a wide variety of teaching methods. The Division of Adolescent and School Health (1996) found only one-third of teachers had received training during the two years preceding their survey. Only three out of the ten respondents had attended workshops to further their knowledge on this controversial subject. Holtzman, Greene, Swendolen, Ingrahm, Daily, Demchulk and Kolbe (1992) reported three hours of instruction had been provided to their subjects.

It was difficult to identify major differences between the subjects in this study in regards to the impact that teacher preparation and knowledge had on the implementation of an HIV/AIDS curriculum. All ten educators had obtained minimal amounts of formal education on this subject. Two of the interviewees (Diane and Max) stated they had each taken a human sexuality class. However, it was interesting to note that Diane expressed an enthusiasm for teaching the subject, while Max shared his dislike of the topic. It should be noted that the teachers who had a stronger passion or positive attitude toward the subject did identify a greater variety of resources they individually utilized. Max, Brian and Deanna shared a limited comfort level in teaching HIV/AIDS education. Jeff taught the subject to his middle school students because he was told to, but did state that little other than factual information was shared.

In order to address the Kansas state HIV/AIDS education mandate, school districts were forced to provide educators to teach the topic. Only two of the ten school

districts, where the interviewees were employed had provided HIV/AIDS workshops for their employees. The remaining eight school districts either provided the opportunity for their teachers to attend out-of-district workshops or expected them to independently educate themselves on this subject. It appeared that the educators in this study under investigation received a smaller amount of training when compared to other studies. This may be due to the number of small school districts in this study, and their limited resources. It may possibly be due to the fact that the perception of some Midwest educators, parents and administrators is that HIV/AIDS is not as threatening to their students as it is to those students located on either coast.

It was surprising that only three out of ten educators reported utilizing the internet as a resource for HIV/AIDS information. Several sites on the world-wide-web do an excellent job of reporting the latest information related to HIV/AIDS education. It is possible to subscribe to the CDC for free newsletters that summarize the latest data, current treatments and research developments. Universities and school districts must better educate teachers regarding possible HIV/AIDS resources on the internet, as these cheap and/or free resources will assist educators in presenting current information to their students. The following table (Table I) summarizes the number of resources utilized by each interviewee:

TABLE I

NUMBER OF RESOURCES UTILIZED BY EACH INTERVIEWEE

Name	Number of Resources Utilized
Barb	6
Greg	5
Diane	4
Max	4
Dennis	3
Anne	3
Deanna	2
Kelly	1
Brian	1
Jeff	0

Knowledge of the Topic The interviews of this study were not structured to measure the knowledge of the teachers on the topic of HIV/AIDS. However, the survey reported a significant lack of knowledge on HIV/AIDS topics. Richter (1997) also found the respondents of her survey to lack knowledge on modes of transmission, testing issues, and condoms as protection. At a glance, the accuracy rate of the respondents to the knowledge questions seems adequate. However, as one multiplies the number of students that may have been provided incorrect information, the picture suddenly is altered. The following table (Table II) outlines the specific knowledge question numbers and the percentages of accurate answers provided by the survey respondents.

TABLE II

SPECIFIC KNOWLEDGE QUESTIONS AND ACCURACY RATE OF RESPONSES

Question Number	Accuracy Rate
4,5,6,18,44,49,54	99%
11	98%
16,40,50	97%
39,55	96%
22,28	95%
23	93%
10, 17	92%
29,30	91%
35	90%
24	83%
34	82%
58	76%
12	71%
45	48%
60	42%
59	18%

The fact that 68% of the questions were answered by the survey-takers with a correct response rate of 90% or better on knowledge-related questions does not initially seem alarming. However, if one assumes that each teacher had at least 25 students in his/her class, then the following table (Table III) will reveal the impact of approximately how many students would have received incorrect information.

TABLE III

APPROXIMATE IMPACT OF INCORRECT KNOWLEDGE OF TEACHERS ON STUDENTS

N=455 Average class size = 25

% of teachers with incorrect answers	# of teachers	approximate number of students receiving inaccurate information
1%	6	150
2%	9	225
3%	14	350
4%	18	450
5%	23	575
10%	46	1150
17%	77	1934
18%	82	2148
24%	109	2730
29%	132	3299
52%	237	5915
58%	264	6598
82%	373	9328

The following seven questions had a significantly lower percentage of correct responses than the other 21 questions answered on the survey. The table (Table IV) below indicates the percentage of individuals that correctly answered the following questions.

TABLE IV

SUMMARY OF SUBJECTS' RESPONSES TO BASIC HIV/AIDS RELATED KNOWLEDGE QUESTIONS

SURVEY QUESTION	Agree	Disagree
24. Knew that a person cannot become infected by smoking the same cigarette of an HIV+ person.	83%	17%
34. Knew there is a period of time when an HIV+ person can test negative on an HIV test.	82%	18%
58. Believed that the vast majority of adolescents are in danger of becoming HIV infected.	76%	24%
12. Knew the breast milk of an HIV+ mother is unsafe for her baby.	71%	29%
45. Knew that drug users could reduce chances of contracting HIV if they clean their needles.	48%	52%
60. Knew that HIV+ males could more easily infect their sexual partner than HV+ females.	42%	58%
59. Knew that menstrual blood is a more efficient transmitter of HIV than clear vaginal secretions.	18%	82%

As can be seen in the table, it is estimated that thousands of students have probably been provided with inaccurate information related to HIV/AIDS. Institutions must better prepare their teachers to provide accurate information to their students. If this is not improved, the HIV/AIDS epidemic will grow to monumental proportions. When educators are teaching incorrect or incomplete information to students, the opportunity for risky behavior and/or transmission of HIV increases. Uninformed parents and administrators may not realize that incorrect information is being provided to students. Efforts to further educate the public with regards to HIV/AIDS education will undoubtedly assist in assuring quality HIV/AIDS instruction in the schools.

Facts related to HIV/AIDS change frequently, therefore it is very important for HIV/AIDS educators to remain current if they are to provide correct information to their students. Kantrowitz (1992) suggested that "teens are at the mercy of adults. Parents,

teachers, and politicians often won't give young people the information they desperately need to make the right choices about their sexual behavior." If school districts were concerned about the quality of instruction on this topic, they would be advised to provide convenient methods for their teachers to become updated on the latest trends in HIV/AIDS education.

Comfort Level

The comfort level of the HIV/AIDS educators in this study was examined during the individual interviews and in the 12 questions on the survey that addressed this topic. Seven out of the ten individuals interviewed claimed to be very comfortable with all topics related to HIV/AIDS education, sexual attitudes, and sexual behavior. One science teacher (Dennis) indicated that the utilized a clinical view of the disease when discussing the topic with his students, and this method seemed to be well received by his students. The comfort level expressed by the survey respondents was significantly high on topics related to providing factual information. Comfort levels by over 90% were identified on the following discussion items: (1) alcohol use with students (98%), (2) sexual abstinence with students (98%), (3) AIDS with students (97%), (4) how HIV is transmitted (96%), and (5) non-sexual ways of displaying affection. These topics were not as personal in nature as other topics frequently discussed during an HIV/AIDS unit; therefore, they probably were not as threatening to the teachers or the students.

Three of the ten interviewees (Max, Brian, and Deanna) said they were not comfortable and/or interested in teaching HIV/AIDS education. These three individuals

also showed no interest in attending workshops or classes, and they were not motivated to further their knowledge on the subject area. Deana taught two other subjects besides health education. She was young, unprepared to teach HIV/AIDS education, and probably overwhelmed with the course load she had to prepare. Max mentioned several times during his interview that he was "weary of the systems," both the local school district and the State BOE. It was bothersome to him that mandates were imposed but little to no support was given to carry out the mandates. It appeared as though he was approaching retirement age. Brian admitted that he prefers to avoid conflict, and teaching a controversial subject was certainly not his preference and he "would rather not think about it much." Administrators should be advised to monitor the interest level and effectiveness of such educators, and seek adequate replacements where necessary in order to provide students with quality instruction.

The topics that seemed to cause the most anxiety for the interviewed teachers revolved around two areas: (1) being uncomfortable talking about subjects not familiar to them, such as homosexuality, condoms, counseling and testing services, and community services and (2) teaching coeducational classes. Teaching subjects that one is unfamiliar with tends to make many people uncomfortable and feel unprepared. Several of those interviewed stated they were not comfortable discussing homosexuality, which was also a finding in a previous study. Remafedi (1993) found his subjects to be uncomfortable discussing homosexuality. His study also showed that those who received training improved their awareness level of gay and lesbian students. Not understanding this lifestyle could be intimidating to some, thus creating difficulty in discussing this issue with students. Some parents, community groups, and religions have very strong opinions

regarding this alternative lifestyle. In order to avoid confrontation with these groups, many teachers have chosen the path of least resistance by not discussing the topic with their students.

The subject of condoms was also a sensitive issue with the interviewees, which was in alignment with previous research. Richter's study (1997) indicated that 40% of her subjects did not feel they could explain to students how a condom should be used. Thirty percent of the health teachers in a study by Haigner, Culhane, Balsley and Legas (1996) stated they were not comfortable explicitly talking about correct methods of using condoms. The survey used for this study found that discussing condom usage with students was reported as the least comfortable topic to discuss, with only 74% of the respondents feeling comfortable teaching this topic. Some teachers may avoid the topic due to individual morals, values, religious convictions and/or personal experiences. Others may not be aware of the teaching methodologies that are successful in teaching how to correctly use a condom.

Discussing counseling and testing services available was another area that was avoided. Being unaware of the services available to their respective community was probably one reason they were not addressed. Once again, lack of education may be a major contributing factor in choosing to avoid these topics.
Gingiss and Basen-Engquist (1994) also found educators unprepared and uncomfortable in talking about counseling and testing services, compassion toward AIDS patients, homosexuality, and the relationship between alcohol/drug use and sexual behaviors.

Some viewed teaching coeducational classes as being problematic. It was noted that, of the schools involved in this study, only one out of five high schools taught

coeducational HIV/AIDS education classes, and four out of five middle schools taught coeducational classes. Several of the teachers felt very strongly about teaching the genders separately. They believed the students would feel more comfortable in discussing sensitive subjects if only students of the same sex were in the classroom. Since the majority of sexual experiences involve two individuals from the opposite sex, some teachers felt it more appropriate to teach to both genders at the same time so they can communicate and respond simultaneously to the lessons presented. In all cases, it was the teacher who decided to teach coeducational or separately, not the school administration.

Several issues seemed to be of greater concern to the survey responding educators than the topics mentioned above. Eleven percent said they would not hug a friend who has HIV, and 84% would feel uncomfortable tutoring an HIV+ student. These comfort levels might suggest that a degree of anxiety still exists when interacting with an HIV+ individual. Eighty-eight percent said they would be comfortable discussing male genitalia with students, although only 86% would feel at ease discussing female genitalia. Discussing injected drug use with students was comfortable to 87%, and sexual intercourse was a non-threatening topic to 85% of the teachers. Once again, if teachers were provided the adequate resources and teaching methods, perhaps these topics would not be intimidating to any of the educators.

Level of Confidence

The perceived level of confidence of the interviewed teachers' effectiveness in changing student behavior in regards to HIV/AIDS was somewhat varied. As mentioned by one teacher, "we have no evidence of proving our effectiveness," thus making it difficult to truly assess the level of success. Anne felt it depended on the group of students as to how seriously the kids addressed the topic. Dennis and Greg felt their kids listened and absorbed what was covered in class, while Max said, "the kids just don't listen." Teacher enthusiasm and classroom presentation may have been the variable accounting for the difference of opinion on this topic. Diane and Kelly believed that their female students frequently gave into peer pressure, regardless of what had been presented in class, while Brian and Barb stated that the "zero" pregnancy rate at their schools were evidence that the program was effective.

Several variables were believed to influence the level of HIV/AIDS education absorbed by the students. If the students were already sexually active they probably were not significantly influenced by the abstinence only lectures. The Haigner, Culhane, Balsley and Lucas study (1996) also suggested that teachers find it difficult to influence the behaviors of students who were already sexually active. The age of the students probably did influence the degree to which they believed and listened to what was being presented to them. The younger, less experienced students were probably more readily willing to believe the facts being shared. It was also mentioned that various groupings of students were more open to sharing their feelings and discussing sensitive subjects than other classrooms of students. However, this phenomena also occurs in classrooms where

the discussions revolve around historical events, science concepts and/or literature reviews. Different combinations of personalities can affect the openness of any group to share their innermost thoughts.

The survey used in this study asked ten questions related to confidence levels of the educators as to their effectiveness of their HIV/AIDS presentations. On half of the questions the teachers responded at the 90% level of confidence, or greater. Ninety-five percent felt they could present accurate information about HIV and AIDS, which agreed with the results of Richter's study (1997). This perception was somewhat contradictory regarding the knowledge base of the surveyed teachers on some topics related to HIV/AIDS was reported to be less than desirable. The confidence level that the individuals could obtain up-to-date information about HIV was 94%. A question for further investigation would involve the degree to which teachers actually take the initiative to seek out the latest findings. Ninety-four percent also suggested they could discuss high-risk drug behaviors with students, and 92% felt they could adequately discuss high-risk sexual behaviors with students. Ninety percent of HIV/AIDS educators responding to the survey felt they could assist students in reaching more accurate perceptions of their own vulnerability to HIV infection. Eighty-nine percent of the teachers believed they were effective in responding to parental inquiries regarding HIV/AIDS education.

The four remaining confidence questions seemed to raise some concern amongst the respondents. Once again, the effectiveness level seemed weak when discussing condoms, with 29% indicating that they did not feel they could explain to students at an appropriate age how a condom should be used. The Richter study (1997) found 40% of

the respondents not confident about teaching the use of condoms. Why this topic is a challenge warrants further study. Are condoms a sensitive subject, and/or are educators not adequately prepared to discuss this matter?

The last three confidence questions involved subsequent behavior of the students after they have participated in the HIV/AIDS unit. Twenty-one percent believed they could not increase student tolerance toward people infected with HIV or AIDS, as compared to 33% found in the Richter study (1997). Thirty-one percent felt confident they could not help students develop skills to refrain from sexual intercourse. The Richter study (1997) found 46% of the participants felt they did not know how to help students develop skills to refrain from or delay engaging in sexual intercourse. Thirty-five percent felt they could not assist students in refraining from injecting drugs, as compared to 45% in the study conducted by Richter (1997). These lower percentages may reflect the teacher perceptions that sharing factual knowledge with students is one thing, but changing behavior is much more unpredictable, especially since the behavior being discussed frequently will not be performed in the presence of adults.

The review of the literature found few studies that addressed the confidence level of teachers regarding HIV/AIDS instruction. Gingiss and Basen-Engquist (1994) found only 19% of their subjects felt they would have a major influence on their students' high-risk behaviors, 72% felt their instruction would have a moderate effect, and 10% believed they would have no influence on subsequent student behaviors. Overall, the respondents in this study had greater confidence levels than the Gingiss and Basen-Engquiest study. This might be due to the fact that this study was carried out six years later, and the teachers may have received more information, thus increasing their confidence levels.

Richter (1997, p. 11) suggested that the teachers' lack of instructional confidence "may be due to the teachers' lack of knowledge concerning sequential, age-appropriate comprehensive health education curricula, rather than the lack of willingness to address the topic."

Beliefs

All of the interviewed teachers believed that the students should receive some degree of HIV/AIDS instruction, which is important, as outlined in the CDC "AIDS Knowledge Base Report" (1999). However, some believed more strongly as to how thorough the instruction should be. Anne, Dennis, Greg, Barb and Diane expressed concern that many school districts wait until high school before offering any HIV/AIDS curriculum to their students. Ninety-two percent (92%) of the teachers surveyed by Gingiss and Basen-Engquist (1994) believed it was important for students to receive HIV instruction. Since the average age of first sexual intercourse is age 16, two health books reviewed (Strong, DeVault, and Sayad, 1999; and Carroll and Wolpe, 1996) advised students to receive sexuality education, which includes HIV/AIDS education, before the age of 16 years.

Deanna believed that the students in her small, low-income school district were more sexually active than students in larger schools. Dennis and Deanna believed that the increase in sexual activity among middle school and high school students was due to broken homes and the divorce rate of parents. Deanna stated that most of the pregnancies

in her high school involved girls who were from divorced families. Dennis thought these students might be "searching for love in all the wrong places."

Of equal concern to the lack of factual knowledge specific to HIV/AIDS is that 12% of those surveyed believed that the vast majority of adolescents were not really in danger of becoming HIV infected, while 13% were uncertain. Twenty-one percent of educators did not believe that their students would participate in high-risk behaviors, and 17% were not sure how they felt regarding this issue. Educators who believe the majority of their students are not sexually active still need to educate and service the needs of those students who are engaging in risky activities. These respondents had not been made aware of the following statistics provided by the 1997 Youth Risk Behavior Survey (1998), which support the need for HIV/AIDS education:

1. The average age of first sexual experience among US adolescents is 16.
2. Approximately 75% of US high school students have had sexual intercourse by the 12th grade.
3. Each year approximately three million American teenagers contract a sexually transmitted disease.
4. STDs can facilitate the transmission of HIV, putting those three million American teens at an even greater risk of contracting HIV.
5. Seventy-nine percent of 9-12th graders in Kansas have tried alcohol at least once. Alcohol and drug use can play a critical role in sexual behaviors and decisions.
6. Forty-seven percent of 9-12th graders in Kansas have had sexual

intercourse. Of those students who had sex within the last three months, only 56% used a condom during the last sexual intercourse.

Two individuals made comments that were rather insightful. Max was very concerned that students were given the option of "opting out" of a subject that is a state mandate. The option was probably made available because of the sensitive nature of the subject matter, and to appease concerned parents. However, the point was well taken that if the topic was important enough to be mandated, why are all students not required to take the classes? The second comment, made by Dennis, relates to the use of the phrase "safe sex." This experienced science teacher believed that when students hear "safe sex" used, they believe they will be free from getting a girl pregnant, contracting STD's or HIV and they will have a clear conscience because they practiced "safe sex." It was his belief that use of the term "safe sex" provides a false sense of security to teens.

All of the interviewees thought that students enjoyed the HIV/AIDS unit. They all agreed that anything dealing with sex certainly provokes the students' interest. Teachers reported that some students made inappropriate statements or were shy initially, but when they realized the topics related to HIV/AIDS would be discussed regardless of their actions and/or attitudes, they seemed to be receptive. Since 28% of the respondents in the survey preferred a health specialist to teach sex-related topics, the data suggests that educators either do not feel prepared to teach such sensitive topics or they were uncomfortable with the subject matter, which may simply be attributed to lack of knowledge or understanding.

Beliefs regarding abstinence-only and abstinence-based programs were also discussed with the teachers. The only foolproof method of STD prevention, and the

method which greatly reduces one's chance of contracting HIV, is by totally abstaining from intimate sexual contact. Abstinence-based sexuality education promotes the use of abstinence-only first, but also provides other methods of prevention for those who choose not to remain abstinent. The majority of educators, 90% in this study, believed in teaching abstinence-based HIV/AIDS education. Eight of these nine individuals were allowed to do so in their respective schools. Anne was told to teach abstinence-only to her students even though she personally felt her students should be provided other options. Jeff, a middle school teacher, believed it only appropriate to teach abstinence-only to his students because of their age. Abstinence was encouraged by all ten of the interviewees, but only eight of them were given permission to inform students how to protect themselves and their sexual partner against various forms of disease or pregnancy.

Strong, DeVault and Sayad (1999) stated, "not everyone believes that schools should present sexuality in a negative light or attempt to scare young people into abstinence until they are married." Many abstinence-based proponents argue that abstinence-only programs are "a thinly disguised effort to impose fundamentalist religious values on public school students, thus violating the constitutional separation of church and state" (Towle, 1993, p. 64).

The beliefs revealed by the survey respondents with regards to the HIV/AIDS disease overall was very understanding and supportive. The largest areas of concern dealt with issues involving the possible spread of the disease. Fourteen percent of the respondents were not in favor of HIV-infected individuals participating in sports, and 24% were uncertain as to how they felt on this issue. Eighteen percent did not believe people living with HIV or AIDS should be allowed to work in restaurants or cafeterias,

while 28% were uncertain whether this should be allowed. Nine percent did not feel comfortable with allowing AIDS positive individuals to eat in the cafeteria. Obviously, respondents lack the understanding that just because an HIV positive student is eating food, does NOT mean they will pass the virus to those around them. This attitude, if continued, could have far-reaching implications on HIV+ individuals and their families and friends.

The results of the survey also made it obvious that individuals are still uncomfortable about interacting with HIV infected individuals. Six percent said they would mind having a student with AIDS in their classroom, and 11% were unsure of their feelings on this matter. Three percent said they would avoid a student whose family member has AIDS, and 4% were uncertain how they would act. Four percent would be bothered if an HIV infected faculty member attended a faculty meeting; two percent were uncertain on how they stood on this matter. Eight percent believed that students with AIDS should be segregated from other students, and 3% were not certain how they felt regarding this issue. Once again, limited understanding of the HIV virus, and how it is transmitted, must certainly be influencing decisions regarding the education of middle and high school students.

Challenges and Barriers

Overall, the level of support from administrators, school board members and parents was adequate, Greg stated, "as long as parents were not complaining everyone seemed satisfied." Several teachers (Max, Jeff, Barb, and Deanna) did not believe their

administrators put a high priority on quality of instruction in this subject area. The subject of HIV/AIDS was not required by the State Board of Education to be assessed annually like the subjects of math, reading and science; therefore, less emphasis was placed on this topic in comparison to other basic academic areas.

The teachers did express several challenges, barriers and/or concerns regarding teaching this topic. In Kansas, HIV/AIDS education is currently a state mandate that all school districts must provide to their students. However, as pointed out by Max, Barb and Diane, the State BOE currently makes no attempt to monitor the implementation of the mandate. The curriculum content presented in each school district was left up to the individual school district to determine. Therefore, the overall quality and thoroughness with which the subject was taught varied widely. Some students received excellent instruction while others received minimum instruction, if any at all.

Deanna and Barb also expressed concern over the lack of appropriate teaching materials. The 1982 copyright on the health book used in Deanna's class was a major concern to her. Her administrator told her that funding was not available for new health books. The limited and outdated resources likely influenced Deanna's attitude toward teaching HIV/AIDS. Brenda Greene (1997) also found lack of funding to be a barrier in her study. Since most teachers were not authorities on HIV/AIDS education, developing their own materials added to the danger that dated, inaccurate information may have been passed on to the students.

It was also of concern to many educators that the State BOE required such a mandate, yet students were allowed to opt out of instruction if their parents did not want them to participate. If the State BOE deemed the subject important enough to mandate it,

then why are students allowed to graduate without having training in this specific area? Brian voiced his concern that "the challenge remains what to do with the students that do not participate in the HIV/AIDS education activities that the rest of the class is experiencing."

Anne and Barb expressed frustration about being limited in the degree of detail they were allowed to address on certain subjects. Most school boards, administrations, and/or parents restricted discussions on condoms and their correct usage. The Wolff and Schoeberlein study (1999) revealed fear of controversy to be a significant factor in developing and implementing HIV/AIDS curriculums. Many small communities still treat HIV/AIDS as taboo, and believe the topic should not be discussed or recognized. Emotional and uncomfortable feelings often surface as homosexuality and HIV+ issues were discussed. Many teachers said they chose to avoid these topics in order to circumvent possible conflict with parents, administration and school board members. This fear of conflict, at the students' expense, blocked the ability for students to be provided a quality program. Hamilton and Levenson-Gingiss (1993) reported that teachers who exhibited a great concern about lack of support from other colleagues, administrators, and parents had less influence on the students.

Curricular Issues

This final section will discuss various curriculum issues encountered by HIV/AIDS educators. The curriculum reviews, which was one of the three data collected methods used, examined the following areas: (1) curricular decisions, (2) goals and

objectives, (3) assessments used, (4) parental involvement, (5) community involvement, and (6) the content areas presented to the students.

Curricular Decisions

Most of the interviewees had sole control over the content and delivery of their school's HIV/AIDS curriculum. Seven of the ten interviewees stated they personally guided the curricular decisions; two individuals were given direction from their district's health curriculum committee, and one was mandated to adhere to the wishes of his/her local school board. A curriculum director, an administrator, or a curriculum committee would generally guide most other curricular decisions within a school district. The fact that individual teachers have most often been given the responsibility of making HIV/AIDS curricular decisions might be an indication that this particular subject was NOT as highly valued as other mandated subject areas. Further evidence of general disinterest lies with the fact that only one school district purchased a curriculum specific to HIV/AIDS to be presented to the students, and one school district still endorsed the use of a textbook with a 1982 copyright.

An observation was also made that high school teachers taught more HIV/AIDS education lessons in a given year than the middle school teachers, and they also claimed to cover a wider variety of specific topics related to HIV/AIDS education. The areas covered by middle school teachers were basically limited to facts and transmission modes. High school teachers addressed facts and modes of transmission, but some also ventured into the areas of refusal skills, prevention of HIV, HIV testing information, and

community services available. Only two out of the ten teachers interviewed discussed support to family and friends afflicted with the disease. These topics were probably discussed in less detail because the teachers were often uninformed on those subjects, or the services mentioned may not be readily available due to the small size of the community.

Strong, DeVault and Sayad (1999) stated that most sexuality educators believe that the focus of HIV/AIDS education should be on self-esteem, communication, critical thinking and building refusal skills. These authors also mentioned that education about risk, prevention, and testing is often most effective when given by peers from the community. Few of those interviewed for this study stated they utilized peer education in their programs.

Goals and Objectives

It is important to establish goals for HIV/AIDS education so a clear understanding exists as to the expectations of the program. One resource (Kansas State Department of Education, 2000) suggested that the five following points be considered when writing goals:

1. goals should be based on the needs of all students,
2. goals should provide for attainable outcomes,
3. goals should be reasonable,
4. goals should reflect both short and long-term achievement and
5. goals should be written within the context of what local schools can do.

The goals and objectives utilized by the schools in this study varied greatly. Half of the schools involved had no written goals and/or objectives for their HIV/AIDS curriculum. Two schools (one high school and one middle school) utilized the objectives stated in their health book or the HIV/AIDS curriculum purchased for use by their school district. Two schools used the outcomes listed in a statewide secondary physical education/health curriculum. One school district developed its own goals and objectives. In order to create a comprehensive curriculum that meets the needs of a specific group of students, Strong, DeVault and Sayad (1999) advised that teachers develop their own goals and objectives to be achieved in a particular unit taught. Lack of prior planning on the part of many teachers would suggest the teachers lack direction regarding what they plan to accomplish during their HIV/AIDS unit and what expectations they have of their students.

Assessment Tools

The vast majority of teachers in this study utilized traditional assessment methods to measure the knowledge of their students in the HIV/AIDS unit. The easiest content area to assess involved specific facts related to HIV/AIDS; therefore, quizzes and written tests were the most common methods administered. Two teachers distributed handouts which included assignments. One teacher utilized the alternative assessments of journal entries, a reflection paper, and a reproductive term paper. Teachers in all subject areas seem to have difficulty developing alternative assessment methods. Peer assessment, self-assessment and other alternative forms were lacking in the curriculums implemented

and reviewed for this study. The absence of goals and objectives in HIV/AIDS curriculums could impact the content of the curriculum and make it difficult to identify which issues should be assessed.

Parental Involvement

Several authors suggest that parental attitudes play an important role in the sexual development of children (Strong, DeVault, Sayad, 1999, Kansas State Department of Education, 2000). The need for human sexuality and HIV/AIDS education should be communicated to the parents and community. Parents and community members should be offered the opportunity to assist in the development of the curriculum. They should also be invited to review proposed goals, objectives and curriculum materials. Teachers should also provide parents with assistance regarding how to communicate with their children about HIV/AIDS education. During an HIV unit, parents should anticipate concern or questions from their own children regarding the topic (Kansas State Department of Education, 2000). Reinforcement provided from home will strengthen the knowledge level of students. It has also been suggested by the Kansas State Department of Education (1998) that parent information nights be conducted to inform parents about the need for a comprehensive HIV/AIDS education program, as well as to involve parents in the classroom instruction through parent-child interaction activities.

The participants in this study did not report frequent parental involvement in the school's HIV/AIDS education curriculum. Two schools (middle and one high school) intentionally involved parents in the homework related to HIV/AIDS. The other eight

schools did not formally involve the parents in their program. However, seven of the schools did inform parents that the sexuality education unit was about to commence. During the interviews it became evident that the teachers did not involve parents because the teachers were not aware of the various methods that may be used to involve parents in the educating process related to HIV/AIDS education. A better attempt to educate teachers on current teaching methods involving parents should be carried out statewide.

Community Involvement

Lerman (2000) reported results from a poll commissioned by SIECUS (Sexuality Information and Education Council of the United States) and Advocates for Youth, Washington, DC. The following was found:

- Ninety-three percent of all Americans polled supported sexuality education in high schools.
- Eighty-four percent showed such support in middle/junior high schools.
- Of these respondents, 70 percent oppose the abstinence-only government funded education that prohibits the teaching of contraception.
- Eighty percent of the respondents do not believe that comprehensive sexuality education that includes the teaching of contraception encourages sexual activity.
- More than 90 percent support the teaching of abstinence as part of the comprehensive program.

This poll confirmed that parents and community members want the schools to be their partners in the sexuality education of their children. Educators must do a better job of involving community members (YMCA's, Boy Scouts, Girl Scouts, churches, and all other children-friendly organizations) in the HIV/AIDS education process. The more that informed citizens from all ages and walks of life become involved in this process the more successful the educational tools provided to students will become. Interviewees did not report widespread involvement of the community in their school-based HIV/AIDS education programs. Nurses, county health departments, non-profit organizations and one ministerial alliance were reported to offer limited involvement. Teachers should become educated regarding organizations which may be of assistance in fighting this epidemic, and then be encouraged to use those community resources.

Content Areas Taught

A review of the curriculum materials, and speaking to the teachers, clarified the specific topics that each respective teacher covered during their HIV/AIDS unit. By far the most thoroughly-discussed topics were facts about HIV and AIDS and the various modes of transmission of HIV, with all interviewees claiming to cover these subjects in a detailed fashion. Nine teachers covered prevention of HIV and eight addressed refusal skills and HIV testing information. However, when asked to describe the refusal skill activities, all but one were somewhat evasive about the specific activities they presented, and the HIV testing information descriptions were all short and somewhat limited. Seven out of ten respondents mentioned community services, although five of the subjects

admitted to limited services for their community. Only two of the educators ventured into discussions related to supporting family and friends dealing with HIV/AIDS. The interviews revealed that the least covered topics with the students were topics those teachers were least informed about or uncomfortable discussing because of the sensitive nature of the topics. Quality in-services could provide lesson activities, alternative assessment ideas and impart the latest information related to the disease. The anxiety of the teachers could be reduced if they were more thoroughly prepared and educated to teach this subject.

Analysis of Data Sources

The results of this study provide an alarming concern in relation to the implementation of quality HIV/AIDS educational programming. The survey results and interviews reported that teachers were grossly under prepared and uneducated in HIV/AIDS education. A lack of factual knowledge about HIV/AIDS education was rampant among the educators and they also exhibited a deficit of comprehensive teaching methodologies. Overall, teachers had not been adequately trained to teach sensitive topic areas and in some cases were restricted by local school boards in addressing various topics. Few surveyed or interviewed provided evidence that the curriculum they taught did little more than touch the surface on this epidemic. If teachers in other subject areas functioned at this level of preparation and knowledge, local schools and parents would be in an uproar. It was also extremely hard to understand why a state sexuality education

mandate would be written which allowed students to be excluded from participation in such a mandate.

The comfort levels and confidence levels of those surveyed and interviewed were also less than desirable. Teachers not comfortable with the topic they are teaching will undoubtedly deliver a less than quality curriculum to their students. It is mandatory that teachers not confident they are effectively impacting the future behavior of their students be provided with resources which will assist students in making healthy decisions. Students who choose to make poor decisions could soon be faced with life or death consequences.

Summary

This chapter summarized the demographic information, introduced the participants, presented the actual data, then provided an analysis of the data. The three areas that formed the triangulation efforts were each discussed-the interviews, the survey and the curriculum reviews. The researcher's overall impression is that further comprehensive education of teachers could obviously improve their knowledge base, their comfort level, their level of confidence, and possibly alter some attitudes. This increased knowledge base would certainly impact the quality of instruction provided to students and possibly assist in curbing the spread of HIV and AIDS.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The study was designed to explore the perceptions of middle school and high school teachers responsible for teaching HIV/AIDS education in their respective school districts. The problem of the study was to utilize the qualitative method in order to develop an understanding of teacher perceptions, comfort levels, beliefs and perceived challenges related to the delivery of an HIV/AIDS curriculum. The following research questions were explored: (a) how does teacher preparation and knowledge affect implementation of an HIV/AIDS curriculum, (b) to what degree are teachers comfortable teaching HIV/AIDS education, (c) what are teacher beliefs regarding effectiveness of an HIV/AIDS curriculum, (d) what challenges and barriers have provided positive and/or negative results in regards to implementation of an HIV/AIDS curriculum, and (e) at the time of the study, what curriculum was employed in each respective school district?

Chapter I introduced the study and presented several quantitative works that addressed the issues mentioned above. Chapter II provided an in-depth review of the literature, which focused on HIV/AIDS programs in middle schools and high schools. The extent to which previous research found teachers to be prepared via in-services, workshops and undergraduate and graduate classes was also examined. The comfort and confidence levels of teachers from previous studies were discussed. Teacher beliefs

toward teaching HIV/AIDS instruction were shown in many studies to impact the quality of instruction. Several studies also investigated the challenges and barriers faced by HIV/AIDS educators. Some studies reviewed the impact that HIV/AIDS prevention programs had on students. References were made to studies and reports that outlined suggested curricula appropriate for quality HIV/AIDS programs.

Chapter III presented the methodology that guided this study and explained the rationale for the methodology. Since the researcher attempted to understand the perspectives held by the HIV/AIDS educators, the qualitative methodology was employed. In addition, Chapter III explained the selection of participants, data collection procedures, data analysis, procedures used to establish trustworthiness, and researcher bias.

Chapter IV presented and analyzed the data. Data was organized into common categories, then presented to the reader. The analysis of the data was presented utilizing the categories used previously. Comments were also shared with regards to the curricular issues that were examined. The following discourse presents the conclusions developed from the data. Implications for each of the research questions are provided, as well as suggestions for further research.

Summary and Conclusions

This section presents the summary and conclusions relative to each research question.

Teacher Preparation and Knowledge

The following paragraphs discuss the teacher preparation of those interviewed and the knowledge base of the teachers surveyed. All ten teachers interviewed stated they felt under-prepared to teach HIV/AIDS education in their respective schools. None of the participants received formal HIV/AIDS education training during their undergraduate years. Universities and colleges must do a better job of preparing their graduates, in order to assist school districts in implementing quality HIV/AIDS programs, which address the state mandate. HIV and AIDS are viewed by many in our society as being sensitive topics; therefore, teacher preparation programs must provide their students with appropriate tools to protect individuals from contracting the disease.

This study also found that training opportunities were more readily available to those who taught in large districts. It should be noted that smaller school districts might only have one or two identified HIV/AIDS educators in their entire district. Only two out of ten interviewed had been provided in-services by their districts on this state HIV/AIDS mandate. The remaining eight interviewed were self-taught, attended workshops outside their district, or took graduate college classes. The motivation to further teacher knowledge may have been lacking since teaching HIV/AIDS education was not the main job description of any of those interviewed. The teachers taught an HIV/AIDS unit consisting of a few weeks, at best, out of the entire school year. Workshops were not frequently offered, and they were often in locations not convenient for participants. The number of resources utilized by the participants was somewhat varied. The teachers who

seemed concerned about the quality of the HIV/AIDS program they presented to their students were those who, for the most part, sought out more resources.

It was evident from the number of knowledge questions that were answered incorrectly on the survey that the basic knowledge base was lacking for many HIV/AIDS educators across the state. Out of 28 knowledge questions on the survey, 12 were answered incorrectly by at least five percent of the respondents. The question numbers and the percent of teachers who incorrectly answered the questions were as follows:

#59 – 89% **#60** – 58% **#45** – 52% **#12** – 29% **#34** – 18% **#35** – 10%

#30 – 9% **#10** – 8% **#29** – 7% **#23** – 7% **#17** – 6% **#24** – 5%

- #59 – 89% incorrect – Menstrual blood of an infected female is more efficient as a transmitter of HIV than clear vaginal secretions.
- #60 – 58% incorrect – HIV infected males can more easily infect their sexual partners during sexual intercourse than HIV infected females.
- #45 – 52% incorrect- Drug users can reduce their chances of becoming infected with HIV by cleaning needles with bleach before injecting drugs.
- #12 – 29% incorrect - The breast milk of a mother who has HIV is unsafe for her baby.
- #34 – 18% incorrect – There is a period of time when a person infected with HIV can test negative on an HIV-antibody test.
- #35 – 10% incorrect – A person who has had a positive HIV-antibody test result can give HIV to someone else.
- #30 – 9% incorrect – A person can become infected with HIV by being bitten by an insect, such as a tick.

- #10 – 8% incorrect – Only a person who is sick with AIDS can give HIV to others.
- #29 – 7% incorrect – A person can become infected with HIV by donating (giving) blood.
- #23 – 7% incorrect – A person can become infected with HIV by sharing needles that have been used to inject steroids.
- #17 – 6% incorrect – People who have AIDS always show clear signs of being sick.
- #24 – 5% incorrect – A person can become infected with HIV by smoking the same cigarette that someone with HIV smoked.

Conclusions Inadequately educated teachers not only have the potential for sharing incorrect information with their students, but also have greater potential for being less effective with the lessons they do teach. Lack of education was also shown to decrease the comfort level of the teachers on several topics. If one does not possess a good command of a topic, one is less likely to be at ease and less motivated to present quality lessons to one's classes. It was also noted from the interviews that inadequately prepared teachers were also less inclined to use alternate instructional methods and assessments.

Teachers who teach math or history incorrectly will probably not endanger the lives of their students. However, those who share incorrect HIV/AIDS information with their students may be responsible for increasing the likelihood that the students may contract the disease.

Comfort Level

Three of the ten individuals interviewed expressed a lack of comfort in teaching specific topics related to HIV/AIDS education. These teachers said they were not comfortable addressing most of the topics related to HIV/AIDS education with their students. This lack of comfort most likely impacted the content and quality of the lessons they presented. Most of the teachers interviewed were comfortable discussing the non-sensitive or non-controversial subjects with their students, such as modes of transmission, facts, sexual intercourse and sexual abstinence. Topics often avoided by the interviewed teachers were: homosexuality, sensitivity to family and friends of those afflicted, compassion to HIV+ individuals, testing information, and condom usage. The following factors contributed to the lack of comfort when addressing these topics: lack of knowing how to approach these sensitive issues, their own personal beliefs, and restrictions implemented by administrators and/or school board members, which allowed limited or no discussion related to those specific topics. The survey reported that 25% of the educators would not be comfortable tutoring an HIV-positive student. If individuals had a thorough understanding of the disease and how it is contracted, they could be more compassionate towards those attempting to fulfill their dreams under extraordinary circumstances. Teachers who believed they had the support of parents, school board members and administrators were more comfortable in addressing issues that may have been purposefully avoided if they did not feel the same level of support.

Conclusions The lack of comfort expressed by HIV/AIDS educators presents serious problems for effectively preparing students in making health choices. The issues mentioned above (homosexuality, sensitivity, compassion, testing information and condom usage) are topics that must be addressed in order for society to be successful in fighting this disease. Homosexuality is a reality in middle schools and high schools. If the lifestyle of these students is totally ignored, the potential for contracting HIV or many other infectious diseases is increased. Students must learn to be sensitive and compassionate toward all individuals afflicted with this epidemic, regardless of their lifestyle. As the numbers of individuals nationwide who are identified as HIV+ and living with AIDS increases, most likely everyone in our society will eventually work with such individuals and/or possibly have them as neighbors. Support must be provided to such individuals as they are challenged to live in a culture that may be inclined to discriminate against the rights guaranteed by our constitution. In order to obtain adequate medical care and sustain a high quality of life, it is essential that medications be administered to HIV+ individuals as soon as possible. People must be educated with regards to the testing options available. One of the most effective methods for decreasing the spread of HIV is the use of condoms. If students are not informed of the correct procedures in using condoms, they too, will be put at a greater risk for contracting the disease than those who are informed.

Finally, as medical treatments improve, individuals are living longer with HIV and AIDS. Many babies are being born with the disease. The likelihood that educators will have HIV+ students in their classes will increase. Educators must be prepared to teach issues related to the disease so they may effectively and tactfully meet the physical

and, perhaps more importantly, mental needs of their students. Comfort levels may also be influenced by societal attitudes. Efforts must be made to further educate the media, communities, and religious organizations so the educational efforts put forth by teachers engender support from all facets of society.

Confidence Level

The confidence expressed by those interviewed regarding the effectiveness of impacting the future behavior of students was somewhat varied. Educators realize that changing behavior must begin with the person who is partaking in risky activities. Losing weight, quitting smoking and increasing one's activity levels will not be long-lasting unless the participant is willing to alter his/her own behaviors. Behavior modifications will most likely be effective if implemented before habits are formed. If students are provided the adequate tools to make good choices at an early age, then bad habits may not be started. Delaying the onset of drug and alcohol usage, as well as sexual intercourse, will increase the chances that risky behavior will not occur.

The confidence of those surveyed was certainly lacking, especially with regards to those topics that the educators themselves had probably not personally experienced, as well as topics that are socially sensitive or had not been addressed thoroughly in training opportunities. Family values, religious overtones and personal biases all influence one's attitudes toward others. Teachers realize, as they attempt to increase student tolerance towards people with HIV and AIDS, the issues mentioned above probably have a greater

influence on attitude and behavior toward others than any lecture or activity could provide.

Conclusions Teachers who are not well prepared to address specific issues will obviously not be as confident in their level of effectiveness as those who have been sufficiently educated. Knowing that some students are sexually active, yet are being encouraged to be abstinent, possibly decreases the confidence level of the instructor. Abstinent-only curriculums do not provide the needed information for students who have experimented with sexual intercourse. Until society fully embraces those individuals afflicted with HIV and AIDS, and supports their family members, the attempt to teach tolerance and compassion will be an uphill struggle. Teachers are in the perfect position to further the education of their students and the community regarding this sensitive issue.

Beliefs

Even though all of the interviewees believed that HIV/AIDS education should be taught to their students, it was quite clear that some did not believe the subject should have high priority in comparison to other subjects. Many teachers believe that most students are not participating in high-risk behavior that may lead to HIV infection. This lackadaisical attitude of teachers, parents and administrators towards HIV/AIDS education may also be influenced by the stance that State School Board members have embraced by passing a state educational mandate that allows students to "opt out" of

instruction on the very topic mandated. Abstinence-only curriculums are certainly restrictive in the content that is presented to students. Many school districts implement these conservative approaches in an attempt to avoid confrontation related to such critical issues. The restricted programs that are presented to hundreds of students are not adequately preparing them for critical issues students may face throughout their lifetimes.

Conclusions Educators, parents, administrators and community members who believe students are not practicing high-risk behaviors are in fact contributing to the increase of many sexually transmitted diseases. Not supplying youth with necessary knowledge and skills to avoid risky behaviors may contribute to inappropriate decisions made by students. This increase in adolescent HIV could possibly be reduced if teenagers were provided adequate information they could utilize. If the State Board of Education required all school districts to teach a comprehensive HIV/AIDS education curriculum, which covered topics beyond HIV/AIDS facts, and also required all students to participate in such a curriculum, the adolescent HIV/STD numbers would undoubtedly decrease. Abstinence-only curriculums require educators to avoid topics that would interest and benefit students. Providing teachers with recent statistics, resources and educational tools might positively influence their beliefs and attitudes toward the need for the implementation of quality programs.

Challenges and Barriers

The positive administrative support at the building level, as expressed by all interviewed, was greatly appreciated. However, some challenges and barriers were identified which impeded the quality of instruction teachers were able to provide to their students. The most frequently expressed concern involved students who could opt out of the classes related to HIV/AIDS education, even though it was a subject mandated by the state. It was also a concern that the State Board of Education currently does not do anything to hold school districts accountable for teaching the topic. Smaller districts were seemingly more restrictive than larger districts regarding the specific topics the teachers were allowed to address. Discussion of condom usage was banned from several of the school districts interviewed. The overall attitude of those districts choosing to limit thorough coverage of issues related to HIV and AIDS seemed to be "ignore it and it will go away." Statistics show that the numbers of adolescent heterosexuals who are sexually active and at risk for contracting the disease are not decreasing in numbers when compared to previous years. The use of condoms is decreasing among some cultural groups. Outdated health textbooks serve as barriers in the attempt to provide current facts and knowledge, testing options, refusal skills and behavioral-change tools for students.

Conclusions Students who are allowed to "opt out" of HIV/AIDS education instruction are at risk for not receiving the education needed to protect themselves from contracting the disease. These same students may not receive accurate information from

their parents, friends, and/or church leaders regarding the transmission of HIV/AIDS. As long as the State Board of Education does not monitor the implementation of quality HIV/AIDS instruction, the semi-thorough attempt of educating students will continue. Linking the mandate to the Quality Performance Accreditation (QPA) requirement of school districts would then guarantee that a measure to assess HIV/AIDS education would be implemented. Administrators would be motivated to insure quality programming in order to be accountable to the state. Parents and administrators need to be made aware that research has shown that educating students about correct condom usage does not increase the amount of sexual activity among adolescents. Condoms are a safe measure, not one that should be feared. The use of outdated materials provides further evidence that students are not always being supplied with the latest knowledge related to HIV and AIDS.

Curricular Decisions

In educational circles, committees typically make curricular decisions on subjects such as math, science and reading. Most of the individuals interviewed for this study made all the decisions themselves regarding the content of the HIV/AIDS curriculum taught in their schools. Especially in small districts, one teacher may be responsible for teaching all of the health and/or HIV/AIDS classes, thus leaving curricular decisions to one individual. If educators are well-versed in the curriculum being designed, they are more likely to prepare a thorough program that is based on sound educational goals and objectives. If one is lacking in knowledge about what a curriculum should include, then

the direction, implementation and assessment efforts related to goals and objectives are less than desirable. Assessments are not currently administered to measure the degree to which this state HIV/AIDS education mandate is implemented. Lack of educational funding also impacts the amount of resources, in-service opportunities and textbooks made available to teachers for implementation of a quality HIV/AIDS unit.

Conclusions When an individual is asked to devise a curriculum, he/she is typically at a disadvantage relative to committees that write curriculums. The knowledge of two individuals usually exceeds the knowledge of one person. If several teachers are able to share ideas, experiences, and knowledge, the final product will undoubtedly better service the needs of students. As was mentioned in previous chapters, most HIV/AIDS educators have had a minimum amount of training and education regarding this topic. This limited preparation restricts their ability to plan and implement quality, comprehensive HIV/AIDS curriculums. Being unaware of appropriate expectations and specific issues that should be addressed with their students limits their ability to produce goals and objectives that are suitable for their programs. Since implementation of the HIV/AIDS state-mandate are not monitored or assessed by the state, administrators probably do not put high expectations on their teachers to prepare quality units of instruction on this topic. Educating administrators on the need and importance of quality implementation of HIV/AIDS education for their students is a must if the future of American students is to be safeguarded against contracting this deadly disease. Legislators, college deans, department chairs, school board members, superintendents,

principals, and curriculum coordinators must also be informed so adequate funding may be provided for personnel, resources and in-services.

Recommendations for Further Research

Based on the findings and conclusions developed by this study, six recommendations for further research related to the perceptions of middle school and high school HIV/AIDS educators are suggested. These recommendations are as follows:

1. Studies should be designed to explore the perceptions of administrators regarding the state HIV/AIDS mandate. Such research may provide insight to the lack of in-services and educational opportunities provided to HIV/AIDS educators in the schools.
2. Further research should be considered that specifically investigates how the lack of comfort level with various issues related to the HIV/AIDS disease impacts the preparation and presentation of quality education on this topic. The lack of comfort level, influenced by lack of knowledge or inexperience in relating to persons afflicted with HIV or AIDS, appears to discourage educators to discuss certain topics with their students.
3. Studies should be conducted that consider the perceptions of the students regarding the HIV/AIDS educational programs they receive. Educational researchers need to ask the students if they believe the HIV/AIDS program presented was effective.

4. Research should be conducted to measure the degree to which university teacher education programs address HIV/AIDS education with their students. Current teachers claim to have been inadequately prepared to teach this subject during their undergraduate training. Universities must be challenged to better educate their students on this topic.
5. Alternative methods for preparing HIV/AIDS education teachers should be investigated. Most school districts do not provide HIV/AIDS education in-service experiences for their teachers. Whether it is due to lack of funding, size of school district, lack of interest by the administration or teachers, or demographics, methods should be investigated which would assist in providing quality HIV/AIDS in-services.
6. Investigating how various cultural groups perceive issues related to HIV and AIDS would be invaluable. Statistics show that Hispanics and African-Americans are disproportionately contracting the disease. Educators must better address the needs of these minority populations.

Summary

This chapter presented the summaries, conclusions, and recommendations developed from this study in regard to the perceptions of middle and high school HIV/AIDS educators. Analysis of the data provided a better understanding of the major issues perceived by these teachers. Six major recommendations were presented in this chapter. The overall conclusion was that public school teachers need comprehensive

teacher preparation and training in HIV/AIDS education in order to deliver quality programs.

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APPENDIX A

LETTER TO ADMINISTRATORS

7/19/00

Dear Colleague,

The Human Immunodeficiency Virus (HIV) and the Acquired Immune Deficiency Syndrome (AIDS) is a serious problem in our state. Presently, there are approximately 2150 reported cases of AIDS in Kansas. Many of those ages 25-39 living with the disease were infected during their teen years. AIDS has become the seventh leading cause of death among young people ages 15-24 years old. Young people's lives are at risk. Health educators are trying to find the best ways to teach people about AIDS and the virus, HIV, which causes AIDS.

Five middle school and five high school HIV/AIDS educators in Kansas will be randomly selected to be interviewed in regards to their perceptions of the HIV/AIDS curriculum they administer to their students. I am currently a doctoral candidate from Oklahoma State University, and am conducting this study to fulfill the requirement for my dissertation. Confidentiality will be observed for both the teachers, as well as, the school and school district they represent. Reports of data will not include names of participating school sites, individual school districts or faculty. Each interview should take approximately one hour. All interviews will be conducted when the teachers to not have teaching responsibilities. Participation will be voluntary.

Education programs should guarantee that young people acquire the knowledge and skills they need to adopt a life-style that virtually eliminates their risk of becoming HIV infected. The data from this study will be used to develop better health education programs for adolescents and young adults in both the classroom and non-classroom settings and to re-evaluate public health and school health education programs in Kansas.

Your support of my effort is essential and your professional courtesy is acknowledged. Please return the enclosed permission form in order to grant the HIV/AIDS educator in your school to be interviewed. Thank you in advance for your cooperation.

Sincerely,

Vicki J. Worrell
Instructor
Wichita State University
Wichita, KS
Principal Investigator

Date _____

I have been thoroughly briefed on the study protocol regarding the interviewing of the HIV/AIDS educator in my school and grant such faculty member to be interviewed regarding their perceptions of the HIV/AIDS curriculum taught in our school. I also grant permission to Vicki J. Worrell to review the various HIV/AIDS curricular materials used in our school.

School _____

City _____

Signature _____

APPENDIX B

CONSENT FORM

CONSENT FORM

I authorize Vicki J. Worrell to conduct research at the school site for a study entitled: Perceptions of middle school and high school HIV/AIDS educators. Each interview is scheduled to take approximately one hour. During the course of this study, the researcher will use commonly accepted research procedures such as; (1) interviews, (2) review of curriculum documents, and (3) surveys.

I understand that participation in this project is voluntary, that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this study at any time without penalty after notifying the project director or dissertation advisor.

I understand that the interview will be conducted according to accepted procedures and that the information gained from the interview will be recorded in such a manner that subjects cannot be identified directly or through identifies linked to the subjects. Complete confidentiality for each individual interviewed and each school district will be protected to the best of the researcher's ability. Each interview will be recorded and transcribed verbatim. All collected data, including the interview tapes, will be recorded and kept in a secure location. The tapes will be destroyed at the conclusion of the study and the researcher, for a minimum of two years following the study, will maintain the data.

I understand the purpose of the study is to investigate the perceptions of teaching as related to the topic of HIV/AIDS education. I understand the interview will not cover topics that could reasonably place the subject at risk of criminal or civil liability or be damaging to the subject's financial standing or employability.

If I wish to obtain further information about the research I may contact the dissertation advisor, Betty Edgley, Ed.D., School of Applied Health and Educational Psychology, 110 Colvin Center, Oklahoma State University, Stillwater, OK 74078; (405) 744-7680. I may also contact Sharon Bacher, IRB Executive Secretary, 203 Whitehurst, Oklahoma State University, Stillwater, OK 74078; (405) 744-5700.

I have read and fully understand this consent form. I sign it freely and voluntarily. A copy of this form has been provided to me.

Date: _____Time: _____ Signature of Interviewee: _____

I certify that I have personally explained all elements of this form to the subject before requesting the subject sign the form.

Signature of Investigator: _____

APPENDIX C

INTERVIEW PROTOCOL

INTERVIEW PROTOCOL

A semi-structured interview format will be used. Questions will fall under the following five major categories: (1) knowledge of HIV/AIDS, (2) comfort level teaching HIV/AIDS education, (3) beliefs about HIV/AIDS education, (4) barriers which impede delivery of the HIV/AIDS curriculum, and (5) description of the current curriculum being used. Additional questions may be asked in order to further clarify an answer.

All participants will be provided opening statement information that will explain what will be asked in the interview, what the information will be used for and how it will be used, and how the information will be handled. Scripts targeting each of these areas are included below. These statements will be read verbatim to each respondent. Respondents will also be provided with an informed consent form detailing voluntary participation and confidentiality of records.

Nature of the Interview

This interview is being conducted to investigate the perceptions of middle school and high school teachers regarding HIV/AIDS education. You will be asked questions about your perceptions of various topics related to HIV/AIDS education. Information gained from this interview will be used in a research study necessary for the completion of the requirements for a doctoral degree in Applied Behavioral Studies.

Validity Issues

The interview will be conducted according to commonly accepted procedures for interview research. Interviews will be tape recorded and transcribed verbatim for analysis. You will be provided with a copy of the completed transcript to ensure that I understood and accurately reported what was said during the interview. If needed, you will have the opportunity to make corrections. It is important to me that I reflect your story accurately.

Confidentiality Issues

All subjects will be coded into research so individuals cannot be identified directly or through the coded identifiers. All collected data, including the interview tapes will be recorded and kept in a secure location. The tapes will be destroyed at the conclusion of the study.

Voluntary Consent

You will be asked to sign a written consent form which outlines what I have discussed with you. Please read the form carefully and sign the form if you are in agreement. You will be provided a copy of this form to keep, prior to the interview.

Questions About the Study

Do you have any concerns or are there any questions that I can answer about the interview process?

Interview Guide

Teacher Preparation/Knowledge of HIV/AIDS Education

1. Describe your experiences teaching HIV/AIDS education.
2. Please share with me how you were educated and/or prepared to teach HIV/AIDS education.
3. What is your best source of HIV/AIDS information used to keep current on this topic?

Comfort Level Teaching HIV/AIDS Education

1. Describe your comfort level in leading student discussion about sexual attitudes and behavior.
2. What topics are you least comfortable teaching and/or discussing?
3. Describe your comfort level of discussing behaviors that put a person at risk of contracting HIV.

Beliefs about HIV/AIDS Education

1. To what degree do you believe it is important that your students receive HIV/AIDS instruction?
2. How influential do you believe HIV/AIDS instruction will be on subsequent student behavior and/or attitudes?
3. Describe how you feel about abstinence only and abstinence based education.

Challenges Which Influence Effective HIV/AIDS Instruction

1. To what degree if any, have challenges or barriers surfaced in your quest to provide quality HIV/AIDS education?
2. Talk to me about parental involvement in your program.
3. To what degree have you noticed significant differences between males and females in regards to interest and/or knowledge of the topic?

Description of HIV/AIDS Curriculum

1. Please describe the curriculum your school district has adopted to teach HIV/AIDS education.
2. Who makes the decisions regarding the implementation of HIV/IDS education in your school district?
3. Describe the sources of the lesson you use....are they self-developed, prepared by the school district or commercially prepared?
4. To what degree do special education students receive instruction of the HIV/AIDS curriculum?

APPENDIX D

CURRICULUM REVIEW

CURRICULUM REVIEW

Teacher _____ Site _____

1. Goals and Objectives – Yes/No

   Comments:

2. Assessment Tools

3. Abstinence only or Abstinence based

4. Parental Involvement

5. Community Involvement

6. Content Areas Taught:

Yes/No	HIV/AIDS facts
Yes/No	Transmission of HIV
Yes/No	Prevention of HIV
Yes/No	Refusal Skills
Yes/No	HIV Testing Information
Yes/No	Community Services Available
Yes/No	Support to Friends and Families of AIDS Patients.

7. Miscellaneous:

APPENDIX E

INSTITUTIONAL REVIEW BOARD

APPROVAL FORM

Oklahoma State University
Institutional Review Board

Protocol Expires: 7/23/01

Date : Monday, July 24, 2000 IRB Application No ED00287

Proposal Title: SELECTED MIDDLE SCHOOL AND HIGH SCHOOL EDUCATORS' PERCEPTIONS OF HIV/AIDS INSTRUCTION

Principal Investigator(s) :

Vicki Worrell
110 Colvin Center
Stillwater, OK 74078

Betty Edgley
110 Colvin Center
Stillwater, OK 74078

Reviewed and Processed as: Expedited

Approval Status Recommended by Reviewer(s) : Approved

Before starting, please change the consent form to say "confidentiality will be protected to the best of the researcher's ability" rather than guaranteeing it.

Signature : Carol Olson

Carol Olson, Director of University Research Compliance

Monday, July 24, 2000
Date

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modifications to the research project approved by the IRB must be submitted for approval with the advisor's signature. The IRB office MUST be notified in writing when a project is complete. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

APPENDIX F

AGREEMENT OF TRANSCRIBER

9/5/00

I, _____, agree to keep all information heard on the cassette tapes I am transcribing for Vicki J. Worrell**Error! Bookmark not defined.** confidential. I promise not to discuss or share the contents of the cassettes with anyone other than the principal investigator of this study. It is understood that confidentiality was guaranteed to the best of the researcher's ability and therefore, I will promise to assist in maintaining such standards.

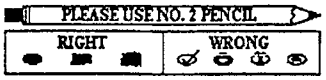
_____ _____

Transcriber Date

APPENDIX G

SURVEY

HIV/AIDS SURVEY



I presently teach a class/classes in:
- ○ Health
- ○ Biology
- ○ Physiology
- ○ General Science
- ○ Home Economics
- ○ Family Relations & Marriage
- ○ Physical Education

I have been teaching for:
- ○ 0 to 5 years
- ○ 6 to 10 years
- ○ 11 to 20 years
- ○ 21 to 31 years
- ○ 31 years plus

My ethnicity is:
- ○ African American
- ○ Caucasian, Non-Hispanic
- ○ Hispanic
- ○ Pacific Islander
- ○ Native American
- ○ Other

My gender is:
- ○ Male
- ○ Female

If you marked Health as a class you presently teach, please mark the following categories that apply to you:
- ○ I am certified to teach Health
- ○ I have a health major/minor/endorsement in my undergraduate degree
- ○ Other

I presently teach a health class that includes:
- ○ identified behavior disordered
- ○ identified mentally retarded
- ○ identified learning disabled
- ○ identified autistic
- ○ identified other categories

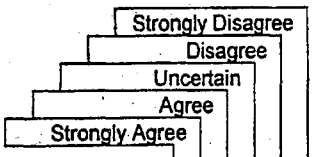
I teach in State School Board region:
- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5
- ○ 6
- ○ 7
- ○ 8
- ○ 9
- ○ 10

Presented below are statements related to various aspects of teaching students about HIV/AIDS. Please indicate the extent to which you agree with each of the statements by using the response key given at the right. There are no "correct" answers for these statements. Therefore, answer the statements based upon what you really know, feel, or think.

Strongly Disagree
Disagree
Uncertain
Agree
Strongly Agree

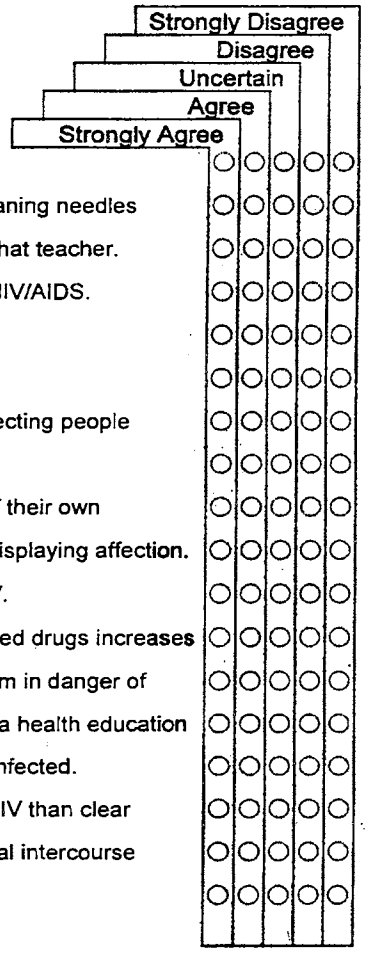
1. I wouldn't mind having a student with AIDS in my classroom. ○○○○○
2. I feel confident that I can obtain up-to-date information about HIV. ○○○○○
3. I feel completely comfortable discussing how HIV is transmitted. ○○○○○
4. Many people who are infected with HIV can look and feel healthy. ○○○○○
5. Drug users can reduce their chances of becoming infected by not sharing needles. ○○○○○
6. AIDS can be cured if treated early enough. ○○○○○
7. A student who is infected with HIV should be allowed to eat lunch in the cafeteria. ○○○○○
8. I feel confident that I can present accurate information about HIV infection and AIDS to students. ○○○○○
9. I feel completely comfortable discussing injected drug use with students. ○○○○○
10. Only a person who is sick with AIDS can give HIV to others. ○○○○○
11. A person can become infected with HIV by having unprotected (no condom) sexual intercourse with someone who is infected with HIV. ○○○○○

Please turn page over



12. The breast milk of a mother who has HIV is unsafe for her baby.
13. I would avoid a student whose family member has AIDS.
14. I feel confident that I can answer parents' questions about HIV education.
15. I feel completely comfortable discussing sexual intercourse with students.
16. Males who are infected with HIV can give it to another person through their semen.
17. People who have AIDS always show clear signs of being sick.
18. People who are infected with HIV can give it to another person through their blood.
19. I wouldn't mind attending a faculty meeting with someone who was infected with HIV.
20. I feel confident that I can discuss high-risk sexual behaviors with students.
21. I feel completely comfortable discussing AIDS with students.
22. A mother can pass HIV to her unborn child.
23. A person can become infected with HIV by sharing needles that have been used to inject steroids.
24. A person can become infected with HIV by smoking the same cigarette that someone with HIV smoked.
25. Students who have AIDS should be segregated from other students.
26. I feel confident that I can help students develop skills they need to refrain from engaging in sexual intercourse.
27. I feel completely comfortable discussing alcohol use with students.
28. People can reduce their chances of becoming HIV infected by using a latex condom during sexual intercourse.
29. A person can become infected with HIV by donating (giving) blood.
30. A person can become infected with HIV by being bitten by an insect, such as a tick.
31. Students who have HIV/AIDS should not play sports.
32. I feel confident that I can explain to students at appropriate ages how a condom should be used.
33. I feel completely comfortable discussing condom use with students.
34. There is a period of time when a person infected with HIV can test negative on an HIV-antibody test.
35. A person who has had a positive HIV-antibody test result can give HIV to someone else.
36. I would feel uncomfortable about individually tutoring a student infected with HIV.
37. I feel confident that I can discuss high-risk drug behaviors with students.
38. I feel completely comfortable discussing sexual abstinence with students.
39. A person can become infected with HIV by using public bathrooms.
40. People who are careful to have sexual intercourse only with healthy looking partners won't become infected.
41. People who have HIV/AIDS should be allowed to work in restaurants and cafeterias.
42. I feel confident that I can help students to refrain from injecting drugs.
43. I feel completely comfortable discussing male genitalia with students.
44. People who are infected with HIV can give it to other people by shaking hands.

Don't forget the last page!!



45. Drug users can reduce their chances of becoming infected with HIV by cleaning needles with bleach before injecting drugs.
46. If I thought a teacher was infected with HIV, I would be afraid to work with that teacher.
47. I feel confident that I can increase students' tolerance toward people with HIV/AIDS.
48. I feel completely comfortable discussing female genitalia with students.
49. People can be infected with HIV and not know they have it.
50. When used during sexual intercourse, condoms are 100% effective in protecting people from becoming infected with HIV.
51. I would feel comfortable hugging a friend who has HIV/AIDS.
52. I feel confident that I can help students reach more accurate perceptions of their own vulnerability to HIV infection.
53. I feel completely comfortable discussing with students nonsexual ways of displaying affection.
54. People can get their blood tested to see if they have been infected with HIV.
55. Not using a condom during sexual intercourse with a person who has injected drugs increases a person's chances of becoming infected with HIV.
56. Many of my students are likely to engage in high risk behaviors that put them in danger of becoming infected with HIV.
57. When in comes to discussing sex related topics with students, I prefer that a health education specialist teach the students.
58. The vast majority of adolescents are not really in danger of becoming HIV infected.
59. Menstrual blood of an infected female is more efficient as a transmitter of HIV than clear vaginal secretions.
60. HIV infected males can more easily infect their sexual partners during sexual intercourse than HIV infected females.
61. Special education students should receive information about HIV/AIDS.

Thank you for completing the survey!

APPENDIX H

LETTER TO EDUCATORS

8/18/00

Dear Educator,

My name is Vicki Worrell and I am currently working on my doctoral program in Health Promotion from Oklahoma State University. The topic of my dissertation is "Selected Middle School and High School Educators' Perceptions of HIV/AIDS Instruction." Since you have been identified as an HIV/AIDS educator I am contacting you.

Would you be interested in participating in an interview regarding your perceptions of HIV/AIDS education? I will personally conduct the interview, which will take from 45-60 minutes. All interviews will be tape-recorded and the information provided will be confidential, no names or schools attached to the comments. You will also be given the chance to review the transcripts and make changes to clarify what you meant to say.

Realizing that the school year is about to begin and it will be difficult to contact you at your school because you will be in class, I am asking that you return the enclosed postcard if you are interested in participating. I will then call or e-mail to arrange for a date and time for the interview that is convenient for you. If it is more convenient for you to e-mail me, my address is worrell@twsu.edu.

The results of this project will be shared with administrators, school board members and state school board members to educate them about the perceptions, concerns and needs of HIV/AIDS educators in Kansas. Thank you for considering involvement in this project and I look forward to hearing from you.

Sincerely,

Vicki J. Worrell
Box 16
Wichita State University
Wichita, KS 67260
316 978-5444
worrell@twsu.edu

VITA

Vicki J. Worrell

Candidate for the Degree of

Doctor of Education

Dissertation: SELECTED MIDDLE SCHOOL AND HIGH SCHOOL EDUCATORS' PERCEPTIONS OF HIV/AIDS INSTRUCTION

Major Field: Applied Educational Studies

Biographical:

Personal Data: Born in Cozad, Nebraska, on September 24, 1955, the daughter of Craig and Betty Worrell.

Education: Graduated from Cozad High School, Cozad, Nebraska in May 1973; received Bachelor of Arts in Education from Wichita State University in May 1977 and received Masters of Science in Education from the University of Kansas in May 1982. Completed the requirements for the Doctor of Education degree at Oklahoma State University in August 2001.

Experience: Raised in Cozad, Nebraska; worked on the family farm, in a drug store, as a waitress and as a vacation guide for two summers upon graduating from high school; employed by Augusta Public Schools as an elementary physical education teacher from 1977-1980; employed as a graduate teaching assistant by the University of Kansas from 1980-1982; employed by Derby Public Schools as an elementary physical education teacher from 1982-1988; employed as an instructor at Wichita State University from 1998-present.

Professional Memberships: American Alliance for Health, Physical Education, Recreation and Dance; Kansas Association for Health, Physical Education, Recreation and Dance.