

AN ABSTRACT OF THE THESIS OF

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Title: A Study to Assess the Knowledge About AIDS Held By
Mental Health Counselors.

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The purposes of this study were to assess mental health counselors' knowledge of AIDS and to determine the effect of various independent variables upon knowledge. The variables used were gender, professional contact with PWAs, personal contact with PWAs, age, sexual preference, AIDS training, and personal acquaintance with a person who is homosexual. A sample of 358 mental health counselors was chosen randomly from the current membership of the American Mental Health Counseling Association which is a division of the American Association for Counseling and Development. Data were collected through a self-administered questionnaire which included a 32-item true-false knowledge test on the transmission, epidemiology, and treatment of AIDS as well as general information about AIDS. Chi-square, t-tests and multiple regression analyses were used at the .05 level of significance to determine the relationship between the variables and degree of knowledge.

Mental health counselors scored quite high on most of the knowledge questions with a mean percentage score of 93%

had a higher knowledge score on epidemiology than females, yet, when the total knowledge score was examined, there was not a significant difference. Respondents who had provided professional services to persons with AIDS within the past year had higher scores for both the sub-section on transmission and total knowledge. Subjects who had been personally acquainted with someone who had been diagnosed with AIDS showed a higher degree of knowledge, whereas acquaintance with someone who is homosexual seemed to have no direct relationship. Although age did not have an effect on knowledge, homosexual mental health counselors had a greater degree of knowledge about AIDS than heterosexuals, and mental health counselors who have had AIDS training have more knowledge of AIDS than those who have not.

Results indicated that there were no significant differences in means between knowledge of AIDS and such factors as religion, work setting, professional degree and geographic area of residence. However, there was a significant relationship between knowledge of community resources and level of knowledge of AIDS.

The study results were reviewed in light of the literature on AIDS and knowledge of AIDS among various professional and non-professional groups. Implications and recommendations for counselor education and clinical practice as a result of this study are presented.

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by

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A STUDY TO ASSESS THE KNOWLEDGE ABOUT AIDS HELD BY
MENTAL HEALTH COUNSELORS

CHAPTER I

STATEMENT OF PROBLEM, SIGNIFICANCE AND HYPOTHESES

Introduction

Acquired Immune Deficiency Syndrome (AIDS)* is a dangerous and deadly disease; it is a communicable disease caused by a virus that results in a breakdown of the body's immune system. The virus destroys infection-fighting cells in the body and leaves a person susceptible to a variety of opportunistic diseases.

Information about AIDS is readily available to the general public through daily newspapers, television news specials, magazines and journals. In 1988 the Surgeon General of the United States authorized sending a brochure, Understanding AIDS (Public Health Service, Centers for Disease Control, (CDC) 1988) to every household in the county. However, even with these attempts to educate the public about AIDS, fear and misinformation remain widespread (Peterson, 1991).

*The acronym AIDS (Acquired Immune Deficiency Syndrome) will be used throughout this paper to refer to the presence of Human Immunodeficiency Virus (HIV) antibodies, as well as the diagnosis of AIDS.

The social climate surrounding the epidemic is intense, volatile and, at times hysterical. Misinformation about AIDS has been particularly destructive in exacerbating an unrealistic fear of contracting AIDS and homophobia (Reieger & Ponterotto, 1988).

Because AIDS is a psychological issue as well as a medical dilemma, it impacts the counseling profession (Maione & McKee, 1987). In order for counselors to effectively treat persons with AIDS, their families and/or friends, counselors must have adequate knowledge and understanding of AIDS and the crisis surrounding it. There is some question whether counselors are knowledgeable about AIDS and thus professionally prepared to deal with the mental and public health emergency it represents (Maione & McKee, 1987).

Significance of the Study

At the end of April, 1991, there were 174,893 reported cases of AIDS in the United States (CDC, 1991).

Public Health officials agree that this number is low, since it does not account for unreported cases, those diagnosed HIV positive or those diagnosed with AIDS-Related Complex (ARC) prior to 1987.

In 1986, the CDC first projected that by 1991 approximately 270,000 cumulative AIDS cases would be reported. In September, 1987, the CDC revised its

projections to account for a broadened clinical definition of AIDS to include ARC and those diagnosed HIV sero-positive. According to the most recent estimates of the CDC, using the revised definition, between 390,000 and 480,000 new cases of AIDS will be diagnosed by the end of 1993 (Zuercher, 1990).

No other disease has had such global and pervasive implications for every segment of medical health care, public health, social policy and mental health practice (Ryan, 1988). More and more, mental health counselors are being called on to assist patients and the medical care system to contend with the complex and innumerable psychosocial issues surrounding AIDS and AIDS-related illnesses (Morin & Batchelor, 1989).

This pandemic demands an immediate and proactive response from the larger professional organizations as well as the individual practitioner (Ryan & Rowe, 1988). In order to adequately assist with the war on AIDS, mental health clinicians must be knowledgeable about basic medical and scientific facts regarding AIDS. Since no setting in any region of the United States will be spared by the pandemic of AIDS, mental health counselors will need to become competent and comfortable in the roles of therapists, educators and community liaisons (House, Gray & Tyler, 1990).

AIDS continues to affect stigmatized and powerless groups such as gay males, male minorities of color, and more recently women and children of color. It has become progressively difficult for the disenfranchised to obtain adequate medical care and other necessary services (Shernoff, 1988a). Therefore, it is imperative for mental health counselors to take a more visible role in organizing and advocating services for people with AIDS (PWA), and in lobbying state and local policymakers to protect the rights of the disenfranchised.

To address the problem, mental health counselors should be able to discuss AIDS issues with clients, including prevention and risk reduction. They should be aware of local resources available to clients. And they must avail themselves of the opportunity to shape appropriate social responses towards AIDS (Furstenberg & Olson, 1984).

Even though some mental health counselors have responded to the AIDS pandemic on an individual level, (e.g. as volunteers for grassroots AIDS groups) professional counseling associations, public schools, and programs of counseling have been slow to develop and implement appropriate policies and programming (Gray, 1988).

Despite the amount of general information available to the general public, a review of literature

for this study revealed a lack of information related to AIDS in two of the major mental health journals. Although the AIDS virus was first identified in 1981, an article on AIDS did not appear in the Journal of Counseling and Development until 1986. As of May, 1990, the JCD had printed only nineteen articles and letters related to the AIDS pandemic (House, Tyler & Gray, 1990a). It is important to note that there continues to be a lack of literature available on AIDS in the counseling journals, e.g. Journal of Mental Health Counseling and the Journal of Counseling and Development. It would seem that the response of the mental health profession to the AIDS crisis has been slow and inadequate.

Dr. Lizbeth Gray (1988) Guidepost Editorial, admonished the American Association of Counseling and Development (AACD) to become more involved by taking an active position on AIDS prevention, AIDS education and AIDS counseling. She stated, "Unintentionally, our professional organization has passed the responsibility of taking a leadership role in fighting AIDS to other groups" (p. 9).

House, Gray & Tyler (1990) believe that counselors should be addressing core issues related to AIDS: sexual conduct, homophobia, serious illness, death, and coping with dying and grieving. Gray, Cummings, Johnson & Mason (1989), indicate that

counselor education programs are not providing training in the areas most needed to even minimally prepare counselors to deal with these core issues. The results of their study showed that only 44% of 270 counselor education programs offer a class in human sexuality, and of these, only 20% require the course.

Purpose of Study

The purposes of this study are to: (1) assess mental health counselors' knowledge of AIDS; (2) determine the difference in knowledge of AIDS between male and female counselors; (3) determine the extent to which professional contact with people with AIDS within the past year has had an effect on their level of knowledge of AIDS; (4) determine the extent to which being personally acquainted with a person with AIDS has had an effect on their level of knowledge of AIDS; (5) determine the extent to which being personally acquainted with someone, other than a client, who is homosexual has had an effect on their level of knowledge of AIDS; (6) determine the extent to which age has an effect on level of knowledge of AIDS; (7) determine the extent to which sexual orientation has an effect on level of knowledge of AIDS; and (8) determine the extent to which hours of AIDS training has an effect on level of knowledge of AIDS.

AIDS is a disease that is strongly associated with male homosexuality (Curran et al., 1985). It

appears likely that those individuals who express a negative attitude toward homosexuality also display a greater prejudice toward PWAs. The study by St. Lawrence, Husfeldt, Kelly, Hood & Smith (1990) of 300 college students found that homophobia is a good indicator of prejudice toward PWAs. In a study of 407 French Canadian adults, Tessier (1989) reported that homophobia is a key indicator of sexual conservatism associated with negative attitudes about AIDS. Other researchers have found that the stigma of AIDS is primarily associated with the high risk groups of homosexual and bisexual men (Douglas, Kalman & Kalman, 1985; Kelly, St. Lawrence, Smith, Hood & Cook, 1987; O'Donnell, O'Donnell, Pleck, Snarey & Rose, 1987; Reed, Wise & Mann, 1984). Researchers have found that nurses and physicians acknowledge more negative reactions toward male homosexuals since the AIDS epidemic (Douglas et al., 1985; Kelly et al., 1987). They also believe that AIDS patients received inferior care when compared to patients with other illnesses (Douglas et al., 1985).

Fear generated by misunderstanding and uncertainty is a common response to AIDS. Fear and prejudice lead to inadequate and unsatisfactory mental health care (Stanford, 1988). However, fear and negative attitudes toward PWAs can be altered by accurate knowledge about the disease (Haughey, Scherer

& Wu, 1989). The literature on continuing medical education suggests that changes in knowledge are related to behavior and attitude changes (Lawrence & Lawrence, 1989; and Wertz, Sorenson, Liebling & Kessler, 1988).

Gordin, Willoughby, Levine, Gurez & Neill (1987) found that knowledge is a predictor of positive attitudes, appropriate professional behavior and lower anxiety in dealing with AIDS patients. Other researchers have reported a correlation between higher AIDS knowledge scores and higher positive attitudes toward PWAs (Henry, Campbell & Willenbring, 1990; Lawrence & Lawrence, 1989; and Shapiro, 1989). Larsen, Serra and Long, (1990) contend that the more knowledgeable a person is about the disease of AIDS, the more tolerant s/he is towards the victim. The study by Dhooper, Royse and Tran, (1987-88) demonstrated that greater knowledge about AIDS, including how it is spread and the risks of contagion can be an antidote for unreasonable fear of AIDS.

Because fears and attitudes can be influenced by up-to-date knowledge about the disease of AIDS, it is important to assess counselors' knowledge level in order to target continuing education interventions. Only as counselors are knowledgeable about the disease and its impact will they be competent to educate their clients, colleagues, and communities effectively.

Investigation of the relationship between knowledge and training has revealed that there is a direct relationship between level of knowledge and attendance at professional conferences and workshops on AIDS (Lewis et al., 1986; King, 1989; and Prince, Beard, Ivey & Lester, 1989). Research seems to further indicate that subjects who have had professional and personal contact with a PWAs have a greater understanding of the disease of AIDS (Haughey, Scherer & Wu, 1989; Henry, Campbell & Willenbring, 1990; King, 1989; and Wierner-Brawerman, 1988).

Results are mixed concerning gender and knowledge of AIDS. Most studies have shown that there is no significant difference in knowledge of AIDS between males and females (Baldwin & Baldwin, 1988; Dhooper et al., 1987-88; King, 1989; and Vener & Krupka, 1988). In some studies males had higher knowledge scores than females (Henry, Campbell & Willenbring, 1990; Price, Desmond & Kukulka, 1985). However, other studies indicated a higher level of knowledge among females (Baldwin & Baldwin, 1988; and Goodwin & Roscoe, 1988).

On the other hand, the vast majority of studies have found that males hold more negative attitudes toward homosexuality and PWAs than females (D'Augelli, 1989; Bouton, Gallagher, Gerlinghouse & Lee, 1989; Crull & Bruton, 1979; Dhooper, Royse & Tran, 1987-88; Goodwin & Roscoe, 1988; Gray and Saracino, 1990;

Grieger & Pontorotto, 1988; Hansen, 1982; Heaven, Connors & Kellehear, 1990; Kite, 1984; Lester, 1989; Merrill, Laux & Thornby, 1989; Millham, Miguel & Kellogg, 1976; and Simkins & Kushner, 1986). Some studies have reported either no gender based bias against homosexuality and PWAs (Newman, 1989; Black & Stevenson, 1984; and, Hudson & Ricketts, 1980), or more negative bias on the part of females (Shapiro, 1989; Douglas, Kalman & Kalman, 1985).

Some studies have reported either no gender based bias against homosexuality and PWAs (Black & Stevenson, 1984; Hudson & Ricketts, 1980; and Newman, 1989), or more negative bias on the part of females (Douglas, Kalman & Kalman, 1985; and Shapiro, 1989).

Age will be used as a co-variate in the analysis of data where gender is a variable. Some data suggest that there is no significant difference between age and level of knowledge (Fredman et al., 1989; Lawrence & Lawrence, 1989; and Peterson, 1991). Other studies have shown that age does have an effect on knowledge; younger subjects scored higher in knowledge than older subjects (King, 1989; Lewis, Freeman & Corey, 1987; and Shapiro, 1989).

Sexual preference and knowledge of AIDS has rarely been studied. The few studies available seem to indicate that there are no significant differences in knowledge between homosexual and heterosexual subjects.

(McDermott, Hawkins, Moore, & Cittadino, 1987; and Richardson, Lochner, McGuigan & Levine, 1987). However, because at the present time homosexual and bisexual males have the highest frequency of diagnosis, it would seem that they would have the greatest interest in being more knowledgeable about the disease than those less affected.

Because research (Lawrence & Lawrence, 1989) suggests that attitudes toward PWAs can be changed by increasing knowledge, it seems vital that up-to-date information be provided to those fighting on the front lines of the war on AIDS. But does AIDS training really increase level of knowledge about AIDS? Several studies seem to suggest that it does (King, 1989; Lewis et al., 1986; and Prince et al., 1989).

Hypotheses

The purposes of this study were to: (1) assess mental health counselors' knowledge of AIDS; (2) determine the difference in knowledge of AIDS between gender; (3) determine the extent to which professional contact with PWAs within the past year has had an effect on their level of knowledge of AIDS; (4) determine the extent to which personal contact with PWAs, other than a client, has had an effect on their level of knowledge of AIDS; (5) determine the extent to which being personally acquainted with someone, other than a client, who is homosexual has had effect on

their level of knowledge of AIDS; (6) determine the extent to which age has an effect on level of knowledge; (7) determine the extent to which sexual orientation has an effect on knowledge of AIDS; and (8) determine the extent to which AIDS training has an effect on level of knowledge of AIDS. In order to fulfill these purposes the following hypotheses will be tested.

HO₁: There is no difference with respect to knowledge of AIDS between male and female mental health counselors.

HO₂: There is no difference with respect to knowledge of AIDS between mental health counselors who have and have not provided professional services to persons with AIDS within the past year.

HO₃: There is no interaction between gender of the mental health counselor who provided professional services to persons with AIDS within the past year and the gender of those that did not provide professional services to persons with AIDS within the past year.

HO₄: There is no difference with respect to knowledge of AIDS between mental health counselors who have and have not been personally acquainted

with someone, other than a client, who has been diagnosed with AIDS.

HO₅: There is no difference with respect to knowledge of AIDS between mental health counselors who are personally acquainted with someone, other than a client, who is homosexual.

HO₆: There is no difference with respect to knowledge of AIDS between younger and older mental health counselors.

HO₇: There are no differences with respect to knowledge of AIDS between homosexual, bi-sexual and hetercsexual mental health counselors.

HO₈: There is no difference with respect to knowledge of AIDS between mental health counselors who have had AIDS training and those who have not had AIDS training.

Definitions

Encephalopathy = An infection of the brain and spinal chord.

Epidemic = A rapidly spreading contagious disease.

Epidemiology = The study of the distribution and causes of diseases.

HIV-positive = Having a positive reaction to HIV antibodies, although not currently ill or exhibiting physical symptoms. However, the person is a "carrier" of the virus.

Homophobia = Irrational fear or hatred of homosexuals or homosexuality.

Incubation period = The length of time between which an individual is first infected with a disease causing organism and the development of symptoms.

Latency = A period when the virus is in the body but rests in an inactive, dormant state.

Morbidity = The degree of symptomatic illness associated with an infectious organism.

Pandemic = The prevalence of a disease over a whole area.

Perinatal = Occurring in the period shortly before or shortly after birth.

Seroconversion = The development of antibody to an infectious agent.

Toxoplasmosis = A disease which damages the central nervous system, eyes, and viscera.

CHAPTER II

REVIEW OF PERTINENT LITERATURE

Everybody knows that pestilences have a way of recurring in the world, yet somehow we find it hard to believe in ones that crash down on our heads from a blue sky. There have always been plagues as wars in history; yet always plagues and wars take people equally by surprise.

Albert Camus, 1972, p. 35

Pervading psychological factors have made AIDS a mental health, as well as a public health emergency; therefore, it is having a dramatic impact on the counseling profession (Maione & McKee, 1987). In order to effectively treat persons with AIDS, their families and significant others, mental health counselors must continue to expand their knowledge and understanding of AIDS. Because misinformation about AIDS has been particularly disruptive in exacerbating paranoia and homophobia, knowledgeable mental health counselors can help to decrease anxiety and needless panic and increase tolerance and hope.

To be prepared to deal effectively with the issues surrounding the AIDS pandemic, mental health counselors must be knowledgeable about basic scientific and medical information in addition to the psychological and psycho/social issues surrounding AIDS. Penzien (1986), recommends that mental health

counselors should know the following scientific and medical information about AIDS: disease description, epidemiology, pathogenesis, transmission, and medical treatment.

The first section of the review of literature will briefly address the medical and psychosocial aspects of AIDS as suggested by Penzien (1986). The second section of the review of literature will discuss literature related to knowledge of AIDS of professional and non-professional groups. The literature will be examined starting from the least pertinent progressing to the most pertinent information. The last section will report on literature as it relates to the hypotheses of this study.

Since there is a paucity of literature on the interrelationship of mental health counselors and AIDS in such journals as the Journal of Counseling and Development and the Journal of Mental Health Counseling the majority of the review of literature will focus on AIDS related knowledge base among other professional and non-professional populations.

History

The AIDS pandemic was first noted as a report in June of 1981. The report described how in the past eight months, five cases of an extremely rare type of pneumonia caused by the protozoan *Pneumocystis carinii*

had been diagnosed in the Los Angeles area. Up until that time the disease had been so uncommon that treatment medications were still considered experimental and could be dispensed solely by the Centers for Disease Control (CDC). Between 1967 and 1979 there had been only two requests for pentamidine isethionate to treat adults who had contracted *Pneumocystis carinii* pneumonia (PCP); yet in five new cases this type of pneumonia had struck young homosexual men whose immune systems had been malfunctioning for no apparent reason.

There was another strange disease phenomena taking place at the same time. The CDC received reports of an increase in the type of cancer previously found predominantly in elderly men and patients receiving immunosuppressive therapy. In a 30-month span, 26 cases of Kaposi's sarcoma had been diagnosed among young homosexual men in New York and California (Heyward & Curran, 1988). These two symptomatic phenomena led to the discovery of the virus which causes the disease which we today know as AIDS.

Acquired immune deficiency syndrome (AIDS), is a communicable disease caused by a virus that results in a breakdown of the body's immune system. This virus destroys infection-fighting cells in the body and leaves a person susceptible to a variety of diseases. These diseases are known as opportunistic diseases.

These diseases are caused by harmful micro-organisms that ordinarily would be destroyed by a healthy immune system (Moffott, Spiegel, Parrish & Helquist, 1987).

AIDS is the name given to this recently recognized medical condition. It has become a major cause of morbidity and mortality in the United States in homosexual males, and the leading cause of death among people with hemophilia and users of illegal intravenous drugs (Francis & Chin, 1987).

Epidemiology

Although first identified in 1981, AIDS can be traced back to 1979 (Curran, 1983). Since 1981 the number of cases has increased in epidemic proportions, resulting in considerable morbidity and mortality. As of May, 1991, 179,136 cases of AIDS have been diagnosed in the United States. Of this number, 60% are as the result of male homosexual/bisexual contact, 21% are the result of IV drug use and less than 2%, the infection of infants as a result of a mother with or at risk for HIV infection (CDC, 1991).

The federal Centers for Disease Control in Atlanta reports that although only 11% of people diagnosed with AIDS in 1988 have died, 92% of those diagnosed in 1981 have died. About 95% of those diagnosed at the very start of the pandemic in 1980 have died. Dr. Ann Hardy, an epidemiologist with the CDC states, "Of all reported AIDS cases, the fatality

rate is about 56%." (American Health Consultants, Inc., 1988). The National Research Council, the research arm of the National Academy of Sciences', reported at the Sixth International Conference on AIDS that this disease is moving to new groups in society, specifically women, adolescents and non-IV drug users (Hilts, 1990).

Today, women are the fastest growing category of people with AIDS in the United States and account for over 10 percent of all reported AIDS cases (Stuntzner-Gibson, 1991). In 1989, 547 cases of AIDS transmission were reported, up 17% from 1988 (AIDS Cases Slow, 1990). The incidence in heterosexual cases of HIV disease increased from 0.9% in 1983 to 5.0% by 1991 (CDC, 1991).

Although death rates for women from breast cancer, heart disease and unintentional injuries is higher than from AIDS, the number of deaths due to HIV infection in women has direct implications for the number of deaths that will occur in infants and children due to HIV infection from the mother. As of December, 1989 approximately 80% of the 1,995 children diagnosed with AIDS acquired HIV from their infected mothers (Chu, 1990).

People of color have been disproportionately affected by AIDS. AIDS is 11 times more frequent among black and Hispanic women than white women, over 10

times more frequent in black men, and four times more frequent in Hispanic men than in white men (Holmes & King, 1990).

In New York City, 51% of all women with AIDS are black and 32% are Hispanic. Over 90% of the infected children under five years of age are black and Hispanic. Nearly all children of color with AIDS (90%) acquired the infection from their mothers during pregnancy or at birth, whereas 57% of white children acquired the infection from transfusions of blood or blood products. The cumulative rates of AIDS infection in black and Hispanic children are respectively 14.3 and 7.4 times the rates for white children (Santree, 1988).

Transmission

In the vast majority of cases, HIV transmission can be linked to at least one of four routes: sexual contact, HIV contaminated needles, blood and blood products, and infected mothers to newborns. There is no evidence that the virus can be passed on by casual contact, although traces of the virus have been found in saliva, tears, urine, and feces (Hamburg, 1990).

According to Green (1989), the risk of infection is basically related to two things. The first is the amount of virus present in a body fluid or tissue: the higher the concentration, the greater the risk. The second is that the virus has to get into the body to

cause the infection. There is no evidence that it is able to cross intact skin. Therefore, the virus must come into contact either with non-skin surfaces, such as the vaginal and rectal linings, or be carried through the skin, as with blood transfusions or needlestick punctures.

Although many medical personnel fear contracting the virus through care of AIDS patients (Gordin, Willoughby, Levine, Gurel & Neill, 1987), the risk of occupational transmission of HIV appears to be statistically low. In an ongoing study by the CDC, four of 870 health care workers had seroconverted following needlestick exposure (Marcus, 1988). Similarly, only one seroconversion had been reported from 235 health care workers with 644 needlestick exposures in San Francisco (Kelly, St. Lawrence, Smith, Hood, & Cook, 1987).

Data are mixed regarding the number of people infected with HIV who have seroconverted to AIDS. Some data indicates that approximately 20 to 30 percent of infected persons have developed AIDS within five years of their infection (Ebberson, 1986). Other studies estimate that 50% of HIV-infected patients will develop AIDS within eight years of infection, and that nearly half of those individuals will die within the following year (Simon, 1989).

In order to test for the presence of antibodies to HIV in the serum of the blood, the enzyme-linked immunosorbent assay (ELISA) test was made available in 1985. When the ELISA suggests the presence of the HIV antibody the Western Blot test is used to confirm the probability (Chavigny, Turner & Kibrick, 1989).

Worldwide

The AIDS pandemic has even more sobering global ramifications. More than 7,000 new cases of AIDS were reported to the World Health Organization (WHO) in July, 1990, increasing the global total to 273,425 since records began. The United Nations reported that any where from 8 million to 19 million people might already carry the HIV virus (July sees, 1990).

By the end of 1989 a total of 31,497 cases of AIDS and 12,973 deaths had been reported to the WHO by 32 European countries. This is an increase of 65.3% since the end of 1988. The greatest increases were in France, Spain, Italy and Germany. Estimates of trends indicate that the largest increase is among heterosexuals (WHO Collaborating Center on AIDS, 1989). In some parts of Africa, a third of the population has acquired HIV, primarily through heterosexual contact. In Thailand, the pandemic spread from IV drug users to heterosexuals and exploded, with infection rates increasing by 50 times in three years (Bolton, 1989). AIDS is the leading cause of death among men and the

second leading cause of death among women in Abidjan, the capitol of the Ivory Coast, West Africa (Okie, 1990).

Trends

WHO predicts that the AIDS pandemic, which has affected 500,000 women and children worldwide in the 1980's will kill at least 3 million more in the 1990's. In major cities in the Americas, Western Europe, and sub-Saharan Africa, AIDS has become the leading cause of death for women age 20-40. If continued, this trend will cause an infant mortality rate as much as 30% higher than what would otherwise be expected (Chin, 1990).

AIDS in the next decade will be worse than in the previous one, according to experts such as Jonathan Mann, former director of the World Health Organization's Global Program on AIDS. An estimated 20 million people may be infected with HIV worldwide by the year 2000, with 5 million to 6 million sick. In the United States, the disease is moving into smaller cities and spreading to heterosexuals (Bowley, 1990).

Pathogenesis

A virus labeled Human T-lymphotropic virus type III (HTLV-III) appears to be the etiologic agent in AIDS. HIV is the commonly used term to describe this agent, although it is still referred to under names

used in the past; HTLV-III, lymphadenopathy-associated virus (LAV) and the AIDS-related virus (ARV) (Fauci, 1988).

The virus was co-discovered by Drs. Robert Gallo and Luc Montagnier. The HIV virus invades white blood cells, the T4 or T-helper cells. The T-helper cells act to turn on the immune system when the body is under attack by infectious agents. They play a key role in the body's defenses against cancer by mobilizing immune system processes which act to kill cancer cells (Boushey & Smith, 1984). In AIDS, many T-helper cells are invaded by the virus and killed; others are impaired in their function, even though they are not infected. The result is that the immune system does not switch on properly in response to invasion by various infectious agents (Green, 1989). Because the immune system is disabled, the individual is susceptible to illnesses which they would normally overcome.

To meet the CDC definition of AIDS, a person must be infected with the AIDS virus, be suffering from any of about 20 infections and cancers not found in people without AIDS, and must not have any other problem that would make that person susceptible to the infections and cancers (Meeks & Heit, 1988).

The most common health problems that lead to an AIDS diagnosis are Kaposi's sarcoma (KS) and

Pneumocystis carinii pneumonia (PCP). Kaposi's sarcoma is a rare type of cancer that occurs as spots on the surface of the skin or in the mouth. The spots look like bruises which appear either reddish or brownish in color. The spots usually get larger and spread to other parts of the body. Kaposi's sarcoma is a common cause of death among AIDS patients (Beral, Peterman, Berkelman & Jaffe, 1990). Pneumocystis carinii pneumonia is an opportunistic form of pneumonia associated with AIDS. The disease spreads rapidly through the lungs and is difficult to treat effectively. It is the most common cause of death among AIDS patients (Gracie, Froebel, Madhok, Lowe & Forbes, 1985).

Most AIDS patients have either PCP or KS. Those diagnosed with KS tend to live much longer than those diagnosed with PCP. Under the typical course of AIDS, the patient keeps getting opportunistic infections until s/he weakens and succumbs to one of them (American Health Consultants, 1988).

A person with AIDS may manifest various symptoms of AIDS. Some of the more common symptoms include: night sweats, fatigue, malaise, unexplained weight loss, yeast infections, shortness of breath and coughing, recurrent diarrhea and swollen glands in at least two parts of the body which persist for three months or more, (Hall, 1988).

The AIDS virus can also directly attack the central nervous system (CNS). Researchers are not clear when CNS infection first becomes apparent in otherwise asymptomatic individuals, nor is there certainty about the proportion of asymptomatic seropositives who might be suffering from mild cognitive impairment (Wolcott, Fawzy & Pasnau, 1985). However, CNS symptoms may manifest after initial seroconversion, although Mayer (1989) believes that it manifests later in the course of the HIV infection. AIDS dementia complex (ADC) is the most common neurological complication of AIDS (Tross & Hirsch, 1988). The early picture of ADC resembles depression and is often indistinguishable without neuropsychologic testing (Dalakas, Wichman, & Sever, 1989).

Usual initial symptoms are forgetfulness and poor concentration. Psychomotor retardation, decreased alertness, apathy, withdrawal, diminished interest in work, and loss of libido develop soon after (Navia & Price, 1986). Manifestations of the later stages of ADC include frank confusion, disorientation, seizures, mutism, profound dementia, coma, and death.

Treatment

At the time of this research project, Zidovudine (AZT) is the only antiviral drug approved by The Food and Drug Administration for treatment of AIDS, although dideoxycytidine (ddC) and dideoxyinosine (ddI) have

been approved for experimental use only (Falloon, 1990). Drugs like AZT inhibit specific enzymes of the virus and prevent it from multiplying, but do not restore the immune system by themselves (Mayer, 1989). AZT gives a person a slightly longer lifespan and can greatly improve the quality of life. Patients treated with AZT seem to develop fewer infections, gain weight, and show an increased number of certain T-lymphocytes (Bohn, 1987).

At the present time there is no vaccine or antibiotic to fight the spread of the disease. Knowledge and behavior change are presently the only available means to curtail the further spread of AIDS.

Cost

A pandemic of this magnitude has severely stressed the health care system in terms of its financial cost, use of resources and effect on medical and support personnel. A recent study of hospitalized patients with AIDS indicates that the estimated cost of in-patient care for patients with AIDS will be approximately \$336 million. This estimate does not include the cost of out-patient care or medication. It is estimated that the cost of the enzyme-linked immunosorbent assay (ELISA) antibody test alone will add another approximately \$100 million per year (Landsman, Ginzburg & Weiss, 1985).

Federal health officials from the Department of Health and Human Services estimate that Americans infected with AIDS may need \$2 billion to \$5 billion annually to pay for the anti-viral drug aerosol pentamidine (AZT) that delays progression of AIDS. AZT now costs about \$8,000 annually for each patient (Cost of Drug Treatment, 1990). Medical care costs for care of PWA is difficult to project. A mid-range estimate would boost medical costs for AIDS to \$38 billion by 1991 (McLaughlin, 1989).

Psychosocial Issues

The diagnosis of AIDS or a positive diagnosis for HIV virus represents a crisis for the infected patients and their significant others. The process that an AIDS patient goes through has often been compared with that of patients suffering with other life-threatening illnesses, and yet the process is much more complicated for people with AIDS (Mechanic, 1986).

Even after the diagnosis, the PWA is confronted with a myriad of medical and psychosocial stressors unique to the disease of AIDS. Not only must they confront their own mortality, they must cope with the disabling and disfiguring effects of the illness. Equally stressful is the fact that persons with AIDS will be confronted by a society which at best tolerates them and at worst hates them and shuns their very presence (Nichols, 1985).

Prejudice

The gay male PWA may be prematurely forced "out of the closet" into a society where prejudice and bigotry run rampant. People with AIDS often are blamed for causing their condition, especially those who contracted the disease as the result of sexual activities or sharing of needles. According to a 1987 Gallop poll, approximately half of Americans agreed that, "most people with AIDS have only themselves to blame" (Herek & Glunt, 1988, p. 889).

At the Sixth International Conference on AIDS, researcher Molly Cooke (Survey, 1990) reported that many medical residents across the nation want nothing to do with AIDS patients because of fear of infection and prejudice against infected groups. Another survey of health professionals (Douglas, Kalman & Kalman, 1985) concluded that a disturbingly high percentage of homosexual subjects acknowledged more negative, even overtly hostile feelings, toward themselves than they had before the emergence of the AIDS epidemic.

The stigma attached to the diagnosis of AIDS often triggers shock, anxiety, social withdrawal and feelings of guilt, depression, fear and anger in the PWA (Morin, Charles & Malyon, 1984). The PWA is placed in a difficult dilemma, as s/he is obligated to place his or her life in the hands of a society that has

taught him or her to doubt the value of his or her very existence (Goldmeier, 1987).

Marzuk, Tierney, Tardiff, Gross, Morgan, Hsu, & Mann (1988) found a substantially increased risk of suicide among males with AIDS. Men aged 20 to 59 years with a diagnosis of AIDS were approximately 36 times as likely to commit suicide than men in the general population. The rate of suicide in females with AIDS was less than that of males with AIDS.

Physical Appearance

AIDS is a disease that can cause debilitation and disfigurement. AIDS patients are particularly sensitive to a loss of bodily control, such as bladder and bowel control (Allers & Katrin, 1988). Self-esteem is often a struggle for patients who experience symptoms such as extreme weight loss, loss of energy and the effects of Kaposi's sarcoma lesions, which in and of themselves tend to stigmatize the person. These symptoms are especially stressful for the young person who was once vital and energetic (Moynihan, Christ & Silver, 1988).

The family and significant others may also be the target of prejudice, alienation, and their own fear of alienation. This fear may lead to withdrawal of support, thus increasing the PWAs sense of isolation and alienation. Out of anger that the patient brought the disease on him or herself, close friends and family

may impede the patient's efforts to be actively engaged in life (Morin & Batchelor, 1984).

Although the AIDS patient may have intensified need for physical and emotional contact, they are hampered by the fear of contaminating others, particularly their lovers and family. This circumstance may be exacerbated by the unwitting withdrawal of partners, family and friends, out of their own fear (Stulberg & Buckingham, 1988). Family members may not understand or be able to accept the severity of the illness, and may encourage the patient to do what s\he is not physically able to do considering his or her physical condition (Moynihan et al., 1988).

Occupational Stress

Whereas the PWA may psychologically need and want to continue to work, he\she may find it difficult to handle a full-time job, since his or her physical condition and the erratic process of the disease may interfere with consistent employment. Employers may be unwilling to continue his or her employment, and co-workers may be unable to overcome their ignorance and personal fears about AIDS (Allers & Katrin, 1988).

Knowledge of AIDS

General Public

An AIDS prevention research interest group at The University of Texas College of Communication in Austin, surveyed residents of Travis County regarding knowledge of AIDS, attitudes toward AIDS, and AIDS-related risk-taking behaviors (Shoemaker, Larose, & McAlister, 1988). Five questions were used on the knowledge part of the survey. Although 93.5% and 81.3% of the respondents respectively knew that AIDS could be transmitted sexually from a woman to a man, and that AIDS cannot be transmitted by coughs or sneezes, however, only 74% knew that people can be infected with the AIDS virus without suffering from any of the disease's symptoms. Only 51% knew that no AIDS cases had been caused by contact with an infected person's saliva, and only 66% knew that AIDS cannot be transmitted by mosquitos. The authors interpreted these findings to indicate that Travis County residents were well informed about AIDS. The majority of the subjects had gained information about AIDS from television and the newspaper.

Approximately every three months, the National Center for Health Statistics surveys a single randomly chosen sample of adults 18 years of age or over in each family to assess AIDS knowledge and attitudes. The questionnaire was revised in May 1988. The results of

the last survey (Hardy, 1990) found that knowledge about the three major modes of transmission (sexual, through sharing contaminated needles, and from mother to baby during pregnancy) was high. The proportion who said it was definitely true that a pregnant woman with the AIDS virus could give it to her baby increased from 77% in December, 1987 to 84% in December, 1989. There was also a slight increase in the proportion of adults who felt it was definitely true that a person can be infected with the AIDS virus and not have the disease (from 55% in December, 1987 to 58% in December, 1989). Fifty-one percent felt that it was true that a person with the AIDS virus can look and feel healthy. This figure was an increase from 48% in the first quarter of 1987.

AIDS knowledge increased as a result of education and was higher for those under 50 years of age than for those 50 years and over. Responses to most questions dealing with the possibility of transmission by casual contact showed an increase in the percent of adults who thought it "very unlikely" or "definitely not possible" to become infected in the selected ways. There was an increase from December, 1987 to December, 1989 in knowledge of the following modes of transmission: Living near a hospital or home for AIDS patients (increase from 81% to 84%), attending school with a child who has the AIDS virus (increase from 68% to

77%); shaking hands, touching or kissing on the cheek someone who has the AIDS virus (increase from 72% to 74%); working near someone with the AIDS virus (increase from 65% to 71%); using public toilets (increase from 52% to 61%); eating in a restaurant where the cook has the AIDS virus (increase from 43% to 51%); sharing plates, forks, or glasses with someone who has the AIDS virus (increase from 48% to 49%); and being coughed or sneezed on by someone who has the AIDS virus (increase from 41% to 46%).

Responses are indicative of a fairly high level of misperception about HIV transmission. As compared with the December, 1987 survey, there was an increase of 1% in the proportion who had heard of the blood test for the AIDS virus (73% to 74%).

A study by Vacalis, Shoemaker and McAlister, (1989) of Texas residents revealed a moderate level of knowledge. Out of 10 questions intended to assess knowledge of AIDS, the mean score was 6.4, with no significant difference between males and females. Most of the subjects did not know the signs and symptoms of AIDS. High knowledge about AIDS was related strongly to high educational level and high family income. Approximately 16% did not know that healthy appearing people can be a source of HIV infection. There was confusion regarding transmission by casual contact. For example, not quite half of the respondents thought

they could be infected by saliva; 13% believed they could be infected by eating at a restaurant where a waiter was HIV infected; 22% thought they could be infected by a mosquito bite, and 38% by giving blood. Only 41% knew that AIDS does not attack red blood cells.

A survey of Oregon residents (Skeels & Johnson, 1990) found that the respondents were quite sophisticated in their overall understanding of the technical facts about how AIDS is and is not transmitted. However, there were definite gaps in many respondents' knowledge. Only 74% knew that the virus could not be transmitted by sharing living quarters with an infected person, and only 82% realized that a non-infected person could not contract the virus by donating blood. This lack of understanding was most severe among those with low incomes or with modest education. Seven percent refused to answer questions regarding prevention, with only 75% answering as "important" the use of latex condoms in AIDS prevention.

Physicians

One of the earliest studies of primary care physicians was conducted in the San Diego area by Barrett-Conner (1984); it found that physicians had a good level of knowledge about most of the important known facts of AIDS, including the population at risk,

disease presentation and prognosis. Most of the respondents were also aware of the limited potential for transmission by casual contact, and were relatively unconcerned about acquiring the disease from their patients. Some of the information gaps were related to the current geographic distribution of AIDS, and the low risk to children in households of AIDS patients. This author notes that the results of the data were not included in the article, making it impossible to know the percentage of correctly answered questions, and how this translated into the level of knowledge.

An early study of 625 physicians in Los Angeles County found that more than 40% of respondents had not heard of the AIDS-related complex, and fewer than a one-third could name at least three symptoms. In addition, almost 75% of the physicians did not know of a screening test for AIDS. However, on a six-month follow-up, the number who knew of an AIDS screening test had risen to almost 80%. In general, the practitioners who had been in practice the longest, who had graduated from a medical school in a less-developed nation, and who had not attended lectures or professional meetings about AIDS were least likely to be in the competent category. According to the authors, less than 30% of the respondents demonstrated adequate knowledge of practices necessary to deal with

patients who had AIDS-related symptoms and concerns (Lewis, Freeman, Kaplan & Corey, 1986).

A later study by Lewis, Freeman and Corey (1987), compared data to similar data obtained in 1984 (see the last mentioned study). Levels of competency in diagnosing and counseling persons with AIDS-related disorders increased in physicians in Los Angeles. However, on a statewide basis, a majority of physicians interviewed lacked the AIDS-related knowledge and skills required to carry out their role in dealing with AIDS. This lack of knowledge was demonstrated by the fact that 65% of the respondents failed to inquire routinely about the sexual orientation of new or regular patients. Further, only 44% knew more than three symptoms of the AIDS-related complex. Although more physicians were aware of screening tests for antibodies with HIV, only 16% knew that their primary concern with such tests should be the specificity or capacity to generate false positives. In addition, only 17% did an adequate evaluation by history and physical examination, and included AIDS in their differential diagnosis.

Richardson, Lochner, McGuigan & Levine, (1987), surveyed 314 heterosexual and homosexual physicians in Los Angeles. Most of the physicians indicated that they had a low to moderate knowledge of AIDS and low levels of experience in treating conditions such as

Pneumocystis carinii pneumonia, Kaposi's sarcoma, or AIDS itself. Only 66% of respondents strongly believed that nurses who cared for AIDS patients were not at risk. The issue of the potential for infectivity of AIDS was seen as a deterrent to treating AIDS patients. Most physicians also felt they had little preparation in dealing with persons suffering from opportunistic infections.

In a study of health professionals, including nurses, physicians and dentists in the Thames region of England, Searle (1987) found evidence of ignorance and anxiety about AIDS among general practitioners, as well as among other health professionals. Overall, 38% did not know the meaning of an antibody test. They also demonstrated an eagerness to serotest patients, especially those in high-risk groups, before hospital admission. A sizeable proportion of respondents wanted to identify seropositive patients in order to refer them elsewhere.

The Anderson & Mayon-White (1988) study of 280 general practitioners in Oxfordshire, England revealed that although most were well informed about most of the means of transmission, they remained uncertain about its transmission by saliva, razors, oral sex, breast feeding, insect bites, dentists, and hairdressers. One-third of the physicians said that they would like further education in matters related to AIDS. Three-

quarters of the respondents thought they had adequate knowledge about AIDS, even though only one-third thought they could do long-term counseling with HIV-positive patients.

Milne & Deen (1988) surveyed 132 general practitioners in East Berkshire, London. Although the majority of physicians correctly classified sharing needles and anal intercourse, as high risk, there was some confusion from a minority of physicians on other routes of transmission, i.e. breast feeding, insect bites, deep kissing, saliva, and oral sex. In addition, routes that carry no risk were regarded as carrying some risk by some practitioners, i.e. saliva, insect bites, sharing crockery or cutlery and swimming pools.

In a study conducted by Schultz, MacDonald, Heckerti & Osterholm (1988) of Minnesota primary care providers, a high level of knowledge about HIV transmission was found among respondents. Half of the respondents indicated interest in additional training and information. Respondents with prior HIV disease experience showed slightly higher levels of interest in obtaining AIDS information.

Another study of physicians in four New York hospitals found that 89% of all respondents believed it was possible to acquire AIDS from their patients by needlestick exposure, and 67% believed it was possible

by other contact with body fluids; 2% believed it was possible to acquire the virus by casual contact (Link, Feingold, Charrp, Freeman & Shelov, 1988).

Shapiro (1989) studied 1271 general practitioners throughout the United Kingdom, and assessed their self-perceived and actual knowledge of AIDS, as well as their attitudes regarding the illness. Recently qualifying doctors scored higher, were less likely to test for HIV without the patient's consent, and thought that they had more knowledge about AIDS and had less hostile attitudes toward patients with AIDS than their older colleagues. Professional journals were the most quoted primary sources of AIDS information.

Ninety-nine adult primary care physicians in the Washington, D.C. metropolitan area were interviewed by telephone in 1987. Although 91% of the physicians had tested or referred patients for HIV antibody tests, 58% could not name the ELISA or Western blot as the tests. Naming the HIV antibody tests was the most significant predictor of preventive counseling advice, although the authors did not indicate how much of the variance this accounted for. Physicians' lack of knowledge and general discomfort in counseling patients about sexual risk factors, as well as discomfort with homosexuals were important barriers to preventive counseling about HIV infection. Seventy-seven percent of all respondents named HIV or HTLV-III as the virus that

causes AIDS (Fredman, Rabin, Bowman, Bandemer, Sardeson & Taggart, 1989).

In a study of 1261 general practitioners in the London postal districts, it was found that doctors with higher knowledge scores were significantly more likely to have been in medical practice for 10 years or less. Those with higher scores were also more likely to have had at least one HIV-positive patient and to have attended at least one study day on AIDS. Attending postgraduate courses did not appear to reduce their apprehension about dealing with AIDS. Having had contact with HIV-positive patients was a much stronger factor in allaying their anxiety (King, 1989).

Summary

Results of these studies document disparities among physicians in knowledge about HIV diseases and transmission, direct clinical experience with AIDS patients, regularity and completeness of risk assessment, diagnostic and treatment competencies, perception of personal risk, and comfort with AIDS patients.

One of the first studies of knowledge of AIDS among physicians done by Barrett-Conner (1984) indicated good knowledge about AIDS, however, later studies indicated a lack of knowledge necessary to adequately treat PWA (Fredman et al., 1989; Lewis et al., 1986; Richardson et al., 1987; and Searle, 1987).

Some studies also revealed confusion regarding mode of transmission through saliva, razors, breastfeeding, oral sex, insect bites, dentists and hairdressers (Anderson & Mayon-White, 1988; Milne & Deen, 1988). A number of studies indicated discomfort and lack of skill in counseling PWA (Anderson & Mayon-White, 1988; Fredman et al., 1989; and Lewis, Freeman & Corey, 1986).

Nurses

A national survey to determine nurses' needs for AIDS information was conducted by Flaskerud, (1987). The information obtained from the survey was used to develop educational resources to meet those needs. Seventy-five percent or more of the respondents indicated a need for information in 56% of the categories which included: Case definition, case reporting, at-risk groups, AIDS symptom assessment, transmission in the workplace, precautions, prevention, safe sexual practices, psychosocial care, legal and ethical aspects, and resources/services available to patients and families. The survey indicated that 80% or more of the respondents needed additional information in the areas of AIDS symptom assessment, psychosocial care, and legal and ethical issues.

In a study of 3000 registered nurses in the state of California, van Servellen, Lewis & Leake (1988) found that only 11.9% of the subjects were able to

correctly distinguish symptoms indicative of the early stages of AIDS. The majority were able to identify the most appropriate isolation precautions to take when caring for an AIDS patient. Despite the fact that the actual risk to nurses is small, about a quarter of those surveyed believed they were at high or moderate risk for contracting AIDS because of occupational or environmental exposure in their current work role. Of additional interest was the fact that 91% of the nurses stated they did not take a sexual history on their patients.

Another study by Scherer and Haughey (1988) examined knowledge, fears, concerns, and attitudes toward care of patients with AIDS. Their findings suggest that nurses are motivated to learn about AIDS and that professional journals provide the most frequent source of self-education. The knowledge test revealed a mean score only slightly in excess of 50%, which indicates that the nurses surveyed could benefit from additional information on epidemiology, etiology, pathophysiology, transmission, and treatment of AIDS. While 53% felt confident of their ability to meet the physiological needs of patients with AIDS, only 40% felt confident about their ability to manage psychological problems.

Stanford, (1988) studied the degree of knowledge about AIDS among nurses who did and did not attend an

AIDS inservice program. Twenty-three percent of the attenders and 30% of non-attenders thought that a person whose blood is shown to be HIV antibody positive has AIDS. Sixty percent knew of the potential danger of a shared razor, but nearly 50% believed incorrectly that saliva, i.e. sharing a cup, could transmit the virus. Generally, the level of knowledge exhibited by the respondents was unsatisfactory, particularly related to nursing care and the legal aspects of AIDS. The results of this study were in keeping with the national survey conducted by Flaskerud, (1987).

Researchers who conducted a study of 581 registered nurses in New York found that there were substantial deficiencies in knowledge of AIDS. There were 29 knowledge questions. A score of 29 represented 100% correct responses. The respondents were most knowledgeable about transmission of the disease, with a mean score of 77.7%. The greatest knowledge deficit was in relation to treatment and care of AIDS patients, with a mean percentage score of 59.2. The total knowledge score was slightly less than 70%. Those who cared for AIDS patients showed a higher mean total score (21.4) than those lacking experience (19.7) (Haughey, Scherer & Wu, 1989).

Lawrence and Lawrence (1989) conducted a study of nursing and non-nursing groups to determine the effect that knowledge acquisition would have on attitudes

about AIDS. The results indicated that RN's had more knowledge and more positive attitudes about AIDS than nursing students. Nursing students had more knowledge about AIDS than liberal arts college students, but their attitudes about AIDS did not differ significantly.

In a study of perinatal nurses, Prince, Beard, Ivey & Lester, (1989) assessed their knowledge, attitudes, and fears concerning AIDS. Sixty-three percent of the subjects reported having attended conferences or in-service workshops on AIDS, and 46% had cared for AIDS patients. Eighty percent of the respondents answered eight to 13 of the 17 knowledge questions correctly. The number of correct answers ranged from four to 16. Results of the knowledge test demonstrated that many nurses either had incorrect information or were lacking basic information about perinatal AIDS. A positive relationship was demonstrated between a high knowledge level of AIDS and attendance at hospital in-service programs and other professional training. More than 85% indicated a moderate to high degree of fear of contracting AIDS. An association also existed between high levels of knowledge of AIDS and those who had the experience of caring for an AIDS patient.

Summary

The results of the previous studies seem to concur with the results of the needs survey by Flaskerud, (1987). Particular gaps in knowledge which were consistent throughout the various studies were in the area of patient care, primarily regarding the psychological needs of the patient, and legal and ethical issues. Results were also consistent regarding higher level of knowledge and professional experience in caring for AIDS patients, and level of knowledge and participation in workshops and training. Studies by Prince, Beard, Ivey & Lester, (1989) and vanServellen, Lewis & Leake, (1988) emphasized the unrealistic fear of nurses in contracting AIDS by patient care.

Hospital Health Care Workers

Valenti and Anarella (1984) surveyed the hospital staff at Strong Memorial Hospital in New York. Respondents' knowledge of the disease increased with the level of their medical education. Scores were highest on questions related to epidemiology and disease transmission; however, 72% were still concerned about acquiring AIDS from PWAs. There appeared to be some uncertainty regarding the need for the routine use of masks, gowns, and gloves, as well as the use of public bathroom facilities and common waiting rooms. A large majority of the respondents indicated that their major source of information on AIDS was the media.

Investigators studied professional and technical-level health-care workers at a major hospital in Massachusetts. Approximately 60% felt that they had sufficient knowledge to deal with the physical needs of AIDS patients, while only 42% felt they had sufficient knowledge to deal with the psychological needs of AIDS patients, and 40% felt equipped to deal with the needs of families and friends. One-third felt they had insufficient knowledge about infection-control procedures. Close to 70% felt that AIDS can be transmitted through an accident needlestick; 58% reported that it could be transmitted while giving CPR. No house officers felt that there was a risk of airborne transmission, in contrast to 26% of nurses and 38% of technicians who believed there was a risk. Employees who had more opportunity to engage in social interactions with patients experienced reduction in stress with increased patient contact (O'Donnell, O'Donnell & Pleck, 1987).

Gordin, Willoughby, Levine, Gurez & Neill, (1987) studied hospital workers at the Washington, D.C. Veterans Administration Medical Center. They found that subjects had poor knowledge of AIDS transmission with almost 70% of persons believing that AIDS can be easily spread by a needlestick; 50% of respondents stated that AIDS can be spread through ordinary non-sexual contact and 23% through air by a cough or a

sneeze. Approximately one-quarter of the subjects stated they avoid public places like swimming pools because of fear that AIDS might be contracted. Multivariate analysis revealed that willingness to volunteer to provide health care to PWAs was related to having family or friends with AIDS, older age, white race, high attitude scores, more knowledge about AIDS and lower anxiety in dealing with AIDS patients.

In a study conducted by Wertz, Sorenson, Liebling, Kessler & Heeren, (1988), 1047 health care workers were evaluated before and after an educational program on AIDS. Prior to the program a majority of the respondents believed that AIDS could be transmitted by needlestick. Approximately 90% believed AIDS could be transmitted by mouth-to-mouth CPR, a large majority believed AIDS could be transmitted by coffee cups, and a significant minority believed AIDS could be transmitted by casual contact, such as shaking hands, or touching equipment. However, there was a significant positive change in knowledge of transmission through casual contact after the program.

Thompson and Eastham (1989) surveyed career and volunteer pre-hospital care providers in Maryland. Of the seven transmission risk questions and eight infection control questions comprising the knowledge portion of the survey, the respondents' average score was 7.6. Seventy-nine percent believed needlestick a

very likely mode of HIV transmission risk, 53% believed mouth-to-mouth resuscitation a possible but unlikely mode of transmission, and almost half believed that touching bloody equipment, splashing of blood on intact skin, cleaning up vomit and changing linen were possible, but unlikely means of HIV transmission risk. For AIDS knowledge and information, respondents relied on formal training programs and journals as their primary sources.

Employees of a Minnesota teaching hospital were assessed for variables affecting AIDS-related knowledge, attitudes and behaviors. Greater knowledge scores were associated with being male, expressing confidence in AIDS medical information, classification as non-religious, and previous attendance of an AIDS in-service program. Greater knowledge scores were also associated with being homosexual and with having a close friend or family member with AIDS (Henry, Campbell & Willenbring 1990).

Summary

The above studies seem to indicate an unrealistic and inordinate fear connected with contracting AIDS among hospital workers. Many of the studies indicated confusion regarding transmission through casual contact, e.g. common waiting room, shaking hands, touching bloody equipment. Several studies (Henry, Campbell & Willenbring, 1990; Thompson-Eastham, 1989;

and, Valenti & Anarella, 1981) demonstrated increased knowledge of respondents with formal AIDS training.

Medical/Nursing Students

In a study of 177 baccalaureate nursing students conducted by Lester & Beard (1988), it was found that students who scored high in knowledge of AIDS also scored high in fear and were afraid of catching the virus during routine care and carrying the virus home. These findings are not in keeping with the results of other studies which demonstrated lower fear with higher knowledge level. Subjects are not able to translate their information regarding AIDS into real situations.

Those students who knew that health-care workers are not at an increased risk for contracting AIDS also tended not to be afraid of contracting AIDS in routine care of AIDS patients. It was noted in this article that at the time of the study little or no formal information was being presented in the nursing curriculum and that most of the students received their information from the media. The majority of students were not acquainted with an AIDS patient.

Imperato, Feldman, Nayeri & Dehovitz, (1988), surveyed second-year medical students. Approximately 91% viewed taking a medical history as low risk, and 22.4% responded that performing a physical examination carried a "very high," "high," or "moderate" risk. Performing invasive procedures was rated as carrying

the greatest risk, with 66.7% responding that this activity carried a "very high," "high," or "moderate" risk. This was followed by 62% who rated drawing blood as carrying a "very high," "high," or "moderate" risk.

Selected undergraduate students, medical school applicants, medical students and pre-clinical nursing students were assessed on AIDS-related knowledge domains. Students were generally aware of risk factors related to sexual transmission. Less than 50% of the respondents were aware of the need to use basic precautionary measures with patients, although 50% over-estimated the risk to health-care workers from needlestick or mucous membrane exposure to blood from a patient with HIV infection. Eighty percent were well informed about the interpretation of the AIDS antibody test. With respect to clinical illness, 95% of the respondents correctly answered the question about AIDS symptoms. Only 50% correctly identified the types of human cells infected by the virus. The health professional students were more knowledgeable about AIDS than the lay public (Tesch, Simpson & Kirby, 1989).

In another study by Johnson, Campbell, Toewe & Bell, (1990), 73 pre-clinical medical students in Virginia were surveyed to determine knowledge of and attitudes about AIDS among students before and after an AIDS training workshop. Despite the training, the

percentage of correct post-test responses for participating students remained relatively low. The participants remained unsure about the risk that AIDS patients pose to health professionals, despite substantial evidence presented to them in the workshop.

Ficarrotto, Grade, Bliwise and Irish (1990) examined exaggerated risk estimates for HIV contagion in relationship to HIV-AIDS knowledge, and resistance to working with AIDS patients among medical and nursing students at a large Northwestern teaching hospital. Results indicated that both lack of clinical experience with AIDS patients and anti-homosexual attitudes were significantly associated with low knowledge scores. Greater clinical experience with AIDS patients was a significant predictor of higher levels of knowledge about AIDS and lower resistance to working with AIDS patients.

A recent study by Currey, Johnson, and Ogden (1990) of 319 students in the medical, dental, nursing, and allied health-care professions revealed that the majority of students understood the pathogenesis of AIDS and correctly identified the major risk factors and modes of transmission for the infection. However, half of the respondents did not feel confident enough in their knowledge about AIDS to work safely with AIDS patients. Almost 25% believed that health professionals were at high risk for AIDS, and 71%

believed that by working with AIDS patients they were placing their own health in jeopardy.

Summary

What seems most clear from the above studies is that despite evidence to the contrary, students over-estimated the risk to professional health care workers of contracting AIDS through normal professional contact with AIDS patients. Studies demonstrated diversity of knowledge, clinical experience and the association between level of knowledge and fear of contagion to be contradictory.

Educators

Literature is sparse regarding knowledge of AIDS among educators. Bowd (1987) examined information and misinformation concerning AIDS among samples of education students and experienced teachers. Five items assessed knowledge of AIDS and one item concerned beliefs about transmission. Results showed a reasonably high degree of misinformation regarding transmission of the HIV virus through casual contact. For example, 20% of students and 40% of teachers believed that the virus was transmitted through friendly kissing. Twenty percent of the teachers did not believe the disease to be transmitted sexually, and 40% did not believe that an infected female could transmit the disease sexually. There were significant

deficiencies in the knowledge of both teachers and students.

Researchers Kerr, Allensworth, and Gayle (1989) conducted a national survey of health and education professionals to assess needs for HIV resources and knowledge about HIV. Compared with the 1987 National Health Interview Survey, the health and education professionals were more knowledgeable about HIV. The ASHA survey was conducted in March and April 1988 and received 2855 responses. There were, however, knowledge gaps. Thirty-nine percent did not know that HIV can damage the brain; 23% believed friendly kissing was a mode of transmission; 72% did not know that a spermicidal jelly, foam or cream was effective in preventing the spread of HIV; and 36% thought a positive HIV antibody test indicated that a person has AIDS.

Summary of Literature of Professional Populations

The purpose of this research project is to assess knowledge of AIDS of mental health counselors. As a result of the empirical studies described in the previous section of the review of literature, the following conclusions can be made: (1) The majority of studies indicate that subjects from various helping professions are not well informed about AIDS, especially as it relates to information about the transmission of AIDS through casual contact; (2)

Several studies revealed confusion regarding transmission through other modes of transmission such as the sharing of razor and toothbrush, performing CPR on PWAs, lesbian activities, oral sex, breastfeeding, insect bites, dentists and hairdressers; (3) There is a general lack of comfort in discussing sexual issues with patients; (4) There is unwarranted fear of contagion via professional contact with AIDS patients; (5) In the majority of studies, professional contact with a PWAs is associated with lower discomfort in providing service to them.

Mental Health Practitioners

Mental health practitioners are in a unique position to serve in the continuing battle against the physical and psychosocial ravages of AIDS. However, an extensive literature search of mental health practitioners' knowledge of AIDS revealed only six articles. Three articles were related to social workers (Dhooper, Royse & Tran, 1987-88; Peterson, 1991; and Wierner-Brawerman, 1988), one article was related to family therapy trainees (Bor, Elford, Perry & Miller, 1988), one article was directed at substance abuse clinic directors and counselors (Mejta, Denton, Krems & Hiatt, 1988), and one article was concerned with mental health counselors (Maione & McKee, 1987). The majority of the studies assessing knowledge of AIDS have focused on medical personnel and college students

A study of 500 members of the National Association of Social Workers showed that less than half of the knowledge questions about AIDS were answered correctly. Respondents most frequently answered questions regarding transmission correctly. For example, 81% knew that mosquitoes cannot transmit the AIDS virus, and 79.4% knew that there was no risk of contracting HIV through donating blood. Respondents were least knowledgeable about specific populations affected by the AIDS virus. However, respondents who reported having either personal or professional reasons for knowing about HIV infection had significantly more correct responses and significantly fewer "don't know" responses than did those who reported no reason to obtain such information (Peterson, 1991).

Also significant is the fact that respondents' who were direct service providers had significantly more don't-know responses than did those in the supervisor/manager/administrator category. Of disappointment to the author was the large number of respondents (87.8%) who stated they had no personal reasons for needing to know about AIDS. The majority of respondents (74.3%) indicated that they had no professional reasons for being knowledgeable about AIDS, and only 19.8% of mental health social workers indicated that they had professional reasons for knowing about AIDS (Peterson, 1991).

In a study of 264 social workers and social work students in 12 hospitals, Wierner-Brawerman (1988) examined the extent to which subjects expressed comfort in working with AIDS patients and their significant others. The researcher was also interested in determining if the level of comfort was associated with knowledge about AIDS, knowledge about resources available to the AIDS population, or job satisfaction. The social worker respondents had a good working knowledge about how the disease presents, as well as knowledge of the groups of people at highest risk for, and/or the behaviors that lead to development of the disease (94%). The majority of the respondents were also aware of the common manifestations of the disease (85%); that the disease cannot be transmitted by casual contact such as handshaking (85%); and that it cannot be transmitted through ordinary non-sexual household contact (85%). They were, however, less knowledgeable that, "AIDS is a venereal disease that requires intimate contact to acquire". A third of the respondents stated this statement was false or that they were not sure. Approximately 34% did not know or were not sure about how long an AIDS patient usually survives following diagnosis of the disease. A little over a third did not know or were not sure that pregnant workers were not at greater risk of contracting HIV infection than health care workers who

were not pregnant. They also did not have adequate understanding of the magnitude of the disease, i.e. 49% overestimated the number of people diagnosed with AIDS. Nearly 66% were also unclear about the proportion of HIV infected persons likely to go on to develop AIDS within two years. According to the researcher, 58% of the respondents had good overall factual knowledge about AIDS.

Social workers who had a greater understanding of the disease reported less fear of contracting AIDS through providing care to AIDS patients. However, social workers who had a greater understanding of the disease were not necessarily more likely to be aware of resources available to AIDS patients. The respondents received their information and knowledge about AIDS most frequently from in-service or professional journals (48%), newspapers (35%), and co-workers (27%).

Dhooper, Royce & Tran, (1987-88) surveyed 128 social workers who were alumni of the University of Kentucky School of Social Work concerning their attitudes toward people with AIDS and their knowledge and fear of AIDS. Regarding their knowledge of AIDS, 27 percent of the respondents were considered "least informed", 41 percent were placed into a category representing "moderate" knowledge of AIDS, and 32 percent of the respondents were "most knowledgeable" about AIDS. They also found that subjects who were

most accepting of homosexuality (45%) were the most knowledgeable about AIDS, and 57 percent of those categorized as having a high level of knowledge had a low social distance (from PWA) score. The authors found little evidence that the social workers in this study were well informed. For example, 68 percent of the respondents believed that it is possible to get AIDS from homosexual employees of restaurants or bars.

Another study investigated the views and knowledge of a group of family therapy trainees in relation to people with AIDS and HIV, (Bor, Elford, Perry & Miller, 1988). The trainees were 46 first- and second-year students in a post-qualifying course in family therapy at the Tavistock Clinic in London. Two-thirds of the trainees were social workers and the rest were divided between psychologists, nurses, health visitors and probation officers. The respondents were clear about the risk of AIDS infection from sexual activities and the lack of risk from routine social contact with an infected person. However, they were less knowledgeable in the assessment of the risk when it was associated with sharing of razors and toothbrushes, lesbian sexual activities, and mouth-to-mouth resuscitation. They were also less knowledgeable about the HIV antibody test than they were about the risk of transmission. Additional gaps in knowledge had to do with specific issues: inactivation of the virus,

drug therapy available for AIDS patients, and occupational risks associated with caring for an HIV infected person. Three-quarters of the respondents correctly understood the results of the HIV antibody test. Two-thirds of the trainees said that the media (television, radio and newspapers) was the most important source of their information about AIDS.

A related study was conducted with 42 substance abuse clinic directors and counselors in the Chicago area to examine clinic policies and practices concerning AIDS, and self-reported knowledge and attitudes about AIDS. From a group of 1800 Chicago-area substance abuse counselors, 150 were selected to participate in the study. When asked to rate their own and other counselors' current knowledge about AIDS, 50% thought they had a "fairly good" knowledge and understanding of AIDS, and 27% of the counselors thought they had a "good" or "fairly good" knowledge. However, only 49% believed they knew enough to counsel a person with AIDS. In this study 57% of the counselors rated other counselors' knowledge about AIDS as "poor" or "not so good." The counselors rated their own knowledge about AIDS as significantly higher than other counselors' knowledge of the disease. Generally, counselors indicated a fear of exposure to AIDS and a lack of knowledge about AIDS (Mejta, Denton, Krems & Hiatt, 1988).

Maione and McKee (1987) conducted a study which was sponsored by the Association for Humanistic Education and Development (AHEAD), and limited to active members. The knowledge part of the questionnaire was composed of 10 questions, in which there were 22 possible correct responses. Respondents were considered "well informed" if they scored 18 or more points correctly; "moderately informed" if they had between 10-17 correct responses; and "uninformed", if they had below 10 correct responses. The results of the knowledge section of the questionnaire showed that all counselors responding fell into one of two categories: well informed and moderately informed. Although none of the counselors were categorized as uninformed, some came very close. Whereas 39% of the counselors were considered well informed, 60% were considered moderately informed.

Summary

The results of the previous studies are difficult to compare because of the diversity of test construction and scoring. In most of the studies the researchers were remiss in providing sufficient information concerning the content of the knowledge test or in providing test scoring which allowed like questions and answers to be compared. Studies by Peterson (1991), Wierner-Brawerman, (1988), and Bor, Elford, Perry & Miller, (1988), indicate that subjects

were most knowledgeable regarding transmission of AIDS, particularly as it relates to at risk behavior and transmission by casual contact.

Knowledge of AIDS and Contact with PWAs

Research studies suggest that persons who have personal or professional contact with a PWAs have a higher level of knowledge regarding the disease. The Wierner-Brawerman (1988) study showed that hospital social workers who had a greater understanding of the disease tended to have worked with AIDS patients.

A study of 1261 general practitioners in London revealed that doctors with higher knowledge scores were significantly more likely to have had at least one HIV-positive patient in their practice (King, 1989). Lack of clinical experience with AIDS patients was significantly associated with low knowledge scores among medical and nursing students, and greater clinical experience with AIDS patients was a significant predictor of higher level of knowledge about AIDS (Ficarrott, Grade, Bliwis & Irish, 1990).

Other studies demonstrate that nurses who care for AIDS patients have a higher level of knowledge than those lacking this clinical experience (Haughey, Scherer & Wu, 1989; and Prince, Beard, Ivey, & Lester, 1989). Greater knowledge scores were associated with having a close friend or family member with AIDS in studies of hospital care workers (Gordin, Willoughby,

Levine, Gurez & Neill, 1987; and Henry, Campbell, & Willenbring, 1990).

Gender and Knowledge and Attitudes of AIDS

Research is mixed concerning gender and knowledge of AIDS. Most studies have shown that there is no significant difference in knowledge of AIDS between males and females (Baldwin & Baldwin, 1988; Dhooper, Royce & Trun, 1987-88; King, 1989; and Vener & Krupka, 1988), although males had higher knowledge scores in some studies (Henry, Campbell & Willenbring, 1990; and Price, Desmond & Kukulka, 1985). Other studies indicated a higher level of knowledge among females (Baldwin & Baldwin, 1988; and Goodwin & Roscoe, 1988).

Various studies have found that males hold more negative attitudes than females toward homosexuality and PWAs. Some studies have reported either no gender differences or that females have more negative attitudes than males.

As mentioned earlier, the St. Lawrence, Husfeldt, Kelly, Hood & Smith, (1990) study of 300 college students found that homophobia is a good indicator of strong prejudice toward PWA. Tessier's (1989) study of 407 French Canadian adults also reported that homophobia is a key indicator of sexual conservatism associated with negative attitudes about AIDS. Other researchers have found that the stigma of AIDS was primarily associated with the high risk groups of

homosexual and bisexual men (Douglas, Kalman & Kalman, 1985; Kelly, St. Lawrence, Smith, Hood & Cook, 1987; O'Donnell, O'Donnell, Pleck, Snarey & Rose, 1987; Reed, Wise & Mann, 1984). Other researchers have found that nurses and physicians acknowledged more negative reactions toward male homosexuals since the AIDS epidemic (Douglas, Kalman & Kalman, 1985; and Kelly, St. Lawrence, Smith, Hood & Cook, 1987) and that they thought that AIDS patients received inferior care when compared to patients with other illnesses (Douglas, Kalman & Kalman, 1985).

Since AIDS is a disease that is strongly associated with male homosexuality (Curren, Morgan, Stracher, Hardy & Jaffe, 1985), it appears likely that those individuals who express a negative attitude toward homosexuality would also display a greater prejudice toward PWAs.

In a study of social workers' attitudes toward PWAs, Dhooper, Royse and Tran (1987-88) found that males tended to be significantly less empathetic than females. Sixty-four percent of the female respondents compared with 39% of the males agreed with the statement "homosexuality should be an acceptable alternative lifestyle", a statistically significant difference between the two groups.

Merrill, Laux and Thornby (1989) studied the attitudes of 216 senior medical students from three

southern medical schools toward PWAs. They concluded that female students scored lower on the homophobic scale than male students, and had less antipathy toward AIDS patients. In a study of 1261 general practitioners in the London postal districts, King (1989) demonstrated that female doctors had more positive attitudes toward HIV infected patients than male doctors. In another study conducted with adult Australians 18 to 75 years of age, men were found to be more prejudiced than women toward PWAs (Heaven, Connors & Kellehear, 1990).

The majority of studies assessing attitudes toward homosexuality and PWAs have been conducted among college students. The results of a study of 2,121 college students revealed that male respondents were more likely to be unwilling to have personal contact with HIV infected persons than females. Men were also more likely to express a desire to avoid homosexuals than were females (Henry & Bradford, 1990). Gray and Saracino (1990) concluded that female participants were more accepting in their attitudes toward PWAs than were male participants. The Lester (1989) study further demonstrated that males had stronger negative attitudes toward AIDS patients than females. Several studies of college students' attitudes toward AIDS and/or homosexuality revealed that males are more homophobic/homosexist and have more negative attitudes

toward homosexuals than females (Augelli, 1989; Bouton, Gallagher, Gerlinghouse & Lee, 1989; Crull & Bruton, 1979; Goodwin & Roscoe, 1988; Grieger & Ponterrotto, 1988; Hansen, 1982; Kite, 1984; Millham, Miguel & Kellogg, 1976; and Simkins & Kushner, 1986)

However, in a study conducted by Shapiro (1989) of 1271 general practitioners throughout the United Kingdom, results revealed that women doctors tended to have less positive attitudes towards patients with HIV and AIDS than male doctors. Another study of homophobia among physicians and nurses indicated that women respondents were significantly more homophobic than men (Douglas, Kalman & Kalman, 1985).

Several studies assessing attitudes towards homosexuality revealed no significant gender differences (Newman, 1989; Black & Stevenson, 1984; and Hudson & Ricketts, 1980).

Age and Knowledge

The literature revealed sparse data about age and knowledge. Some data suggest that there is no significant difference between age and level of knowledge (Fredman et al., 1989; Lawrence & Lawrence, 1989; and Peterson, 1991). However, other studies have shown that age does have an effect on knowledge (King, 1989; and Shapiro, 1989).

In a study of 1,000 family and general practitioners and internists, Lewis, Freeman & Corey

(1987) reported that one of the most important variables associated with physician competence was years in practice (younger physicians). King (1989) found that younger doctors were more positive toward and knowledgeable about AIDS than older doctors. The Shapiro (1989) study of 1824 general practitioners throughout the United Kingdom found that younger doctors seemed to have a better understanding of HIV and less hostile attitudes toward patients than their older colleagues.

Sexual Orientation and Knowledge

Limited research has been done to assess the differences in level of knowledge between heterosexuals, homosexuals and bisexuals. Because homosexual and bisexual men have had the highest incidence of AIDS diagnosis, it would seem that they would have the greatest motivation to be knowledgeable about AIDS. Except for one study, the research that could be found suggests that there are no differences in knowledge between the various groups. In a study of 161 university students, a comparison of knowledge scores for heterosexual versus homosexual/bisexual respondents produced no statistical significance (McDermott, Hawkins, Moore & Cittadino, 1987) Richardson, Lochner, McGuigan & Levine (1987) surveyed 314 heterosexual and homosexual physicians in Los Angeles County. Both heterosexual and homosexual

physicians indicated a lack of medical knowledge and experience about AIDS. In contrast was a later study of employees of a Minnesota teaching hospital (Henry & Bradford, 1990) which found that greater knowledge scores were associated with being homosexual.

Knowledge and Training

Researchers (Lawrence & Lawrence, 1989) suggest that people's attitudes about AIDS can be changed by increasing their knowledge levels. Studies have been done to determine if AIDS training really does increase levels of knowledge. Lewis, Freeman, Kaplan & Corey (1986), evaluated the impact of a continuing education program on the AIDS-related competencies of primary care physicians in Los Angeles County. The results of their study demonstrated that physicians who had not attended lectures or professional meetings about AIDS were the least likely to be in the competent category. Prince, Beard, Lewis & Lester (1989) studied 134 perinatal nurses working in five midwestern hospitals and found that a positive relationship was demonstrated between a high knowledge level regarding AIDS and attendance at hospital in-service programs, professional conferences, and classroom sessions.

Summary

Several significant conclusions can be determined from this review of the literature. AIDS is a disease

of pandemic proportions which has become one of the major public and mental health diseases of this time. As a result of the pervasive psychological factors which inherently accompany the disease, AIDS has created a mental health emergency which necessitates a proactive response from the mental health profession.

The majority of available information about AIDS has focused on the medical aspects of the disease; little has been written to guide the mental health professional in how to adequately respond to this mental health emergency. To this author's knowledge, no systematic study which assesses mental health counselors' knowledge of AIDS and level of professional involvement with PWAs has been done.

Although information about AIDS has been widely disseminated to both the professional mental health community and the general public about prevention, common modes of transmission, and at-risk behaviors, a great deal of fear and prejudice continues to be directed toward people with AIDS. Studies noted in the review of literature demonstrate that although respondents have a fairly good understanding of widely publicized information about the disease, a great deal of misinformation still exists about transmission of AIDS through casual contact. This has resulted in inordinate and unnecessary fear of contagion with resulting prejudice and hostility toward PWAs.

It is evident from studies of medical professionals that both physicians and nurses are not prepared to meet the psychosocial needs of their patients. This lack of involvement from the health care community makes it imperative that the mental health professional be adequately prepared to fill this gap in treatment.

Research shows that the interrelationship between gender and knowledge of AIDS is mixed; however, data does reveal a clear relationship between gender and attitudes toward PWAs. According to the studies here documented, males appear to be more homophobic than females. Studies suggest that there is an interrelationship between level of knowledge about AIDS and personal contact with a friend or family member who has AIDS, just as there is an interrelationship between level of knowledge about AIDS and professional contact with AIDS patients. In these cases, personal and professional contact clearly brings about an increase in knowledge levels. Less clear is the relationship between age and level of knowledge about AIDS. Some studies suggest that there is no relationship while other studies suggest that younger subjects had higher knowledge scores than their older colleagues.

Limited research has been done on the relationship between knowledge of the disease and sexual orientation. The majority of available studies

indicated no relationship between knowledge and sexual orientation. However, all studies which test the effect of AIDS training on knowledge indicate a positive relationship.

CHAPTER III

OVERALL DESIGN AND METHODOLOGY

Introduction

This chapter will detail the research design and specific methodology used to address the purposes in this study, as well as the population studied, the specific procedures for collecting the data, and the details of the data collection instrument. In addition, information on the null hypotheses to be tested and the statistical methods for analyzing the data are also included.

Purpose of the Study

The purposes of this study are to: (1) assess mental health counselors' knowledge of AIDS; (2) determine the difference in knowledge of AIDS between genders; (3) determine the extent to which professional contact with PWAs within the past year has an effect on level of knowledge of AIDS; (4) determine the extent to which personal contact with PWAs, other than a client, has an effect on level of knowledge of AIDS; (5) determine the extent to which being personally acquainted with someone, other than a client, who is homosexual has an effect on level of knowledge of AIDS; (6) determine the extent to which age has an effect on

level of knowledge of AIDS; (7) determine the extent to which sexual orientation has an effect on level of knowledge of AIDS; and (8) determine the extent to which AIDS training has an effect on level of knowledge of AIDS.

Subjects

The population under study, mental health counselors, was chosen randomly from the current membership of the American Mental Health Counseling Association which is a division of the American Association for Counseling and Development. According to Cohen's table (1969), 256 subjects plus an additional 40% of the 256 were needed for this study to ensure minimum same size response. The total number of subjects needed for the study was 358.

The demographic characteristics of the AMHCA membership were as follows:

1. Sixty-five percent were female and 35 percent were male.
2. Ninety-four percent were caucasian, 2% were Afro-American, 1.5% were Hispanic, less than 1% were Asian and native American.
3. Sixty-five percent work in the role of counselor, 10% were students, 6% were counseor educators, 5.6% were administrators, and 4% were supervisor/consultants.

4. Approximately 46% are in private counseling practice, 11.5% work in a college or university, 8% work in a community mental health center, and 6% work in a school setting.

5. Sixty-eight percent have a master's degree, 19% have doctorates, 9% have an associate's degree, and 3.3% have an education specialist degree.

Instrumentation

Data were collected through a self-administered questionnaire. Counselor knowledge of AIDS was measured by an instrument designed by Gray and Saracino (1989). (See Appendix A). A revised instrument was used for this project. The instrument is a 32-item True-False knowledge test on the transmission, epidemiology, and treatment of AIDS as well as general information regarding AIDS. The content validity was established by a panel of three physicians who are experts in the field of AIDS. Cronbach's Alpha, a test of internal consistency, was performed on the knowledge index; the reliability co-efficient of .6859 was obtained. According to Courtney (1988) this correlation co-efficient demonstrates a moderate level of test reliability. This researcher examined a number of tests that measure AIDS knowledge, but the instrument used in this research project was most appropriate for use with the subjects being evaluated in the project.

Additional data were obtained through various demographics, which included such questions as principal work setting, highest professional degree, years worked as a mental health counselor, present religious affiliation, sexual orientation, gender, age and ethnic background. Further information was elicited through specific questions related to AIDS, including the number of HIV positive clients and family seen, type of services provided for HIV positive clients, number of formal hours spent in AIDS training, source of information about AIDS, and awareness of community services to persons diagnosed with AIDS. Responses were also elicited regarding respondents' need for additional information about the medical and mental health aspects of AIDS, whether they have been personally acquainted with someone, other than a client, who has been diagnosed with AIDS or who is homosexual. At the end of the survey respondents were given the opportunity to share any additional comments about their experience counseling people with AIDS or about the questionnaire.

Procedure

In February, 1991 a survey packet was mailed to a random sample of subjects (358) from the current membership of the American Mental Health Counseling Association. The packet included the AIDS knowledge instrument, an attitude instrument, a demographic

information form, and a letter describing the study and requesting that it be filled out and returned in the enclosed self-addressed, stamped envelope. (See Appendix A). A week later a follow-up card was sent to all subjects (358) thanking them for their participation in the project and requesting them to return the completed survey. (See Appendix B). Two weeks later a final letter with duplicate survey was sent to subjects who had not responded. (See Appendix C). Names of subjects were kept confidential. A number was assigned to each subject. When the completed survey was returned, the name of the subject was crossed off the master list. This process complies with the recommendations of Dillman (1978) for assuring valid responses. Two hundred fifty-five (255) out of three hundred fifty-eight (358) subjects surveyed responded; this is a response rate of 72%.

Statement of the Hypotheses

This study was designed to test the following eight hypotheses:

HO₁ : There is no difference with respect to knowledge of AIDS between male and female mental health counselors.

HO₂ : There is no difference with respect to knowledge of AIDS between mental health counselors who have and have not provided professional services to persons with AIDS within the past year.

HO₃ : There is no interaction between gender of the mental health counselor who provided professional services to persons with AIDS within the past year and the gender of those who did not provide professional services to persons with AIDS within the past year.

HO₄ : There is no difference with respect to knowledge of AIDS between mental health counselors who have and have not been personally acquainted with someone, other than a client, who has been diagnosed with AIDS.

HO₅ : There is no difference with respect to knowledge of AIDS between mental health counselors who are personally acquainted with someone, other than a client, who is homosexual.

HO₆ : There is no difference with respect to knowledge of AIDS between younger and older mental health counselors.

HO₇ : There are no differences with respect to knowledge of AIDS between heterosexual, bi-sexual and homosexual mental health counselors.

HO₈: There is no difference with respect to knowledge of AIDS between mental health counselors who have had AIDS training and those who have not had AIDS training.

Statistical Design

Descriptive Statistics

Descriptive statistics were utilized in this study to examine individual questionnaire items. Such descriptive statistics include item means, standard deviations, frequency distributions and cross-tabulations of demographic information. The frequency distributions include not only the number of responses, but also a valid percentage result and a cumulative percentage result.

Analysis of Variance

T-tests were used at the .05 level to determine if there were significant differences between the means of male and female mental health counselors with respect to knowledge of AIDS (HO₁) T-tests were also used to determine if there were significant differences between the means of mental health counselors who have and have not provided professional services to persons with AIDS within the past year (HO₂)

A multiple regression analysis was used to determine if there was an interactional effect between (HO₁) gender and (HO₂) mental health counselors who provided professional services to persons with AIDS (HO₃).

An analysis of variance (ANOVA) was used to test hypotheses four (HO₄) and five (HO₅). With respect to hypothesis six, age was used as a co-variate to adjust for the unequal size of the two gender groups; therefore, an analysis of co-variance (ANCOV) was used to test for differences in means between younger and older counselors, with respect to knowledge.

The last two hypotheses (HO₇) and (HO₈) were tested using an analysis of variance (ANOVA). Since both showed significant differences in the means, the Newman-Keuls multiple comparison test was used to locate where the differences in means occurred.

Crosstabulations were made on the demographics, and the chi-square method was used to test the demographic variables.

Limitations and Advantages

The instrument was a self-administered questionnaire. One of the advantages of self-administered questionnaires is that the respondents are able to complete the form on their own time and at their own speed. In addition, the instrument was anonymous which hopefully encouraged respondents to respond honestly and frankly.

An additional key factor in this study was the high return rate of 72%. The return rate was similar to that achieved by Peterson, (1991) in her study of social workers, who had a response rate of 75.8%. The good response rate may be attributed to the interest of mental health counselors in this topic.

One of the limitations of this study was the failure of some to return questionnaires, some missing data, and the inability to check the responses with the respondents. However, the findings have come from only those mental health counselors who were willing to participate in the study. In addition, the study could not completely provide control that all respondents were mental health counselors since membership to the American Mental Health Counseling Association is open to people in a variety of job positions. The results,

therefore, may not fully reflect the profession of mental health counselors as a target population.

Knowledge about AIDS changes daily and what was current several months ago may no longer be accurate today. Another limitation of the study was the fact that the AIDS knowledge instrument was developed using a university population. Considering the fact that the mean score for accuracy was 93%, this test may not accurately measure the knowledge base necessary for mental health counselors to be adequately prepared to provide services related to AIDS.

CHAPTER IV

ANALYSIS OF DATA

This chapter presents the results of the study as applied to each of the eight hypotheses tested. The hypotheses were stated in the null form.

The chapter begins with a description of the subjects who took part in the research project, followed by a presentation of the data as it relates to each hypothesis. Additional demographic information on the subjects is given.

Descriptive Analysis

A randomly chosen sample of mental health counselors from the current membership of the American Mental Health Counseling Association were surveyed for this study. Surveys were sent to 358 subjects with 255 usable surveys returned, for a response rate of 72%.

Counselor Characteristics

Table 1 describes the characteristics of mental health counselors used in this study. Respondents work either in private practice (40%), in outpatient mental health clinics (23.1%), or in hospitals or clinics (11.8%). Over half of the respondents (68.2%) have master's degrees and (15.7%) hold Ph.D degrees.

The majority of respondents were between the ages of 41 and 45 (25.8%), they were closely followed by respondents between the ages of 51 and 60 (18.4%), those between the ages of 36 and 40 (17.5%) and those between the ages of 46 and 50 (12.5%). Those between the ages of 26 and 30, and those between the age of 31 and 35 each comprise approximately (9%) of the sample population. Only about 12 (4.7%) of the respondents were over the age of 60, and 5 (1.9%) were under the age of 26.

TABLE 1: MENTAL HEALTH COUNSELOR CHARACTERISTICS

	<u>Percent</u>
<u>Gender</u>	
Male	38.4
Female	61.6
<u>Ethnic group</u>	
Native American	.8
Caucasian	95.3
African American	2.0
Hispanic	2.0
<u>Sexual Orientation</u>	
Heterosexual Male	92.9
Heterosexual Female	91.0
Homosexual Male	4.1
Homosexual Female	4.5
Bisexual Male	3.1
Bisexual Female	4.5
<u>Highest Professional Degree</u>	
BA	2.7
MA	68.2
PHD	15.7
MA student	4.0
Doctoral student	5.9
Educational Specialist	1.6
Associates/Certificate	.8
<u>Principal Work Setting</u>	
Private Practice	40.0
Outpatient Mental Health Clinic	23.1
Hospital/Clinic	11.8
School	4.7
College Counseling Center	5.9
Social Service Agency	3.9
Parochial agency	1.6
Retired	.8
Student Placement	3.5
Government Agency	1.6
Drug/Alcohol Center	1.2
Unemployed	.4
Corrections	.4
Rehabilitation Agency	.4

MENTAL HEALTH COUNSELORS CHARACTERISTICS (CONT'D)

<u>Age Categories</u>	<u>Number</u>	<u>Percent</u>
21-25	5	1.9%
26-30	25	9.8%
31-35	23	9.2%
36-40	45	17.5%
41-45	66	25.8%
46-50	32	12.5%
51-60	47	18.4%
Over 60	12	4.7%
 <u>Religion</u>		
Catholic	52	20.4%
Protestant	93	36.5%
Jewish	27	10.6%
Buddhist	4	1.6%
None	44	17.3%
Unitarian	7	2.7%
Other	28	10.9%
 <u>Years worked as a professional mental health Counselor</u>		<u>Mean</u>
		9.1

A majority of the respondents were female (61.6%) while (38.6%) of the mental health counselors who responded were male. Almost all of those who responded to the survey were heterosexual (91.4%). Only (4.3%) reported themselves to be homosexual and only (3.9%) as bisexual. Almost all of the respondents were caucasian (95.3%), leaving only (2%) to be African American or Hispanic, and less than one percent (.8%) Native American. Over one-third (36.5%) of the respondents were protestant, while (20.4%) were Catholic, (10.5%) were Jewish, and (17.3%) indicated no religious affiliation. Mental health counselors who responded had worked an average of 9.1 years in their profession.

Respondents' Experience Working with PWAS

The mental health counselors who responded to the survey stated that they had seen 278 clients diagnosed HIV positive. The mean number of PWAs seen per mental health counselor was 1.090, with a standard deviation of 3.703 and a mode of .000.

Table 2 describes the breakdown of the number of clients seen per counselor. As is evident, a majority of mental health counselors (72.9%) have not provided professional services for clients diagnosed HIV positive, while 12.5% of the respondents have seen one client, 6.3% have seen two clients, five (2.0%) have

seen six clients, and only three (1.2%) have seen eight clients during the past twelve months.

TABLE 2. NUMBER OF MENTAL HEALTH COUNSELORS SERVING HIV+ CLIENTS

<u>Number of clients</u>	<u>Number of counselors</u>	<u>Percent of counselors</u>	<u>Cumulative percent</u>
0	186	72.9%	72.9%
1	32	12.5%	85.5%
2	16	6.3%	91.8%
3	2	.8%	92.5%
4	1	.4%	92.9%
5	2	.8%	93.7%
6	5	2.0%	95.7%
8	3	1.2%	96.9%
10	2	.8%	97.6%
11	1	.4%	98.0%
12	2	.8%	98.8%
20	1	.4%	99.2%
25	1	.4%	99.6%
40	1	.4%	100.0%

The number of counselors who have provided professional services to HIV positive clients is further broken down into gender differences. (See Tables 3-4). Results indicate that 121 (77.1%) of female respondents and 65 (66.3%) male respondents have not provided services to HIV positive clients over the past 12 months. Twenty (12.7%) female respondents and 12 (12.2%) of males respondents have provided services to one HIV positive, while 11 (7.0%) of the females and 5 (5.1%) of the males have provided services to two clients. One (.6%) female respondent saw 25 clients, and one (1.0%) male respondent saw 40 clients.

Less than five percent of the mental health counselors who responded to the questionnaire have provided services to 70% of the HIV positive clients.

TABLE 3. NUMBER OF FEMALE MENTAL HEALTH COUNSELORS SERVING HIV+ CLIENTS

<u>Number of clients</u>	<u>Number of counselors</u>	<u>Percent of counselors</u>	<u>Cumulative percent</u>
0	121	77.1%	77.1%
1	20	12.7%	89.8%
2	11	7.0%	96.8%
3	1	.6%	97.5%
4	1	.6%	98.1%
5	1	.6%	98.7%
6	1	.6%	99.4%
25	1	.6%	100.0%

TABLE 4. NUMBER OF MALE MENTAL HEALTH COUNSELORS SERVING HIV+ CLIENTS

<u>Number of clients</u>	<u>Number of counselors</u>	<u>Percent of counselors</u>	<u>Cumulative Percent</u>
0	65	66.3%	66.3%
1	12	12.2%	78.6%
2	5	5.1%	83.7%
3	1	1.0%	84.7%
5	1	1.0%	85.7%
6	4	4.1%	89.8%
8	3	3.1%	92.9%
10	2	2.0%	94.9%
11	1	1.0%	95.9%
12	2	2.0%	98.0%
20	1	1.0%	99.0%
40	1	1.0%	100.0%

Out of 255 respondents 93 mental health counselors indicated that they provide individual and/or family counseling with PWAs and/or their families, 35 provide group counseling, 14 deliver

concrete services, 52 provide crisis intervention and 23 teach alternative healing practices, such as nutrition, meditation, visualization, etc.

Knowledge Test Results

Mental health counselors were asked to indicate by a circle whether they thought the statement was true or false. A "don't know" category was also available. Table 5 indicates responses received to each item.

There were 32 items in the questionnaire used to test the knowledge of respondents about AIDS. Each of these 32 items were coded as "0" if incorrect or unknown and "1" if correct for each respondent. The scores for the items were then summed for each respondent creating a measure of factual knowledge. The range of possible scores was from 18 to 32. The mean was 29.7, representing a percentage score of 93% accuracy. The standard deviation was .06.

As can be seen from Table 5 (Factual Understanding of AIDS), the mental health counselors who responded to the questionnaire had a good working knowledge of AIDS. For example, when the knowledge questionnaire was scored according to sub-scores, respondents correctly scored 94% on epidemiology; 89.7% on transmission; 94.8% on treatment and 90.8% regarding general information of the disease. In addition, 100% of the respondents correctly knew that the virus can be transmitted by infected blood during a blood

transfusion, and by sharing a needle with a drug user who has the disease. They all knew that AIDS is a serious disease.

The area respondents had the most difficulty, had to do with the question regarding the use of a natural skin condom during intercourse in reducing the risk of transmitting AIDS. On this question only 48% of the males and 32.9% of the females answered correctly. Twenty-one percent of the females responded with "don't know" to this item. Although it is true that the use of condoms during vaginal, oral and anal sex, especially when used with spermicide nonoxynol 9 provides a fairly high degree of protection, a latex condom rather than a natural skin condom has been proven effective.

The mental health counselors who responded were less knowledgeable about the virus that causes AIDS. Only 79.4% accurately knew that the virus that causes AIDS is not the same as the virus that causes gonorrhea, and (17.8%) didn't know that AIDS is not caused by a bacteria. The respondents also had a poorer understanding regarding transmission of AIDS through casual contact. Only 82.4% accurately scored false to the statement "you can get AIDS from sharing plates, forks, or glasses with someone who has AIDS."

A low, but significant number of respondents (28.7%) "didn't know" that the majority of homosexual

men do not have AIDS, and (21.8%) thought it was true that "it is possible to get AIDS by donating blood." Approximately one-fifth (19.1%) indicated a "don't know" response to the statement, "if you kiss someone with AIDS, you will get the disease." One-fifth (19.8%) of the respondents didn't know that the majority of lesbian women do not have AIDS.

A comparison between inaccurate with "don't know" responses, to all questions except for question "a", revealed that respondents lack information rather than possess inaccurate information about AIDS. The average percentage score per incorrect response was (5.3%) compared to (9.5%) per "don't know" response.

Table 5: FACTUAL UNDERSTANDING OF AIDS

Q a. Use of a natural skin condom during intercourse greatly reduces the risk of transmitting AIDS.

	<u>Number</u>		<u>Percentage of Sample</u>	
	Male	Female	Male	Female
True	43	70	43.9%	45.2%
False*	47	51	48.0%	32.9%
Don't know	8	34	8.2%	21.9%

Q b. The AIDS virus can be present in vaginal fluid.

	<u>Number</u>		<u>Percentage of Sample</u>	
	Male	Female	Male	Female
True*	90	139	91.8%	89.1%
False	2	9	2.0%	5.8%
Don't Know	6	8	6.1%	5.1%

* Indicates correct response

FACTUAL UNDERSTANDING OF AIDS (Cont'd)

Q c. Unprotected heterosexual intercourse carries a risk of transmitting AIDS from a man to a woman.

	<u>Number</u>		<u>Percentage of Sample</u>	
	Male	Female	Male	Female
True*	97	156	99.0%	99.4%
False	1	1	1.0%	.6%

Q d. Unprotected heterosexual intercourse carries a risk of transmitting AIDS from a woman to a man.

	<u>Number</u>		<u>Percentage of Sample</u>	
	Male	Female	Male	Female
True*	96	153	98.0%	97.5%
False	0	1	0%	.6%
Don't know	2	3	2.0%	1.9%

Q e. AIDS can be transmitted by anal intercourse.

	<u>Number</u>		<u>Percentage of Sample</u>	
	Male	Female	Male	Female
True*	96	155	99.0%	98.7%
False	0	1	0%	.6%
Don't know	1	1	1.0%	.6%

Q f. AIDS can be transmitted in semen.

	<u>Number</u>		<u>Percentage of Sample</u>	
	Male	Female	Male	Female
True*	94	146	95.9%	93.6%
False	0	7	0%	4.5%
Don't know	4	3	4.1%	1.9%

* Indicates correct response

FACTUAL UNDERSTANDING OF AIDS (Cont'd)

Q e. AIDS can be transmitted by anal intercourse.

	<u>Number</u>		<u>Percentage of Sample</u>	
	Male	Female	Male	Female
True*	96	155	99.0%	98.7%
False	0	1	0%	.6%
Don't know	1	1	1.0%	.6%

Q f. AIDS can be transmitted in semen.

	<u>Number</u>		<u>Percentage of Sample</u>	
	Male	Female	Male	Female
True*	94	146	95.9%	93.6%
False	0	7	0%	4.5%
Don't know	4	3	4.1%	1.9%

Q g. Having sex with fewer partners decreases the risk of getting AIDS.

	<u>Number</u>		<u>Percentage of Sample</u>	
	Male	Female	Male	Female
True*	87	125	88.8%	80.6%
False	9	21	9.2%	13.5%
Don't know	2	9	2.0%	5.8%

Q h. A person can contract AIDS through oral-genital sex.

	<u>Number</u>		<u>Percentage of Sample</u>	
	Male	Female	Male	Female
True*	91	140	92.9%	89.2%
False	3	6	3.1%	3.8%
Don't know	4	11	4.1%	7.0%

FACTUAL UNDERSTANDING OF AIDS (Cont'd)

Q i. Receiving a blood transfusion with infected blood can give a person AIDS.

	<u>Number</u>		<u>Percentage of Sample</u>	
	Male	Female	Male	Female
True*	98	157	100%	100%

Q j. You can get AIDS by sharing a needle with a drug user who has the disease.

	<u>Number</u>		<u>Percentage of Sample</u>	
	Male	Female	Male	Female
True*	98	157	100%	100%

Q k. Shaking hands with someone who has AIDS can give it to you.

	<u>Number</u>		<u>Percentage of Sample</u>	
	Male	Female	Male	Female
False*	96	157	99.0%	100%
Don't know	1	0	1.0%	0%

Q l. AIDS can be spread by using some else's personal belongings, like a comb or hairbrush

	<u>Number</u>		<u>Percentage of Sample</u>	
	Male	Female	Male	Female
True	1	0	1.0%	0%
False*	93	155	94.9%	98.7%
Don't know	4	2	4.1%	1.3%

FACTUAL UNDERSTANDING OF AIDS (Cont'd)

Q m. AIDS is a medical condition in which the body has a difficult time fighting off infection.

	<u>Number</u>		<u>Percentage of Sample</u>	
	Male	Female	Male	Female
True*	96	154	98.0%	98.7%
False	2	2	2.0%	1.3%

Q n. You can get AIDS from casual contact (such as shaking hands, coughing, using the same telephone or toilet seat) with people who have the disease.

	<u>Number</u>		<u>Percentage of Sample</u>	
	Male	Female	Male	Female
True	1	1	1.0%	.6%
False*	96	153	98.0%	97.5%
Don't know	1	3	1.0%	1.9%

Q o. Some babies born to mothers with AIDS will carry the AIDS virus.

	<u>Number</u>		<u>Percentage of Sample</u>	
	Male	Female	Male	Female
True*	94	155	96.9%	98.7%
Don't know	3	2	3.1%	1.3%

Q p. Stress causes AIDS.

	<u>Number</u>		<u>Percentage of sample</u>	
	Male	Female	Male	Female
False*	98	151	100.0%	96.8%
Don't know	0	5	.0%	3.2%

FACTUAL UNDERSTANDING OF AIDS (Cont'd)

Q q. If you kiss someone with AIDS, you will get the disease.

	<u>Number</u>		<u>Percentage of sample</u>	
	Male	Female	Male	Female
True	1	5	1.0%	3.2%
False*	84	140	87.5%	89.2%
Don't know	11	12	11.5%	7.6%

Q r. The majority of gay men have AIDS

	<u>Number</u>		<u>Percentage of sample</u>	
	Male	Female	Male	Female
True	3	2	3.1%	1.3%
False*	85	126	86.7%	80.3%
Don't know	10	29	10.2%	18.5%

Q s. If you touch someone with AIDS without exchanging bodily fluids you can get AIDS.

	<u>Number</u>		<u>Percentage of sample</u>	
	Male	Female	Male	Female
True	1	0	1.0%	0%
False*	96	157	98.0%	100.0%
Don't know	1	0	1.0%	0%

Q t. What you eat can give you AIDS.

	<u>Number</u>		<u>Percentage of sample</u>	
	Male	Female	Male	Female
False*	97	156	99.0%	99.4%
Don't know	1	1	1.0%	.6%

FACTUAL UNDERSTANDING OF AIDS (Cont'd).

Q u. AIDS can be cured.

	<u>Number</u>		<u>Percentage of sample</u>	
	Male	Female	Male	Female
True	1	1	1.0%	.6%
False*	91	148	92.9%	94.3%
Don't know	6	8	6.1%	5.1%

Q v. AIDS is not at all serious: it is like having a cold.

	<u>Number</u>		<u>Percentage of sample</u>	
	Male	Female	Male	Female
False*	98	157	100.0%	100.0%

Q w. AIDS is caused by a bacteria.

	<u>Number</u>		<u>Percentage of sample</u>	
	Male	Female	Male	Female
True	2	5	2.1%	3.2%
False*	89	132	91.8%	85.2%
Don't know	6	18	6.2%	11.6%

Q x. AIDS is caused by the same virus that causes gonorrhoea.

	<u>Number</u>		<u>Percentage of sample</u>	
	Male	Female	Male	Female
True	0	4	0%	2.5%
False*	88	115	89.8%	73.2%
Don't know	10	38	10.2%	24.2%

FACTUAL UNDERSTANDING OF AIDS (Cont'd)

Q y. Having sexual intercourse with someone who has AIDS is one way of getting it.

	<u>Number</u>		<u>Percentage of sample</u>	
	Male	Female	Male	Female
True*	98	156	100.0%	99.4%
False	0	1	0%	.6%

Q z. The majority of people with AIDS die from the disease.

	<u>Number</u>		<u>Percentage of sample</u>	
	Male	Female	Male	Female
True*	86	144	87.8%	91.7%
False	8	10	8.2%	6.4%
Don't know	4	3	4.1%	1.9%

Q aa. The majority of lesbian women have AIDS.

	<u>Number</u>		<u>Percentage of sample</u>	
	Male	Female	Male	Female
False*	88	142	89.8%	90.4%
Don't know	10	15	10.2%	9.6%

Q bb. People with AIDS usually develop other diseases as a result of AIDS.

	<u>Number</u>		<u>Percentage of sample</u>	
	Male	Female	Male	Female
True*	95	153	96.9%	97.5%
False	2	2	2.0%	1.3%
Don't know	1	2	1.0%	1.3%

FACTUAL UNDERSTANDING OF AIDS (Cont'd).

Q cc. I can avoid getting AIDS by exercising regularly.

	<u>Number</u>		<u>Percentage of sample</u>	
	Male	Female	Male	Female
True	2	0	2.0%	0%
False*	94	157	95.9%	100.0%
Don't know	2	0	2.0%	0%

Q dd. You can get AIDS from sharing plates, forks, or glasses with someone who has AIDS.

	<u>Number</u>		<u>Percentage of sample</u>	
	Male	Female	Male	Female
True	5	7	5.2%	4.5%
False*	77	132	80.2%	84.6%
Don't know	14	17	14.6%	10.9%

Q ee. There is a vaccine available which prevents AIDS.

	<u>Number</u>		<u>Percentage of sample</u>	
	Male	Female	Male	Female
True	0	1	0%	.6%
False*	92	154	93.9%	98.1%
Don't know	6	2	6.1%	1.3%

Q ff. It is possible to get AIDS by donating blood.

	<u>Number</u>		<u>Percentage of sample</u>	
	Male	Female	Male	Female
True	12	15	12.2%	9.6%
False*	86	138	87.8%	87.9%
Don't know	0	4	0%	2.5%

Findings Related To The Hypotheses

Eight (8) hypotheses were developed for this study. The hypotheses are discussed in the order they appear in Chapter three.

Null Hypothesis 1

HO_1 -- There is no difference with respect to knowledge of AIDS between male and female mental health counselors.

A t-test was performed on the total knowledge test as well as the four sections of the knowledge test. The findings in Table 6 indicate that males had a higher mean score on epidemiology than females, with a p value of .003, well below the .05 significant level. As a result of this data the null hypothesis was rejected.

The t-test for transmission, treatment, general knowledge and total knowledge showed no significant relationship between gender and knowledge at the .05 significance level (see Tables 7 - 10).

TABLE 6: Knowledge of Epidemiology correlated with Gender

	<u>Male</u>	<u>Female</u>
Mean	.9588	.9194
Standard Deviation	.087	.121

p=.003 Significant at .05

TABLE 7: Knowledge of Transmission correlated with Gender

	<u>Male</u>	<u>Female</u>
Mean	.9258	.9190
Standard Deviation	.073	.066
p=.457 Not significant at .05.		

TABLE 8: Knowledge of Treatment correlated with Gender

	<u>Male</u>	<u>Female</u>
Mean	.9337	.9618
Standard Deviation	.198	.155
p=.235 Not significant at .05.		

TABLE 9: General knowledge of AIDS correlated with Gender

	<u>Male</u>	<u>Female</u>
Mean	.9107	.9061
Standard Deviation	.158	.159
p=.819 Not significant at .05.		

TABLE 10: Total knowledge score of AIDS correlated with gender

	<u>Male</u>	<u>Female</u>
Mean	.9354	.9224
Standard Deviation	.063	.062

p=.747 Not significant at .05.

Null Hypothesis 2

HO₂ -- There is no difference with respect to knowledge of AIDS between mental health counselors who have and have not provided professional services to persons with AIDS within the past year.

This hypothesis was tested using a t-test on the total score and sub-sections of the test. Table 11 indicates that there is a significant relationship at the .05 level for both transmission and professional contact (.031) and total knowledge score and professional contact (.017). The null hypothesis was rejected.

TABLE 11. T-TESTS CORRELATING PROFESSIONAL SERVICES AND KNOWLEDGE

Subject	p value
Epidemiology	.068
Transmission	*.031
Treatment	.098
General	.567
Total knowledge	*.017

*Significant at .05 level.

Null Hypothesis 3

HO₃ -- There is no interaction between gender of the mental health counselor who provided professional services to persons with AIDS within the past year and the gender of those that did not provide professional services to persons with AIDS within the past year with respect to knowledge of AIDS.

Using a multiple regression analysis, results indicated no interactional effect. The dependent variable was knowledge and the independent variables were gender, professional services and the interaction of gender and professional services. With Alpha set at .05 results indicated a p value of .0994 which was above the level of significance (See Table 12). As a result, the hypothesis was retained.

TABLE 12. MULTIPLE REGRESSION ANALYSIS: INTERACTIONAL EFFECT

Multiple R	.28584
R Square	.08170
Adjusted R Square	.04396
Standard Error	.04795

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	3	.01493	.00498
Residual	73	.16785	.00230

F = 2.16500 Signif. F = .0994

Variables in the Equation

Variable	B	SE B	Beta	T
Sig T				
SEXXQ1	6.019230E-04	2.22840E-03	.06980	.270
.7878				
SEX	.02025	.01267	.20770	1.599
.1142				
Q1A	6.171454E-04	1.95959E-03	.07595	.315
.7537				
(Constant)	.92763	8.60324E-03		107.823
.0000				

Null Hypothesis 4

HO₄ -- There is no difference with respect to knowledge of AIDS between mental health counselors who have and have not been personally acquainted with someone, other than a client, who has been diagnosed with AIDS.

This hypothesis was tested by an analysis of variance (ANOVA). Gender was also included in the analysis to see how much variance it accounted for when

compared with personal acquaintance and knowledge. As can be seen on Table 13, .001 is well below the .05 level of significance. Because personal acquaintance is a significant variable in determining level of knowledge, the null hypothesis is rejected. Of interest is the fact that even though the t-test showed a significant difference between gender and knowledge with respect to epidemiology in hypothesis 1, the difference is not significant when personal acquaintance is added.

TABLE 13 ANALYSIS OF VARIANCE COMPARING GENDER AND KNOWLEDGE, PERSONAL ACQUAINTANCE AND KNOWLEDGE, AND THE INTERACTION OF GENDER AND PERSONAL ACQUAINTANCE AND KNOWLEDGE

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	.048	2	.024	6.446	.002
Gender	.008	1	.008	2.075	.151
Personal Acquaint.	.039	1	.039	10.350	*.001
2-way interactions					
gender					
personal acq.	.000	1	.000	.081	.776

Null hypothesis 5

HO₅ -- There is no difference with respect to knowledge of AIDS between mental health counselors who are personally acquainted with someone, other than a client, who is homosexual.

An analysis of variance (ANOVA) revealed no significant difference between the groups, thus the null hypothesis was retained (See Table 14). There was no difference with respect to knowledge between mental health counselors who are personally acquainted with someone, other than a client, who is homosexual and those who are not personally acquainted with someone, other than a client, who is homosexual.

TABLE 14. ANALYSIS OF VARIANCE COMPARING GENDER AND KNOWLEDGE, KNOWING SOMEONE WHO IS HOMOSEXUAL AND KNOWLEDGE, AND THE INTERACTION OF GENDER AND KNOWING SOMEONE WHO IS HOMOSEXUAL AND KNOWLEDGE

Source of Variation	Sum of Squares	DF	Mean Square	F	Signif of F
Main Effects	.015	2	.007	1.887	.154
Gender	.010	1	.010	2.445	.119
Knowing homosexual	.005	1	.005	1.321	.251
2-way interactions	.002	1	.002	.629	.429
SEX	.002	1	.002	.629	.429
Knowing homosexual					

Null hypothesis 6

HO₆ -- There is no difference with respect to knowledge of AIDS between younger and older mental health counselors.

As was stated elsewhere in this paper, age is being used as a co-variate to help adjust for the unequal size between male and female groups, therefore, an analysis of co-variance was used to test this

hypothesis. The results of the analysis (See Table 15) indicate that age is not related to level of knowledge, therefore, the null hypothesis was retained.

TABLE 15. ANALYSIS OF CO-VARIANCE COMPARING AGE AND KNOWLEDGE

Knowledge is the dependent variable.
Sex and age are independent variables.

<u>Source of variation</u>	<u>Sum of Squares</u>	<u>DF</u>	<u>Mean Square</u>	<u>F</u>	<u>Signif of F</u>
Covariates					
Age	.000	1	.000	.040	.842
Main Effects	.009	1	.009	2.404	.122
Explained	.010	2	.005	1.222	.297
Residual	.918	235	.004		
Total	.928	237	.004		

Null Hypothesis 7

HO₇ -- There is no difference with respect to knowledge of AIDS between heterosexual, bisexual and homosexual mental health counselors.

This hypothesis was tested by using the one-way analysis of variance to compare the groups and setting the confidence level at .05 as shown in Table 16. The F ratio was shown as significant and the null hypothesis was rejected. To locate where the differences in means occurred, the Newman-Keuls multiple comparison test (shown in Table 17) was used. The results of the Newman-Keuls multiple comparison

showed that groups 1 and 3, and groups 3 and 2 were the same, however, there was a significant difference between groups 2 and 1, thus indicating that of the three groups, homosexuals had significantly higher levels of knowledge than heterosexuals.

TABLE 16. ANOVA RESULTS COMPARING KNOWLEDGE AND SEXUAL ORIENTATION

<u>Analysis of Variance</u>					
<u>Source</u>	<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Squares</u>	<u>F Ratio</u>	<u>F Prob.</u>
Between Groups	2	.0262	.0131	3.3981	.0351*
Within Groups	234	.9015	.0039		
Total	236	.9277			

*Significant at .05.

TABLE 17. NEWMAN-KEULS MULTIPLE COMPARISONS OF MEANS FOR SEXUAL ORIENTATION

<u>Mean</u>	<u>Group</u>	<u>1</u>	<u>3</u>	<u>2</u>
Heterosexual	.9243	Grp 1	X	X
Bisexual	.9438	Grp 3		X
Homosexual	.9716	Grp 2	*	X

(*) Denotes pairs of groups significantly different at the .05 level.

Null Hypothesis 8

HO₈--There is no difference with respect to knowledge of AIDS between mental health counselors who have had AIDS training and those who have not had AIDS training.

One-way analyses of variance were performed comparing the groups for differences in level of knowledge. The F ratio was found significant at the .05 level, and the null hypothesis was rejected (See Table 18). To determine where the differences between the means were located the Newman-Keuls test was performed (See Table 19). Results show that level of knowledge increased with an increase in hours of formal AIDS training. A Chi-square was also run to determine if there were gender differences as related to hours of formal training. Results showed there was no significance (See Table 20).

TABLE 18. ANOVA RESULTS COMPARING LEVEL OF KNOWLEDGE AND TRAINING

<u>Source</u>	<u>DF</u>	<u>Analysis of Variance</u>			
		<u>Sum of Squares</u>	<u>Mean Squares</u>	<u>F Ratio</u>	<u>F Prob.</u>
Between Groups	4	.0737	.0184	5.0233	.0007*
Within Groups	233	.8542	.0037		
Total	237	.9278			

(*)Denotes significance at .05 level.

TABLE 19. NEWMAN-KUELS MULTIPLE COMPARISONS OF MEANS
FOR HOURS OF TRAINING

			G	G	G	G	G
			r	r	r	r	r
			p	p	p	p	p
	<u>Mean</u>	<u>Group</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>4</u>
NONE	.9040	Grp 1	X	X	X	X	X
1-5	.9210	Grp 2	X	X	X	X	X
6-10	.9422	Grp 3	*	*	X	X	X
21+	.9524	Grp 5	*	*	X	X	X
11-20	.9539	Grp 4	*	*	X	X	X

(*)Denotes significance at .05 level.

TABLE 20. CHI-SQUARE ANALYSIS OF GENDER AND HOURS OF
FORMAL TRAINING

<u>Hours</u>	<u>Male</u>		<u>Female</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
None	21	21.4%	37	23.6%
1-5	28	28.6%	63	40.1%
6-10	27	27.6%	35	22.3%
11-20	11	11.2%	9	5.7%
21+	11	11.2%	13	8.3%
<u>Chi-Square</u>	<u>DF</u>	<u>Significance</u>		
5.94133	4	.2036		

Additional Factors

Other factors that could potentially affect mental health counselors' level of knowledge were also analyzed. This section of the chapter will demonstrate the results of this data.

A one-way analysis was run to determine the effect of religion, work setting and professional degree on level of knowledge. Significance was not found at the .05 level on any of these factors.

Geographic Factors

Particular areas in the United States have greater incidence of reported AIDS cases. For example, the highest reported incidences of AIDS have been reported in California, New Jersey, Florida, Washington D.C., New York, Maryland and Puerto Rico.

A one-way analysis of variance was run to determine if there were significant differences in levels of knowledge and geographic incidence. Results showed a p value of .3995 which was above the .05 level of significance, thus indicating that there were no significant differences in level of knowledge of AIDS and geographic incidence.

Knowledge of Community Resources

There was a significant relationship between awareness of community resources and level of knowledge. Table 21 shows the frequency distribution

of mental health counselors who knew or didn't know of community services for PWAs and the number who were able to list the services. Over three-quarters (79.9%) of the respondents stated they knew of at least one community service available for PWAs, although only 61.2% of the total respondents were able to actually identify a community service. A chi-square analysis was run to determine if there were significant differences between males and females regarding knowledge of community services for AIDS. Results revealed no significant differences related to gender (See Table 22). A t-test was then run to determine if knowledge of community services has an effect on level of knowledge. The results on Table 23 reveal a significant p value of .002, which is significantly lower than the .05 level of significance. The data suggests that mental health counselors who are knowledgeable about community services for PWAs have a higher level of knowledge than those who are not knowledgeable about community services for PWAs.

TABLE 21. FREQUENCY DISTRIBUTION FOR KNOWLEDGE OF COMMUNITY RESOURCES

<u>Value Label</u>	<u>Frequency</u>	<u>Percent</u>
Yes	196	76.9%
No	59	23.9%
Listed service	156	61.2%

TABLE 22. CHI-SQUARE TEST COMPARING SEX AND KNOWLEDGE OF COMMUNITY RESOURCES

	<u>Male</u>		<u>Female</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Yes	72	73.5%	124	79%
No	26	26.5%	33	21%
<u>Chi-Square</u>	<u>DF</u>	<u>Significance</u>		
.74400	1	.3884		

TABLE 23. T-TEST COMPARING LEVEL OF KNOWLEDGE AND KNOWLEDGE OF COMMUNITY RESOURCES FOR PEOPLE WITH AIDS

	<u>Yes</u>	<u>No</u>
Mean	.9361	.9003
Standard Deviation	.054	.078

p=.002 Significant at .05 level.

Where knowledge was obtained

The respondents received their information and knowledge about AIDS from a variety of resources. Respondents were given the opportunity to state the first and second most important AIDS information source as well as the least important AIDS source of information. In order of highest frequency, the respondents reported obtaining the majority of their information from professional journals (24.7%), newspapers and magazines (23.5%), workshops (15.7%),

colleagues (12.9%), television (8.6%), college courses (5.5%), experience (4.7%), friends (2.4%), clients (1.2%), and government mailings (.8%). (See Table 24). Respondents listed the two least important AIDS sources of information as personal experience and friends. (See Table 24).

TABLE 24. SOURCES OF AIDS INFORMATION

Most important source of AIDS Information

<u>Source</u>	<u>Frequency</u>	<u>Percent</u>
Journals	63	24.7%
News/magazines	60	23.5%
Workshops	40	15.7%
Colleagues	33	12.9%
TV	22	8.6%
College Courses	14	5.5%
Experience	12	4.7%
Friends	6	2.4%
Clients	3	1.2%
Government mailing	2	.8%

Least important AIDS Source

<u>Source</u>	<u>Frequency</u>	<u>Percent</u>
Friends	62	24.3%
Experience	53	20.8%
TV	43	16.9%
News/Mag	40	15.7%
Journals	32	12.5%
Colleagues	21	8.2%
Clients	1	.4%
Workshops	1	.4%
College course	1	.4%

Cross-tabulation of Demographics

The chi-square method was used to test demographic variables. Although not significant, there is an interesting correlation between religion and knowing someone other than a client with AIDS. Fifty percent of the 52 respondents who indicated they were Catholic knew someone other than a client with AIDS; 26.9% of 93 protestant respondents knew someone other than a client with AIDS; and 43.2% of 44 respondents who indicated no religious affiliation knew someone other than a client with AIDS.

When sexual orientation was compared with knowing someone other than a client with AIDS, 90.9% of homosexuals, 60% of bisexuals, and 36.1% of heterosexuals knew someone other than a client with AIDS. Using chi-square there was a significant difference in the means with a p value of .0005 being well below the .05 level of significance. (See Table 25).

TABLE 25. CHI-SQUARE TEST COMPARING SEXUAL ORIENTATION
AND KNOWING SOMEONE OTHER THAN A CLIENT WITH AIDS.

	<u>Heterosexual</u>	<u>Homosexual</u>	<u>Bisexual</u>
Know PWA	84 36.1%	10 90.9%	6 60.0%
Didn't know	149 63.9%	1 9.1%	4 40.0%
<u>Chi-Square</u>	<u>DF</u>	<u>Significance</u>	
15.09881	2	.00005*	

*Denotes significance at .05 level.

Respondents' Personal Feedback

On the last page of the questionnaire, respondents had the opportunity to comment on the study and/or their feelings about working with people with AIDS. Thirty-eight mental health counselors wrote comments. The following reflects some of the feelings and concerns reflected in those comments.

Training

"If one of my clients contracted HIV I would immediately seek consultation and/or further information on how to best help my client".

"Because I don't know very much about it, I would refer any patients to specialists in this area".

"For your information all Florida MH professionals must take an AIDS education course prior to being licensed...Texas and Montana don't [require AIDS training]".

"I would be more motivated if I had an AIDS client, relative, etc".

"I feel the entire counseling community needs to be better educated about the normal grief/mourning and bereavement experience".

"Tremendous need to educate therapists in this area. I have worked at educating myself through local resources, and have a medically-oriented background. I don't know what my colleagues are doing. So far we work mostly with people concerned about risk to

themselves, although I lost a friend to AIDS. I push my single clients about education and use of condoms and provide literature for them. I'm glad you are doing this research".

"Much more training needs to be undertaken to train counselors in working with gay and lesbian clients".

"There is much misinformation, but it's getting better. Much more education needs to be focused on prevention, cure, and treatment including support of victims. Good luck with your efforts and work".

"More workshops should be offered with both information and experiential. The issue offers mental health counselors an opportunity to increase their awareness and knowledge of a critical societal and health-related concern".

"Since I'm not in the medical field, I'm not overly concerned about the medical specifics of AIDS or cancer or other medical problems".

Experience

"I worked at a correctional facility where many of the residents were HIV positive and had active AIDS. Care was totally inadequate. If other facilities in the country are similar this nation has a time bomb ticking away...".

"I work with a very specific population-pregnant women who abuse drugs. We have not had many women who

are HIV positive so opportunity is not there to deal in depth. Suspect reasons are 1) failure to seek prenatal care period, 2) increased risk of miscarriage 3) fear of seeking treatment".

"Greatest professional challenge-helping a HIV positive person break the layer of denial even when diagnosed...and helping them confront fear of regular medical testing and fear of dying of AIDS... particularly those who are alcoholics and/or drug addicts".

Questionnaire

"Your questionnaire made me aware that I do not have enough information about it, however, as a counselor I have yet to encounter an AIDS patient".

"Excellent Questions. Made me think about the questions in a meaningful way".

"I liked your format. I suggest that we not persist in speaking about AIDS patients as though they were an oddity. The consequences are devastating. These are normal people".

Fear of contagion

"When I answered several questions I was embarrassed but honest. The fear of the unknown is too human a factor to deny. My reaction to someone with AIDS would also depend on the circumstances of their acquiring the disease-an innocent victim or a hardened

junkie? Is this somewhat judgement? Sure- but I am not as liberal as some and though I would counsel someone, I would be uninvolved personally".

"My personal fears include the fact that I feel there is still a lot to be learned about the disease, as the epidemic unfolds with time..".

"You might want to add a question about wanting to avoid an HIV positive person. I don't avoid them, but sometimes I want to avoid them out of fear, regardless of my knowledge about transmission".

"Yes, I feel I am a compassionate, intelligent person, but I find that my feelings are similar to friends and colleagues-the disease is just too new to know how you get it. I don't believe it is airborne, or you get it by touching someone, but I find most people don't want to risk death....".

"I feel sorry for people with AIDS but, I have to admit I would be leary of spending close time with them.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter is divided into three sections. The first section includes a synopsis of and purposes for the study, including the procedures used for obtaining the data. The second section presents a summary of the findings based on the statistical analyses described in Chapter IV. The third section covers the conclusions, relates it to the literature, and makes recommendations for each conclusion.

Research assessing knowledge of AIDS in mental health counselors is virtually nonexistent. Because pervading psychological factors have made AIDS a mental health as well as a public health emergency it is imperative that mental health counselors expand their knowledge of AIDS and the fear, pain and stress associated with the disease.

The purposes of this study were to: 1) assess mental health counselors' knowledge of AIDS; 2) determine the difference in knowledge of AIDS based on gender; 3) determine the extent to which professional contact with PWAs within the past year has an effect on level of knowledge of AIDS; 4) determine the extent to

which personal contact with PWAs, other than a client, has an effect on level of knowledge of AIDS; 5) determine the extent to which being personally acquainted with someone, other than a client, who is homosexual has an effect on level of knowledge of AIDS; 6) determine the extent to which age has an effect on level of knowledge of AIDS; 7) determine the extent to which sexual orientation has an effect on level of knowledge of AIDS; and 8) determine the extent to which AIDS training has an effect on level of knowledge of AIDS.

The population consisted of mental health counselors, who were chosen randomly from the current membership of the American Mental Health Counseling Association, which is a division of the American Association for Counseling and Development. In February, 1991 a survey packet was mailed to 358 subjects. The packet included an AIDS knowledge instrument, an attitude instrument, a demographic information form, and a letter describing the study and requesting that it be filled out and returned. Out of 358 surveys sent, there were 255 useable surveys returned, for a return of 72%.

The data obtained were analyzed to provide descriptive information pertaining to mental health counselors and to provide evidence for the support or rejection of the hypotheses.

Summary of the Findings

Mental Health Counselors Descriptive Information

The majority of respondents (61.6%) were female, Caucasian (95.3%), and heterosexual (91.9%), who work either in private practice (40%), in an outpatient mental health clinic (23.1%), or in a hospital or clinic (11.8%). The average age of the respondents was 43.3 years old and their average number of years working as a professional mental health counselor was 9.1.

This study revealed that 68.2% of the respondents had an earned masters degree and 15.7% had earned doctorates. Over one-third (36.5%) were protestant, (20.4%) were Catholic, (10.5%) were Jewish, and (17.3%) indicated no religious affiliation.

The majority (72.9%) of mental health counselors have not seen any clients diagnosed HIV positive. This was in contrast to a study by Wiener-Brawerman, (1988) who found that 66% of hospital social workers had worked with PWAs, either in private practice or as a part of their position at the hospital. In this study males saw significantly ($p=.027$) more people diagnosed HIV positive who contracted the virus through homosexual contact than females. It appears from the data that 5% of respondents are providing services to 70% of the HIV positive clients.

Knowledge Test Results

There were 32 items in the questionnaire which were used to test the knowledge of respondents about AIDS. The mean score was 29.7, representing a percentage score of 93% accuracy.

Although the respondents scored quite high on most of the knowledge questions, there were some gaps in their knowledge. One such gap had to do with the use of a natural skin condom during intercourse to reduce risk of infection. The majority (52.1% of the males and 67.1% of females) either didn't know or were misinformed about the type of condom material most effective in reducing risk of infection.

Mental health counselors were less knowledgeable about the virus that causes AIDS. One-fifth (20.5%) thought that the virus that causes AIDS is the same virus that causes gonorrhea, and (17.8%) didn't know that AIDS is not caused by a bacteria. Not quite one-fifth (17.6%) of the respondents incorrectly thought that AIDS can be contracted by sharing plates, forks, or glasses with someone who has AIDS. Almost one-fifth (19.1%) indicated a "don't know" response to the statement, "if you kiss someone with AIDS, you will get the disease." In spite of these gaps, mental health counselors were knowledgeable of the more common modes of AIDS transmission.

Summary of the Findings of the Hypotheses

Eight hypotheses were developed and tested for this study. The t-test was used to examine HO₁ and HO₂. A multiple regression analysis was used to determine interactional effect of HO₃. An analysis of variance (ANOVA) was used to examine HO₄ and HO₅. To examine HO₆ an analysis of co-variance (ANCOV) was used. The analysis of variance and the Newman-Keul multiple comparison were used to test HO₇ and HO₈.

HO₁ -- There was a significant difference with respect to knowlege of AIDS between male and female mental health counselors. Males scored higher on the epidemiology section than did females. However, when the total knowledge score was examined there was not a significant difference.

HO₂ -- There was a difference with respect to knowledge of AIDS between mental health counselors who have and have not provided professional services to persons with AIDS within the past year. Mental health counselors who have provided professional services to persons with AIDS within the past year had higher scores for both the section on transmission and total knowledge.

HO₃ -- There was no interactional effect between gender of the mental health counselor who provided professional services to persons with AIDS within the past year and the gender of those that did not provide

professional services to persons with AIDS within the past year with respect to knowledge of AIDS.

HO₄ -- There was a significant difference with respect to knowledge of AIDS between mental health counselors who have and have not been personally acquainted with someone, other than a client, who has been diagnosed with AIDS. Mental health counselors who have been personally acquainted with someone, other than a client, who has been diagnosed with AIDS scored significantly higher in knowledge than those mental health counselors who have not been personally acquainted with someone who has been diagnosed with AIDS.

HO₅ -- There was no difference with respect to knowledge of AIDS between mental health counselors who are personally acquainted with someone, other than a client, who is homosexual.

HO₆ -- There was no difference with respect to knowledge of AIDS between younger and older mental health counselors.

HO₇ -- There was a difference with respect to knowledge of AIDS between heterosexual, bisexual and homosexual mental health counselors. The results of the analysis of variance indicated that there was a difference, with respect to knowledge, between the groups. Further analysis of the three groups using the Newman-Keuls multiple comparison showed that

homosexuals were more knowledgeable about AIDS than heterosexuals.

H₀₈--There was a difference with respect to knowledge of AIDS between mental health counselors who have had AIDS training and those who have not had AIDS training. Data suggest that mental health counselors who have had AIDS training have more knowledge of AIDS than those who have not had AIDS training. The Newman-Keuls multiple comparison test further demonstrated that the more hours of training one has the higher the knowledge level.

Additional Factors

Other factors that could potentially affect mental health counselors' level of knowledge were analyzed. Results indicated that there were no significant differences in means between knowledge and religion, work setting, professional degree and geographic area of residence. However, there was a significant relationship between knowledge of community resources and level of knowledge. Analysis indicated that mental health counselors who are knowledgeable about community services for PWAs have a higher level of knowledge than respondents who were not knowledgeable about community services.

Discussion and Conclusions

Knowledge of AIDS

The mental health counselors who responded to the questionnaire demonstrated a high level of knowledge, relative to this authors' scaling system. However, it was not possible to compare level of knowledge with results from other studies because of the diversity of test construction and scoring. The Peterson (1991) study of social workers indicated that less than 50% of the questions were answered correctly. Wierner-Brawerman (1988) revealed that 58% of the social workers she evaluated had a "good" level of knowledge. The results of the Dhooper (1987-88) study showed that social work alumni were not well informed about AIDS and that 73% fell into the "moderate" to "most knowledgeable" category.

A comparison between inaccurate (5.3%) and "don't know" responses (9.5%), seemed to indicate that respondents were uninformed rather than misinformed about AIDS. This finding was compatible with the study of social workers (Peterson, 1991) which noted that the percent of incorrect responses (19.7%) was much lower overall than the percentage of "don't know" responses (23.18%).

However, respondents in this study clearly demonstrated information gaps. One area where respondents seemed most uninformed and misinformed had

to do with the type of condom most effective in reducing the risk of AIDS. Respondents were also less knowledgeable about the virus that causes AIDS. A minority were also misinformed regarding modes of transmission through casual contact, such as kissing and sharing plates, forks, or glasses with someone who has AIDS. This finding was consistent with the Stanford (1988) study of nurses which found that 50% of the respondents believed incorrectly that AIDS could be transmitted by sharing a cup with someone who had AIDS. Respondents were also misinformed about the extent to which homosexual males and lesbians have the disease.

Although the respondents were quite knowledgeable it is clear that there were definite knowledge gaps. One of the areas of misinformation had to do with contraction of the virus through casual contact, e.g. kissing and the sharing of eating utensils. The review of literature suggests that there is a great deal of confusion on the part of both professional and lay groups about this issue. It is true that the AIDS virus has been found in minute amounts in saliva, thus contributing to the fear that it may be a possible mode of transmission. It is this type of information which may get exaggerated and lead to fear and prejudice toward PWAs. Mental health counselors must have accurate information about AIDS if they are to help

disband the myths and misinformation too prevalent in our society.

Although slight, males did have a higher level of knowledge with respect to epidemiology than females. However, this finding should be taken with caution, since an analysis of variance to test the dependent variable knowledge with the independent variables of gender and personal acquaintance with PWAs indicated there was no significance regarding gender differences in knowledge.

Recommendations for Knowledge of AIDS:

Increase the number of articles on AIDS in the Journal of Counseling and Development and the Journal of Mental Health Counseling.

Since professional journals are the primary source of information about AIDS for mental health counselors, it is incumbent upon the American Association of Counseling and Development to provide up-to-date information about AIDS. Not only should there be more journal articles exploring various psychosocial models of counseling HIV positive clients, but also at least one issue a year should be dedicated to the topic of AIDS. This special annual issue should include a list of resources where the most recent information on AIDS can be obtained.

Experience Working with PWAs

Mental health counselors who have provided professional services to persons with AIDS within the past year scored higher in knowledge of AIDS than those who had not provided services to persons with AIDS within the past year. This result is consistent with the Wiener-Brawerman (1988) study which showed that hospital social workers who had a greater understanding of the disease of AIDS tended to have worked with AIDS patients. It is also compatible with several studies of medical personnel (Ficarrott, Grade, Bliwis & Irish, 1990; Haughey, Scherer & Wu, 1989; and King, 1989) which found that nurses and physicians who had clinical experience with AIDS patients had a higher level of knowledge about AIDS.

The results of this research clearly demonstrate the fact that the majority of mental health counselors are not providing services to PWAs. In part, this could be accounted for by the fact that a person with AIDS will seek out a counselor who is a specialist in working with PWAs. In addition, the majority of mental health counselors in this survey were either in private practice or working in settings which may not be financially accessible to PWAs.

Recommendations for Experience Working With PWAs:

Counselor education programs need to provide the opportunity of working with PWAs.

Mental health counselors already in the field cannot be required to work with PWAs or even volunteer their time. However, counselor education programs can provide the opportunity of a placement whereby counselor trainees may obtain professional experience working with PWAs. Because of the diverse and multitudinous needs of PWAs, sensitive and careful supervision would need to be provided for this type of placement.

Personal Acquaintance With PWAs and Knowledge

Similarly, mental health counselors who have been personally acquainted with someone, other than a client, who has been diagnosed with AIDS had a higher level of knowledge than respondents who have not been personally acquainted with someone who has been diagnosed with AIDS. This result is congruous with studies of hospital care workers (Gordin, Wiloughby, Levine, Gurez & Neill, 1987; and Henry, Campbell & Willenbring, 1990) which demonstrated that greater knowledge scores were associated with having a close friend or family member with AIDS.

Although it is clear that knowledge of AIDS increases with personal contact, the majority of the mental health counselors in this study did not

personally know a person with AIDS. This was particularly true for heterosexual respondents. Even though AIDS is no longer considered a "gay disease," the majority of people diagnosed with it are homosexual and bisexual males. It is reasonable to assume, therefore, that the majority of homosexual and bisexual respondents would have significantly more contact with PWAs than heterosexual respondents.

Recommendations for Personal Acquaintance With PWAs and Knowledge:

The National or State Associations for Counseling and Development should provide workshops and/or conferences on AIDS which should include an experiential component.

Information alone may not be sufficient to adequately increase knowledge and positive attitudes toward PWAs. Small discussion groups, facilitated by PWAs could be included as a part of a training program on AIDS. Small groups could provide an informal opportunity for participants to share their concerns about AIDS and obtain information directly from PWAs without fear of embarrassment or reprisal if they were to ask the same questions in a larger group format. Getting to personally know PWAs could help serve to move mental health counselors from seeing PWAs from a detached, removed and impersonal stance to seeing them

as people like themselves with similar needs, feelings and desires.

Age and Knowledge of AIDS

There was no difference with respect to knowledge of AIDS between younger and older mental health counselors. The results were congruous with those of Fredman et al., 1989; Lawrence & Lawrence (1989); and Peterson (1991), which found no significant difference between age and level of knowledge. This is in contrast to several studies of physicians (Lewis, Freeman & Corey, 1987; King, 1989; and Shapiro, 1989) where younger physicians were more knowledgeable and/or competent about AIDS than their older colleagues. The results of this data may suggest that as a group, mental health counselors tend to keep up with current trends that impact the field of counseling regardless of the age of the mental health counselor.

Knowledge and Sexual Orientation

Homosexual mental health counselors were significantly more knowledgeable about AIDS than were heterosexual mental health counselors. This finding is in contrast with the majority of studies that found no difference in knowledge between heterosexuals, homosexuals and bisexuals (McDermott, Hawkins, Moore & Cittadino, 1987; and Richardson, Lochner, McGuigan & Levine, 1987). However, the finding is in accord with

the study of the employees of a Minnesota teaching hospital (Henry, Campbell, & Willenbring, 1990) which revealed that homosexuals had higher knowledge scores.

One reason for this difference may be that heterosexual mental health counselors have seemingly not been as personally touched by the AIDS pandemic as have homosexual respondents. One might wonder if there is more apathy and indifference on the part of heterosexual mental health counselors as a result. There may also be a prevalent attitude among heterosexual respondents that since they are not presently providing direct services to PWAs there is nothing else they can or need to do about the pandemic. However, because the AIDS pandemic is increasingly affecting heterosexuals, it is crucial that heterosexual mental health counselors become as knowledgeable about AIDS as their homosexual colleagues.

Recommendations for Knowledge and Sexual Orientation:

Mental health counselors must actively increase their involvement in providing AIDS prevention education.

Although the majority of mental health counselors are not providing direct services to PWAs they do have a responsibility to at least educate their clients in "safer sex" and high risk practices in addition to counseling them about the AIDS antibody test.

Increasingly, mental health counselors will find themselves with a client who is HIV positive or a relative or friend of a PWAs. Mental health counselors should keep material on AIDS visibly available in their offices, and be adequately prepared to discuss questions arising from this information. If mental health counselors are to provide effective preventative education, they must be knowledgeable about such information as the type of condom most effective in reducing the transmission of the AIDS virus.

Knowledge and Training

A positive relationship was found between hours of AIDS training and knowledge of AIDS. The more hours of AIDS training mental health counselors had, the higher was their level of knowledge of AIDS. This conclusion is supported by the Lewis, Freeman, Kaplan & Corey, (1986) study which found that physicians who had not attended lectures or professional meetings about AIDS were the least likely to be in the competent category. Another study of nurses (Prince, Beard, Ivey & Lester, 1989) showed a positive relationship between a high knowledge level of AIDS and attendance at hospital in-service programs, professional conferences, and classroom sessions.

It seems reasonable to assume that training about AIDS would increase level of knowledge. Not only would the actual information increase understanding of AIDS

but it could be assumed that those mental health counselors who are motivated enough to attend an AIDS training would be more apt to increase their level of knowledge and thus be better prepared to deal with the AIDS pandemic.

Recommendations for Knowledge and Training:

To insure that mental health counselors have adequate knowledge of AIDS to provide effective services to PWAs, State Licensing Boards should make continuing education in AIDS training a pre-requisite for obtaining licensure as a mental health counselor.

A limited number of states, including Washington and Florida, mandate a specific number of continuing education hours necessary to become licensed. At the end of the survey upon which this study is based, respondents were provided the opportunity to write additional comments about the survey or about AIDS. There was an unfortunate attitude among some respondents that suggested they would obtain AIDS training only after they had an HIV positive client. At this time the only available methods of slowing the transmission of AIDS is through education and prevention. Now is the time for the mental health community to become involved in the war on AIDS.

The AIDS task force on counselor education must develop a formal AIDS curriculum for counselor trainees.

As was illustrated in another part of this thesis, graduate training in human sexuality is missing in the majority of counselor education programs. Graduate training in human sexuality is needed to provide skills that will enhance mental health counselors' ability to more comfortably discuss sexual issues with clients.

Departments of counselor education could collaborate with other departments within the university or college for the development of interdisciplinary course offerings, such as public health, inter-cultural studies, psychology, medicine, sociology, and family life sciences. A comprehensive AIDS curriculum should include not only the medical and scientific aspects of AIDS, but also assessment and psychosocial counseling models appropriate to specific populations. As was stated in a previous section of this paper, a requisite part of this curriculum should be the opportunity to work with a person with AIDS, especially since experience working with PWAs is clearly a variable which correlates with higher knowledge.

Knowledge and Awareness of Community Services

The more knowledgeable mental health counselors are about available community services for PWAs, the higher the level of AIDS knowledge they have. These results were in contrast to those found in the Wierner-Brawerman (1988) study which found that higher knowledge of AIDS was not correlated with knowledge of resources for PWAs.

The majority (72.9%) of mental health counselors surveyed in this study have not provided services to clients diagnosed HIV positive. This lack of professional involvement may be accounted for in part by the fact that the majority (63.1%) of respondents' principal work setting is either in private practice or an outpatient mental health clinic. It may be that most people diagnosed HIV positive could not afford private practice fees. On the other hand, a recent study of social workers (Peterson, 1991) revealed that 74% of the respondents indicated that they had no professional reasons for being knowledgeable about AIDS, and 87.8% had no personal reasons for knowing about AIDS. Since it is every social worker's and mental health counselor's responsibility to be knowledgeable about HIV infection, one could wonder about the seeming lack of professional commitment to dealing with this present mental health crisis.

Recommendations for Knowledge and Awareness of
Community Services:

Mental Health Counselors must be knowledgeable
about community resources for PWAs.

The needs of PWAs are numerous. Mental health counselors must be aware of and knowledgeable about the various community resources available if they are to effectively advocate for their clients. Counselors should know which physicians are most sensitive and knowledgeable about treatment options, as well as how to work with the system to obtain adequate housing and financial assistance, and where to go for psychosocial support. Mental health counselors must assist their clients in understanding their basic rights and in seeking and receiving care and services.

Resources for AIDS Information

Respondents obtain information and knowledge about AIDS from various resources. Those resources most frequently used by mental health counselors are professional journals (24.7%) and newspapers and magazines (23.5%). This finding is similar to the results of the Wiener-Brawerman (1988) study of social workers, which found that 48% of social workers obtained their information about AIDS from journals, (35%) from newspapers and (27%) from co-workers.

It may be assumed that mental health counselors tend to be passive recipients of AIDS information since

they obtained the majority of their information from professional journals, newspapers and magazines, rather than from active participation in workshops or from personal experience.

Recommendations for Resources for AIDS Information:

The American Association for Counseling and Development must provide adequate and up-to-date information on AIDS through a sufficient number of journal articles, brochures, and professional trainings.

In addition to the more passive means of obtaining information about AIDS, mental health counselors must become more actively involved. The national association must provide articles, brochures and training so that counselors acknowledge the fact that AIDS is rapidly pervading our society, and accept their role in fighting the war on AIDS.

Conclusion

AIDS will continue to impact our world and our society for many years. At the present time education and prevention are the only hope of controlling the spread of this disease. Mental health counselors must do their part in assisting with the war on this pandemic. The professional counseling associations also have an obligation to provide information and resources to assist mental health counselors become

knowledgeable and competent as resources to both clients and the larger community.

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APPENDICES

APPENDIX A

LETTER OF REQUEST AND RESEARCH INSTRUMENT

January 1, 1991

Dear Colleague:

Acquired Immunodeficiency Syndrome (AIDS) has reached epidemic proportions, with well over 157,525 people been diagnosed as of November 30, 1990 in the U.S. alone. Every mental health professional has been or will be touched by this pandemic. As a professional Mental Health Counselor, you are in a unique position to respond to the challenges of AIDS.

Our study assesses the knowledge and attitudes Mental Health Counselors have toward people with AIDS. It is a collaborative effort of two doctoral candidates enrolled in the Counselor Education program at Oregon State University. The ultimate validity and usefulness of this study's findings depends on your willingness to provide candid responses.

You have been chosen to be one of a random sample of the American Mental Health Counseling Association's Mental Health Counselors. Your answers will be confidential. The enclosed questionnaire is numbered only so that we will not contact you again after you have returned it.

Please take a few minutes to complete and return this questionnaire in the stamped, self-addressed envelope. Your part in the success of the study is greatly appreciated.

Sincerely,

Terri Jo Christenson,
M.S., NCC
Ph.D. Candidate
(503) 838-3816.

Micki Turner,
M.S.W., L.C.S.W.
Ph.D. Candidate
(503) 371-4510

Oregon State University
Mental Health Counselor
AIDS Survey

January 1991

The attitude scale was developed by Larsen, K., Long, E., & Serra, M.(1988), the knowledge scale by Gray, L., & Saracino, M.(1989), and the comfort scale was adapted from an instrument developed by Weiner-Brawerman, L.(1988).

MENTAL HEALTH COUNSELORS SURVEY ON AIDS

1. Please indicate how many clients you have seen in the last 12 months for each of the following categories:

NUMBER

- a. Diagnosed HIV Positive _____
- b. Family, partners and/or friends of a person diagnosed HIV Positive _____

(IF YOU HAVE NO CLIENTS IN THESE TWO CATEGORIES, PLEASE SKIP TO QUESTION 4)

2. Of those clients who are HIV positive, what number contracted the virus through each of the following (indicate all that apply):

NUMBER

- a. homosexual/bisexual contact _____
- b. blood transfusion _____
- c. heterosexual contact _____
- d. IV drug use..... _____
- e. unknown _____

3. Please indicate whether or not each of the following is a part of the work you do with clients diagnosed with AIDS and/or the family, partners or friends of diagnosed persons: (circle one for each)

	<u>YES</u>	<u>NO</u>
a. Individual, couples and/or family counseling	1	2
b. Group counseling	1	2
c. Concrete services, i.e. transportation, housing, financial services, etc	1	2
d. Crisis intervention	1	2
e. Alternative healing practices, i.e. nutrition, meditation, visualization, etc	1	2
f. Other (PLEASE SPECIFY) _____		

4. What is your principal work setting? (circle one)

1. PRIVATE PRACTICE

2. OUTPATIENT MENTAL HEALTH CENTER

3. HOSPITAL OR CLINIC

4. OTHER (PLEASE SPECIFY) _____

5. What is your highest professional degree? (circle one)

a. BA IN HUMAN SERVICES FIELD

b. MA IN HUMAN SERVICES FIELD

c. PhD OR EdD IN HUMAN SERVICES FIELD

d. OTHER (PLEASE SPECIFY) _____

6. How many years have you worked as a professional mental health counselor? _____ YEARS

7. Below is a list of statements that have been made about AIDS. There are no right or wrong answers. Please indicate the extent to which you agree or disagree with the statements. First impressions are best. Circle only one number for each statement.

	<u>DISAGREE</u> <u>STRONGLY</u>	<u>DISAGREE</u>	<u>NO</u> <u>OPINION</u>	<u>AGREE</u>	<u>AGREE</u> <u>STRONGLY</u>
a. Victims of AIDS represent a forgotten part of our society.....	1	2	3	4	5
b. More media coverage should be given to the plight of AIDS patients	1	2	3	4	5
c. People with AIDS should be grouped together and isolated	1	2	3	4	5
d. I would be worried for my health if a co-worker had AIDS.....	1	2	3	4	5
e. Persons with AIDS are dangerous to allow in public.....	1	2	3	4	5
f. People with AIDS are a menace to society	1	2	3	4	5
g. I would avoid someone if I knew they had AIDS	1	2	3	4	5
h. I would work alongside someone I knew had AIDS	1	2	3	4	5
i. I would offer whatever support necessary if a friend had AIDS	1	2	3	4	5
j. People with AIDS should be grouped together and isolated	1	2	3	4	5
k. I would open up my house to anyone with AIDS.....	1	2	3	4	5
l. I wouldn't mind if one of my child's classmates had AIDS	1	2	3	4	5
m. I avoid people with AIDS.....	1	2	3	4	5
n. I would not want a person with AIDS to touch me.....	1	2	3	4	5
o. I feel no sympathy for someone with AIDS	1	2	3	4	5

	<u>DISAGREE</u> <u>STRONGLY</u>	<u>DISAGREE</u>	<u>NO</u> <u>OPINION</u>	<u>AGREE</u>	<u>AGREE</u> <u>STRONGLY</u>
p. I would probably not embrace someone with AIDS	1	2	3	4	5
q. I would frequent a business which employed AIDS victims	1	2	3	4	5
r. If someone gets AIDS, they should be allowed to continue living as normally as possible.....	1	2	3	4	5
s. I would not associate with a person who had AIDS, even if they were a close friend	1	2	3	4	5
t. People with AIDS are probably living promiscuous lives	1	2	3	4	5
u. I feel personally comfortable counseling people who are diagnosed with AIDS.....	1	2	3	4	5
v. I feel professionally competent providing mental health services for persons diagnosed with AIDS, their family, friends and partners	1	2	3	4	5

8. How many hours altogether of formal professional training have you had regarding AIDS? (Circle one response)

1. NONE
2. 1-5
3. 6-10
4. 11-20
5. 21 OR OVER

9. From the list of sources below please indicate which one has been your most important source of information about AIDS, and which has been your second most important source. Finally, indicate your least important source of information about AIDS. Place the letter of your choice in the appropriate space.

<p>_____ MOST IMPORTANT</p> <p>_____ SECOND MOST IMPORTANT</p> <p>_____ LEAST IMPORTANT</p>	<p><u>SOURCE</u></p> <p>A. newspaper or magazine</p> <p>B. television</p> <p>C. personal experience</p> <p>D. colleagues</p> <p>E. professional journals</p> <p>F. friends or acquaintances</p> <p>G. OTHER (SPECIFY) _____</p>
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10. To your knowledge are there any resources or specific agencies in your community that provide services to persons diagnosed with HIV? (circle one number)

1. YES
2. NO

10a. Please list agencies _____

11. What additional information, if any, do you feel you need to know about the medical aspects of AIDS, e.g. etiology, transmission, treatment?

12. What additional information, if any, do you feel you need about mental health counseling of people diagnosed with HIV, e.g. psychosocial aspects, psychological treatment models?

13. For this list of statements about AIDS, please indicate if you think each statement is true or false. Circle one number for each item.

DONT
TRUE FALSE KNOW

a. Use of a natural skin condom during intercourse greatly reduces the risk of transmitting AIDS

1 2 3

b. The AIDS virus can be present in vaginal fluid

1 2 3

c. Unprotected heterosexual intercourse carries a risk of transmitting AIDS from a man to a woman

1 2 3

d. Unprotected heterosexual intercourse carries a risk of transmitting virus from a woman to a man

1 2 3

e. AIDS can be transmitted by anal intercourse

1 2 3

f. AIDS can be transmitted in semen

g. Having sex with fewer partners decreases the risk of getting AIDS

1 2 3

h. A person can contract AIDS through oral-genital sex

1 2 3

i. Receiving a blood transfusion with infected blood can give a person AIDS

1 2 3

DONT
TRUE FALSE KNOW

j. You can get AIDS by sharing a needle with a drug user who has the disease

1 2 3

k. Shaking hands with someone who has AIDS can give it to you

1 2 3

l. AIDS can be spread by using someone else's comb or hairbrush

1 2 3

m. AIDS is a medical condition in which the body has a difficult time fighting off infection

1 2 3

n. You can get AIDS from casual contact (such as shaking hands, coughing, using the same telephone or toilet seat) with people who have the disease

1 2 3

o. Some babies born to mothers with AIDS will carry the AIDS virus

1 2 3

p. Stress causes AIDS

1 2 3

q. If you kiss someone with AIDS, you will get the disease

1 2 3

r. The majority of gay men have AIDS

1 2 3

DONT
TRUE FALSE KNOW

s. If you touch someone with AIDS without exchanging bodily fluids you can get AIDS

1 2 3

t. What you eat can give you AIDS

1 2 3

u. AIDS can be cured

1 2 3

v. AIDS is not at all serious; it is like having a cold

1 2 3

w. AIDS is caused by a bacteria

1 2 3

x. AIDS is caused by the same virus that causes gonorrhea

1 2 3

y. Having sexual intercourse with someone who has AIDS is one way of getting it

1 2 3

z. The majority of people with AIDS die from the disease

1 2 3

aa. The majority of lesbian women have AIDS

1 2 3

bb. People with AIDS usually develop other diseases as a result of AIDS

1 2 3

DONT
TRUE FALSE KNOW

cc. I can avoid getting AIDS by exercising regularly

1 2 3

dd. You can get AIDS from sharing plates, forks, or glasses with someone who has AIDS

1 2 3

ee. There is a vaccine available which prevents AIDS

1 2 3

ff. It is possible to get AIDS by donating blood

1 2 3

14. What is your present religious affiliation, if any?

1. CATHOLIC
2. PROTESTANT
3. OTHER CHRISTIAN (NON-DENOMINATIONAL)
4. JEWISH
5. OTHER (SPECIFY) _____
6. NONE

15. Have you been personally acquainted with someone, other than a client, who has been diagnosed with AIDS? (i.e., friend, family member, or partner)

1. YES
2. NO

16. Are you personally acquainted with someone, other than a client, who is homosexual?

1. YES
2. NO

17. Do you consider yourself to be: (CIRCLE ONE)

1. HETEROSEXUAL
2. HOMOSEXUAL
3. BISEXUAL

18. Please indicate your gender

- a. FEMALE
- b. MALE

19. What is your age?

_____ AGE

20. What is your ethnic background? _____

21. Do you have any additional comments pertaining to your experience counseling people with AIDS or about this questionnaire?

THANK YOU VERY MUCH FOR YOUR PARTICIPATION

APPENDIX B

ONE WEEK FOLLOW-UP AND THANK YOU CARD

February 14, 1991

Last week a mental health counselors AIDS survey was mailed to you. Your name was chosen from a random sample of members of American Mental Health Counselors Association.

If you have already completed and returned the survey to us, please accept our sincere thanks. If you have not, please do so today. Because the survey is being sent to only a small, but representative sample of mental health counselors it is extremely important that your responses be included if the results are to accurately represent the mental health counseling profession.

If by chance you did not receive the survey, or it got misplaced, please call 1-503-737-4317. A replacement survey will be mailed right away.

Sincerely,

Terri Jo Christenson, M.S., NCC

Micki Turner, L.C.S.W.
Ph.D. Candidate

APPENDIX C

THREE WEEK FOLLOW-UP LETTER

February 27, 1991

Dear Mental Health Counselor:

About three weeks ago, we wrote to you seeking your responses to the mental health counselors AIDS survey. As of today we have not received your completed questionnaire.

We have chosen the study of AIDS and mental health counseling because we believe that the response of mental health counselors to the growing AIDS epidemic is important and timely.

We are writing to you again because of the significance each completed survey has to the usefulness of this study. Your name was chosen by a random sampling process. All results are confidential. In order for the results of the study to be truly representative of mental health counselors, it is essential that each person return the survey.

In the event your survey has been misplaced, a replacement is enclosed. Please feel free to contact either of us by phone if you have any questions or concerns about the questionnaire.

Sincerely,

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