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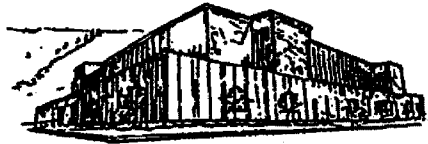
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AN EVALUATION OF HIV TRANSMISSION KNOWLEDGE AND
PREVENTION BEHAVIOR
AMONG MIGRANT WORKERS IN MONTANA

by

Angela D. Edwards McCall

B.S. East Tennessee State University, 1995

presented in partial fulfillment of the requirements

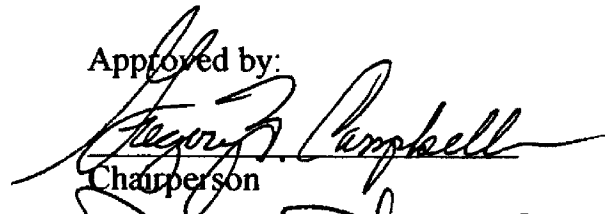
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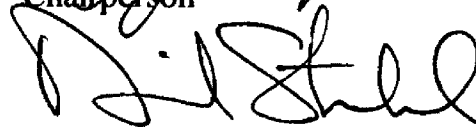
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An Evaluation of HIV Transmission Knowledge and Prevention Behavior Among Migrant Workers in Montana

Director: Gregory R. Campbell 

As HIV infection and AIDS cases remain high within minority populations, it is important to understand the level of knowledge the members of these populations have about HIV transmission. Public health campaigns frequently are not effective in reaching all segments of the population. It is estimated by the National Center for Farmworker Health (2003) that health services at migrant clinics reach less than 20 percent of all who need services. With limited resources, public health campaigns are designed to reach mainstream audiences and may not effectively reach minority populations. Cultural beliefs and linguistic differences serve as obstacles in reaching this population with mainstream public health messages. Additionally, migration itself serves as an obstacle to receiving public health information.

The purpose of the study was to determine the level of knowledge migrant workers in Montana have about the transmission routes of the Human Immunodeficiency Virus (HIV). Additionally, information was collected regarding how that information influenced the respondents' behavior in protecting themselves from infection. It is hoped that through this study, public health officials will better understand the educational needs of this population thus creating a more effective public health campaign to reach members of this group.

One hundred twenty survey instruments were distributed at sites where the Montana Migrant Council provides services; ninety-one were returned. The questionnaires were comprised of three different types of questions: 1) basic questions regarding HIV transmission routes, 2) questions regarding behavior in protecting oneself from infection, and 3) demographic information. The demographic information was compared to the respondents' answers in an effort to determine differences within the population and if people within one group lacked important information that made them more susceptible to acquiring the disease. Crosstabulations were conducted on issues of age, educational attainment, and sex to determine those most at risk of becoming infected with HIV and identify the issues that are of most concern.

Preface

The author wishes to thank Dr. Susan Twaddle for her assistance in conducting the statistical analysis of this research. The author also thanks Dr. Barbara van oss Marin of the Center for AIDS Prevention Studies at the University of California San Francisco for permitting the use of certain questions from her survey instrument.

Thanks also to Dr. Greg Campbell who encouraged me to complete the study. Thanks also to my family whose patience has far surpassed my expectations.

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Chapter 1

Introduction

Statement of the Problem

Migrant workers suffer from a wide range of burdens that stem from living in poverty and having a transient lifestyle. One of these burdens is poor health, caused by frequent contact with chemicals such as pesticides and fertilizers and exposure to extreme weather conditions such as heat, cold, rain, and intense sunlight. Once the day's work is done, migrant farmworkers are often exposed to overcrowded and substandard living conditions where tuberculosis and other infectious diseases are spread quickly. Many farms do not have proper toilet facilities or clean water available to migrant workers. This can lead to waterborne parasites and disease. Furthermore, many migrant farmworkers have difficulty accessing health care because of work schedules, the lack of sick leave, the distance to health clinics or primary care physicians, lack of transportation to and from the clinic, and the cost of medical attention. Most farmworkers also do not have medical insurance (National Center for Farmworker Health, Incorporated 2003a).

Typically, migrants use health services only as a last resort when they become too sick to work in the fields and require immediate medical attention. The migrants then go to a local emergency room where acute medical care is provided. The need for follow-up care or continuing care for chronic conditions is rarely met. In addition, health education availability is limited (National Center for Farmworker Health, Incorporated 2003a).

The prevalence of HIV (Human Immunodeficiency Virus) infection and AIDS continues to rise among minorities, particularly among women (Marin and Marin 1990,

Stinson 2000). As HIV infection rates rise among minority populations, migrant farmworkers are particularly a vulnerable population. The National Center for Farmworkers Health, Inc. reported an increase of HIV seroprevalence rate among migrant and seasonal farmworkers from 0.5 percent in 1987 to five percent in 1992 (National Center for Farmworker Health, Incorporated 2003b). The Centers for Disease Control (1988) indicate that health care workers have a difficult time in assessing the health status and the incidence of HIV infection due to the migrants' transience.

There are two primary reasons for the elevated levels of HIV infection among migrant workers. First, the public health educational programs implemented by states often do not reach workers who frequently travel between locales within a state or across state boundaries. Traditional public health educational programs also are frequently not designed to overcome language and cultural barriers of many migrant populations.

In November 1998, Candie Stearns, nurse at the Montana Migrant Council, revealed a fear that many of the agency's clients were undereducated on the transmission routes of the Human Immunodeficiency Virus (HIV) (Stearns, personal communication 1998). She stated that she did not know exactly the extent of their knowledge base about the disease, its etiology, and transmission routes. Additionally, she was interested in how the knowledge the migrants had about the disease and its transmission routes influenced their behavior. In an effort to deliver the best possible services, the Montana Migrant Council indicated that a Needs Assessment for an HIV/AIDS education program would be appropriate to determine the clients' level of education on this topic. After several discussions with Ms. Stearns, it was decided that an anonymous survey be conducted to assess the knowledge held by individuals and to

determine which behavioral risk factors for contracting HIV were most common in the cohort. The study was conducted so that the Montana Migrant Council could more effectively teach people about the transmission of HIV and the dangers of certain behaviors that could predispose the individual to infection.

As ethnic minorities and marginalized groups across the United States suffer from elevated levels of HIV infection and AIDS (Stinson 2000, Kline, Kline, and Oken 1992), researchers look for reasons why this statistical anomaly is occurring. The first reason is the result of United States Government's failure to launch a comprehensive HIV/AIDS education program designed to hamper the spread of the disease. When HIV and AIDS were first identified in the 1980's, it was reported to be a disease of gay men: primarily middle class, white men. This idea of HIV being limited to this segment of the United States persists among women of ethnic minorities despite public health outreach and campaigns. The Centers for Disease Control recently released statistics indicating that the AIDS epidemic among gay men of color is rising (Lee 2000b). These "same gay men often don't come clean with their girlfriends and wives about their sexual orientation" which puts women at further risk of HIV infection without their knowledge. (Lee 2000b:1). Therefore, women of ethnic minorities do not view HIV infection or AIDS as a threat to them. According to Stine (1998), women are 17.5 times more likely to contract HIV from an infected male partner than men are to contract it from an infected female partner.

Health education, where it exists, is segmented. Health education programs are administered by the Department of Health in each state with little or no coordination with adjacent states. Typically, this coordination is not necessary for the general population;

however, the lack of coordination affects the dissemination of information necessary for migrant workers to protect themselves from the disease. This segmentation of health education programs is problematic for migrant workers since migrants frequently cross state lines and frequently travel within the state itself.

In 1998, Congress enacted a law requiring mandatory HIV testing before a VISA is granted to refugees or immigrants. This law further compounded the problem by forcing many at-risk migrant workers into an underground way of life and created a fear of expulsion from the United States should they test positive while in the United States (Center for Strategic and International Studies 2003, Centers for Disease Control 1988). These laws increase the likelihood of illegal immigrants and further complicate a difficult scenario. Migrants who are not United States citizens and are HIV positive may not seek the health care they need due to the fear of deportation. Additionally, they put their sexual partners at risk because they may not know proper methods to protect their partners from infection such as the use of condoms or latex barriers/dams.

Additionally, language and culture provide a barrier to effectively reach certain ethnic minorities. Programs designed to reach minorities will generally fail if they are not culturally appropriate and utilize the correct language and terminology to deliver the health message. Programs not carefully designed may be in direct conflict with religious customs and beliefs that may further alienate the group of people (Lee 2000b).

Programs reaching migrants will need to be carefully planned as to disseminate the most crucial information in a culturally and linguistically appropriate manner to protect them from HIV infection. This study is important in determining the gaps in

knowledge of HIV transmission and determining the erroneous knowledge that will need to be corrected.

This study is unique in that it was approached and analyzed from an anthropological perspective. This viewpoint allows the researcher to evaluate cultural influences that may be overlooked by a study conducted strictly from a public health perspective.

Definition of the Group to be Studied

In an effort to design an appropriate educational program for migrant workers, it is important to understand the ethnic and national origin of those participating in the migration for agricultural employment. Additionally, it is crucial to understand the basic migration patterns across the United States. There are three major streams or routes of migrant workers and are identified geographically. According to Goldfarb (1981), the three migrant streams originate in the southern part of the United States and travel north as the growing and harvesting seasons progress throughout the year. Listed below are the three major routes, where they originate and who travels within them (Goldfarb 1981).

- The East Coast Stream originates in Florida and consists of native blacks, Puerto Ricans, and West Indians;
- The Mid-continent Stream originates in Texas and consists primarily of Mexican Americans, Central and South Americans; and
- The West Coast Stream originates in California and consists of Chinese, Japanese, Filipinos, Southern Europeans, and some Mexican Americans.

According to the Montana Migrant Council, approximately 10,400 individuals travel to work in the agricultural sector in Montana and the majority (70 percent) of workers migrates through the Mid-continent Stream. Twenty-five percent travel from Washington and a mere five percent come from California. Ninety percent of these workers are Hispanic, thus the focus on the Hispanic ethnicity throughout this document. While other regions tend to have migrant camps or barracks that are provided for the migrant workers by employers, migrants in eastern Montana tend to live in other types of housing that is dispersed. Montana has a wide range of land types and the labor varies from work in the grain fields of eastern Montana to the cherry orchards of the Northwest region. The majority of migrant workers in Montana travels as family units and come from Texas. Currently, Texas ranks fourth with the highest rates of HIV infection (Centers for Disease Control 2002). This fact has important implications concerning the development of health education programs; these implications will be discussed in Chapter five.

A study was conducted in the summer of 1999 in cooperation with the Montana Migrant Council to determine the clients' knowledge of HIV transmission routes and how that knowledge affected their behavior. Other factors such as formal education and age were also incorporated into the study. A survey was distributed at the Montana Migrant Council's main office in Billings as well as two field clinics operated by the Montana Migrant Council in Fairview and Hardin. All three locations are in eastern Montana. Migrant workers in the western part of the state usually arrive in the late summer or early fall and surveys were not completed in the western part of the state due to time constraints for the study.

For the purpose of this study, I did not ask if the person was a United States citizen or if he or she was an immigrant; this question was avoided due to issues of citizenship and legal/illegal immigration status. The immigration status of an individual is not relevant when it comes to HIV transmission. If a person is infected HIV, it is unnecessary to determine his/her legal status because the virus will be spread whether or not the person is here illegally. Therefore, public health campaigns must equally reach illegal aliens as well as legal aliens and United States citizens. HIV and other viruses do not recognize borders and issues of citizenship were completely avoided in this study.

Assumptions

Three assumptions pertained to this study. First, the researcher assumed that clients responding to the knowledge questions responded to the best of their abilities. This means that they did not answer incorrectly on purpose to provide misleading information. Secondly, the clients who completed the surveys answered the behavior questions honestly instead of how they thought they should respond. For example, a response to the question “The last time you had sexual intercourse did you use a condom?” should have been honest and not what the respondent thought the researcher wanted him or her to indicate. The last assumption is that the respondent understood that the survey was anonymous and did not reveal their identity in any way and could not be traced back to him/her.

Limitations

The geographical scope of this study is limited to the service area of the Montana Migrant Council, which is primarily the eastern part of the State of Montana. The main office of the Montana Migrant Council is located in Billings and its core services are available in this area. A mobile medical clinic regularly visits three other sites: Bridger, Fairview, and Hardin. Surveys were distributed only at Fairview, Hardin, and the main office in Billings. Although the Montana Migrant Council also serves the northwest region of Montana in the fall during cherry harvesting season, the migrants in this region were excluded from the survey due to time constraints. The study was conducted in the summer months before migrants in northwest Montana were to arrive.

Procedures

A literature review was conducted in order to determine what information was developed from prior research on migrant populations and what types of HIV/AIDS education needs they have had in the past. Several studies were available on the East Coast Stream that has a very different ethnic composition than the Midcontinental Stream. Foulk, et al. wrote about their findings from a survey given to migrants regarding HIV Transmission knowledge and behavior in three counties in southern Georgia (Foulk, Lafferty, Ryan and Robertson 1989). This study revealed that many migrants responding to the survey were misinformed. For example, 47.3 percent of respondents indicated that someone coughing could transmit AIDS and 64.3 percent

indicated that HIV Transmission could occur through shaking hands (ibid.) Goicoechea-Balbona studied three towns in western Palm Beach County, Florida comprised of migrant workers primarily from Latin America and the Caribbean. These towns had extremely high rates of HIV positive people and compared with rates found in New York City and San Francisco (Goicoechea-Balbona 1994). During her study, she found that black women had the highest rate of infection and they were becoming infected through heterosexual contact. The importance of Goicoechea-Balbona's article was that it exposed the link between poverty, poor access to health care, and an increased risk of HIV infection. Another study on migrants in the East Coast Stream was performed in North Carolina and focused on the use of injectable drugs for medicinal purposes by lay-people as a cause of the increasing rates of HIV infection among migrants in that area (McVea 1997). McVea goes on to indicate the larger overall problem that "...Hispanic farmworkers by engaging in unsafe practices during their migration into areas of high HIV prevalence may become vectors for its transmission to areas of low prevalence as they bring HIV infection home to their families in Mexico." (McVea 1997:93). Salgado de Snyder, Diaz Perez, and Maldonado (1996) echoed this finding of migrant workers engaging in unsafe practices that place them at risk of HIV infection. Men who work seasonally in the United States endanger their wives and children in rural Mexico by placing them in danger of becoming infected as well. Salgado de Snyder, Diaz Perez, and Maldonado (1996) indicate that injection of medication by *inyeccionistas*, or lay-people who are identified as healers, is another possible source of HIV transmission since syringes are used multiple times and may or may not be sterilized between uses on different people. Another important part of this research was on condom use and the fact

that Mexican women felt that condoms should be used only when the husband is with another woman besides his own wife. This is consistent with research performed by Marin, Gomez, and Hearst (1993) from a survey conducted with Hispanic respondents in the general population from nine states selected in the northeastern and southwestern United States which indicated that condoms should be used only when a man has intercourse with a secondary partner and that use of a condom with a primary partner such as a wife or girlfriend suggests fidelity issues. Organista, Organista, and Soloff (1998) released a study of the East Coast stream migrants that revealed several migration-related factors that pose risks to health, including HIV exposure. “These factors included limited education, cultural, linguistic, and geographical barriers to health care; and the poverty-related low wages, hazardous working conditions, chronic underemployment, constant mobility, and substandard housing.” (Organista, Organista, and Soloff 1998). The authors also indicated that Mexican migrant workers knew less about transmission and prevention of HIV infection than African American workers in the same study. Furthermore, they determined that Mexican women were the least informed about HIV and ways to protect oneself from contracting the virus. As indicated, all of the studies referenced are from the East Coast Stream (ibid.). Very little information is available on the farmworkers that travel in the Midcontinent Stream.

Methods

A survey was determined to be the best method of collecting information from migrant farmworkers about their knowledge of HIV transmission routes and sexual behavior due to cultural beliefs against openly discussing sexual matters.

Both men and women over the age of 18 were given surveys to complete. Minors were not allowed to complete the surveys due to some of the questions pertaining to sexual behavior. Surveys were available in both Spanish and English for men and women. Additional information on the subjects of this study is described in Chapter Three.

As previously mentioned, migrant workers do not have the knowledge necessary to protect themselves from HIV infection and those who speak only Spanish are even more vulnerable to exposure. Information from previous surveys and reports are several years old and most focus on the East Coast Stream that has a very different composition of ethnic groups and nationalities than the Midcontinent Stream. This survey was conducted to assist the Montana Migrant Council in its development of an HIV/AIDS education program.

In upcoming chapters, several topics will be covered in an effort to demonstrate the educational needs evident within the population to develop an effective and successful health education program. For example, Chapter two is a review of existing literature and information that influenced the design of and need for the survey. Chapter three is focused on the methodology of the survey including data collection, questionnaire/survey instrument development, biases identified, and subjects of the study

including demographic information collected from the survey. Chapter four is a review of the responses generated from the survey and includes information on the gaps of knowledge are present. Chapter five is a summary of the entire thesis and includes information linking knowledge of HIV transmission and at-risk behavior. Furthermore, chapter five discusses the need for a linguistically and culturally appropriate educational program. Without one or more of these steps, the health education program will not be as effective as it should be.

Chapter 2 Literature Review

Within the past two decades, there has been much discussion surrounding the differences in health status based on one's ethnicity. It has been proven that certain ethnic and racial groups are more genetically prone to certain diseases such as diabetes in Native American populations and hypertension in African American populations. However, genetic explanations cannot explain the high rates of infectious disease, such as HIV infection and the development of AIDS, in certain minority groups. The rising incidence of these cases must be linked to social position, socioeconomic status, and/or educational attainment. One possible reason may be attributed to cultural, religious, or language barriers that prevent public health initiatives from being effectively received by members of that group. Another possible reason may be the lack of appropriate public health awareness campaigns targeting or reaching these groups.

Since 1982, the second year in which the federal Centers for Disease Control counted cases of AIDS, AIDS cases were reported in African Americans and Hispanics at a higher rate in ratio to their population numbers in the United States. Fox (1990) reported that AIDS cases in African Americans and Hispanics comprised just under half of the males, almost 80 percent of the females, and almost two-thirds of the children diagnosed with the disease in the United States.

According to Alonso and Koreck (1989), HIV infection rates among Hispanics accounted for 14 percent of all the cases in the United States. Although this number may sound low, Hispanics comprised only six percent of the United States total population during the late 1980's (Alonso and Koreck 1989). In 2001, the rate of HIV infection

among Hispanics remains disproportionate in comparison with the United States population. For example, the Centers for Disease Control (2001) reported that 18.3 percent of cumulative AIDS cases were people reporting they were Hispanic while only 12.5 percent of the total United States population is Hispanic. Please see *Figure 1* listed below for the distribution of AIDS cases across racial categorizations. This chapter will discuss the possible reasons of elevated HIV infection rates among minorities, particularly Spanish-speaking migrant workers.

Figure 1. Comparison of AIDS Cases based on Ethnicity

| Ethnicity | Number of Cumulative AIDS Cases¹ | % of Infections² | Population of United States³ | % of Population⁴ |
|---------------------------------|----------------------------------------------------|------------------------------------|------------------------------------------------|------------------------------------|
| White, not Hispanic | 343,889 | 42.1% | 211,595,678 | 75.1% |
| Black, not Hispanic | 313,180 | 38.3% | 34,658,190 | 12.3% |
| Hispanic | 149,752 | 18.3% | 35,305,818* | 12.5%* |
| Asian / Pacific Islander | 6,157 | <1% | 10,242,998 | 3.6% |
| American Indian / Alaska Native | 2,537 | <1% | | |
| Race/Ethnicity Unknown | 634 | <1% | | |
| Total | 816,149 | 100% | 281,421,906 | 100% |

¹ *HIV/AIDS Surveillance Report*, Centers for Disease Control 2001.

² *HIV/AIDS Surveillance Report*, Centers for Disease Control 2001.

³ United States Census Bureau 2000.

⁴ United States Census Bureau 2000.

*** The United States Census indicated that the numbers may add to more than the total population and the percentages may add to more than 100 percent because individuals may report more than one race.**

Class/Social Issues of Migrant Workers

Immigrants are frequently employed in low-skilled industries such as agriculture. Employers use them because, typically, they work for lower wages, work in poorer environments, and work flexible schedules (Cantu 1995). According to Zamora (1993), “Mexicans were said to be the most exploitable workers primarily because they were accustomed to harsher working conditions in Mexico and demanded less of their employers in the United States.” (Zamora 1993:35)

Agricultural employment represents a labor sector that many Americans have no desire to enter. Only other lower class Anglos and minorities are interested in these jobs and compete with the Spanish-speaking migrant worker. The agricultural jobs held by English-speaking migrants are for short periods of time, not as a career such as the Spanish-speaking migrants, whose options are limited due to low educational levels, language barriers, and lack of governmental support.

Those who migrate for employment are usually from a lower socioeconomic class and are seen as outsiders. Migration is due to economic factors that cause laborers to move from the periphery to a core area to access the modes of production required in a capitalist society (Kearney 1986). The periphery is economically deprived and movement to the core would promote economic gain. The core attracts workers from economically depressed areas by having available jobs. This scenario resulted in a push-pull relationship; the periphery pushed workers out due to a lack of opportunity and the core pulled them in because of the need for cheap laborers (Kiser and Kiser 1979). However, the periphery rarely gains from this strategy; few migrants return with skills

they could apply in their homeland. Kearney (1986:346) states, “Anthropologists have found that the developmental impact of return migration is negative or at best neutral.” Upon return to their home, they have few, if any, new skills that will benefit them in their work.

Once they are in the core area, the community frequently does not accept the migrant workers. Nagel (1995) proposes that the influx of immigrants may cause hostility from the host country due to the increased competition for jobs, social programs, housing and educational benefits. Prejudice toward members of the immigrant group may be expressed due to the majority’s or other minority’s feelings of threat or loss. A cultural division that frequently results from this type of situation tends to produce “segregated ethnic communities characterized by great inequities of wealth, power, and status” as indicated by the lack of power experienced by the migrant farmworkers (Nagel 1995:446). This lifestyle is perpetuated across generations as children who migrate with their parents typically follow the same lifestyle as their parents and other family members. This entrapment into migration patterns creates a marginalization of the migrant worker, particularly those that speak Spanish. Furthermore, the United States government contributes to this marginalization by denying unemployment insurance and workers compensation, providing only mediocre educational opportunities, and not targeting public health campaigns to educate migrant workers on health issues. Cantu (1995) indicates that the government manipulates citizenship regulations in order to keep migrants permanently marginal and dispensable. Cantu then charges that the “state plays an integral role in reproducing and maintaining ‘core-periphery’ characteristics as marginalized social relations” (Cantu 1995:407) which perpetuates power in the core and

weakness in the periphery. The weakness of the periphery will always translate into a dependence on the core while the core maintains its dependence on disposable workers from the periphery.

Class/Social Position and Its Impact on Health

A class system impacts people's health within the society. "The concept of class is important because it focuses our attention on the economic, political, and social resources available to specific groups within a society. Like class, immigration status – or rather lack of immigration status (the undocumented) - also influences the resources available to individuals and groups." (Chavez, Flores and Lopez-Garza 1992:7)

Chavez, Flores and Lopez-Garza further explain that the United States attracts migrants and displaced persons because of its position in international capitalism and its dominant relationship with less powerful or subordinate countries who supply the workers.

Undocumented migrants are particularly likely to go into the secondary or informal sectors of the job market and frequently, they accept low-skilled, low-paying jobs. As Grey noted (1999), many corporations depend on immigrants and migrants to provide cheap labor and the United States economy benefits from their economic contribution not only in cheap labor, but in payment of income and sales tax as well. Immigrants play a vital role in our society because of the jobs they take; however, they represent the lowest class in America's capitalist society. Additionally, because migrant workers accept such low-paying jobs, businesses are able to expand their profit margins while cutting costs on wages and fringe benefits. Frequently, health care insurance is not provided to them.

This occurs despite the fact that farm laborers are exposed to some of the most dangerous working conditions. Agriculture is among the top three (3) most dangerous industries in the United States (Arcury and Quandt 1998).

The global economy has become increasingly capitalistic in recent years. The health care system in the United States is based on this same capitalistic ideology and class structure. Those who have the financial means are able to access quality health care while those who do not have such means cannot gain the same access (Baer, Singer and Susser 1997). While the middle class can afford basic and preventive medical care, those members of low socioeconomic classes which include large numbers of ethnic and racial minorities in the United States cannot afford preventive care. The public health care system in the United States is not able to effectively provide preventive care.

As originally designed, the United States Public Health Care system eradicates infectious diseases and monitors their transmission routes while educating the public about health issues. However, there is a history of low-income people, especially minorities, not receiving the message. This problem continues today despite efforts to reach minority populations. Furthermore, migrant farmworkers have a more difficult time receiving that message because of three primary factors. The first factor is due to the migrants frequently traveling across state lines. Since states operate their own health systems independently of other states and with little or any coordination of services and programs between states, those who cross state boundaries fall through the cracks. Another possible cause of the poor information provided to migrants is the fact that their work hours are during the day when they would need to go to the clinic or doctor. With other migrants being available to take the job, migrant farmworkers tend to push

themselves and avoid leaving work. Without programs providing after hours services, most migrants would not receive services. The third factor affecting the delivery of public health campaigns is the migrants' fear that the Immigration and Naturalization Service is working through the public health programs to determine who is here illegally and, if found, the migrants will be evicted from the United States. The 1998 law enacted by Congress requiring HIV testing made the fear of deportation even more legitimate (Lee 2000b).

Other barriers exist in addition to those listed above and include a lack of transportation, distrust of medical personnel, inability to afford treatment costs, and difficulty understanding the serious nature of illness or disease. Goicoechea-Balbona (1997) indicates that poor rural families do not utilize health care frequently and rural people of color face additional barriers to accessing health care. Due to the frequent relocation of migrants, disease management of patients becomes problematic and when migrants attempt to access services at the next location, it is questionable whether services will be available. Although the United States Department of Health and Human Services provides funding to migrant care centers, the need is greater than the services made available with the money provided by the Federal Agency (National Center for Farmworker Health 2003a). Furthermore, it is estimated that existing centers have the capacity to serve fewer than 20 percent of the nation's migrant farmworkers (ibid).

A Brief History of AIDS and HIV

Since the early 1980's when AIDS was first recognized, the social significance and immoral connotations of AIDS has changed. Initially, HIV infection and AIDS were seen as a "gay" disease because the majority of the victims suffering from this disease were men who have sex with men. Due to the frequency of gay men experiencing the diseased immune system, doctors and epidemiologists began to correlate the disease to their lifestyle assuming that intercourse between two men was the deciding factor. Baer, Singer and Susser (1997) indicated that the first patients seen with this disease were middle-classed men with the financial means to access adequate medical care. The original name of the virus was Gay-Related Immune Deficiency, which clearly marked it as a disease of homosexuals. This name was changed in 1982 when medical personnel recognized that young children and recipients of blood transfusions were suffering from the same virus (Baer, Singer and Susser 1997).

In the 1970's before AIDS was officially recognized and researched, medical personnel noticed that many Intravenous (IV) drug users were experiencing immune system deficiencies; however, due to their lifestyle, many doctors and medical professionals considered the debilitating effects IV drug use had on the bodies of the victims and did not pursue researching the cause of their weakened immune systems (Baer, Singer and Susser 1997).

According to Barker, Battle, Cummings and Bancroft (1998), 25% of all HIV infection in the United States is transmitted heterosexually and heterosexual contact accounts for 35% of all AIDS cases in women in the United States (MacQueen 1994).

As the incidence of heterosexual transmission increases so will the incidence of perinatal transmission (MacQueen 1994). Furthermore, "...women constitute the group with the greatest proportionate increase in AIDS diagnosis rate over the past several years, and AIDS is already one of the six leading causes of death among women between the ages of 18 and 45 in the United States" (Kelly, et al. 1994:1918). Between 1982 and 1986, the percentage of women contracting AIDS through contact with their male partners rose from 12 percent to 29 percent (Kline, Kline and Oken 1992).

Public Health Response to AIDS

Because of the association between AIDS and homosexuality, the United States government delayed their response to the disease and caused more problems in educating people about its transmission routes (Treichler 1988). Additionally, researchers were slow to consider all the possible methods of transmission. The general public had already perceived AIDS to be the "gay disease" and was not interested in hearing about its other transmission routes. The general public considered AIDS to be an affliction serving as punishment for immoral behavior. This widely accepted perception hindered governmental funding being allocated toward additional research because of the implication that it was condoning the immoral behavior of gay men and IV drug users. Through the use of science to develop a vaccine, social concerns of who the AIDS virus attacks is avoided. In a 1987-1992 study of Senate voting for AIDS programs, it was found that senators often voted for more money to be given to groups with sympathetic supporters. Schroedl and Jordan (1998) have identified four (4) different groups that have been labeled as such: 1) Advantaged- veterans, health care workers, and health

insurance industry; 2) Contenders- gay and bisexual men and the general population with AIDS; 3) Dependents- spouses, patients, and the general public; and 4) Deviants- IV drug users, criminals, prisoners, and foreigners. Those classified as deviants have been denied assistance or have experienced substantive and symbolic burdens.

Groups that had become infected through innocent behavior such as health care workers or recipients of blood transfusions were allocated more funds. These victims have been classified as “Dependents”. This strategy developed by politicians that allows them to allocate money while allowing them to maintain their political appeal especially to conservative voters.

Once researchers recognized that the disease did not strike only gay men and IV drug users, they began to promote a public health campaign designed to educate people about the virus. As early as 1986, the popular news media began to discuss the dangers of AIDS to heterosexuals (Treichler 1988). Public Health and governmental officials argued over the delivery of the education program while conservatives maintained that teaching sex education was promoting premarital and immoral sex. Eventually, the public health education campaign came to fruition and safe sex was promoted as a way to control the disease. Condoms were being used at a higher rate and it seemed that the public had the information it needed to protect itself. However, the campaign fell short of getting the message to everyone. The rates of HIV infection among ethnic and racial minorities continue to rise despite the public health campaigns (Centers for Disease Control 2001).

Another problem with the delivery of health education and dissemination of information on AIDS is the lack of consensus about policies for public sex education.

(Fox 1990) As one researches the discrepancies in health status, it becomes clear that public health campaigns do not reach everyone equally. In the case of the migrant farmworkers, delivery of health care has been problematic for 2 major reasons: public health programs are state-operated and lack continuity across state lines and the perception that most migrant farmworkers are illegal immigrants. According to Marin and Marin (1990), comparisons between several racial/ethnic groups revealed that Hispanics are less well informed on many issues regarding AIDS. Goicoechea-Balbona (1994) reports that rural migrant workers are at high risk for contracting HIV.

Within the past few decades, the United States Government has been very active and successful in controlling many diseases such as polio, smallpox, tuberculosis, and other highly infectious diseases. This has been largely accomplished through improvements in sanitary conditions and through the development of biological agents to prevent or cure diseases such as vaccines or antibiotics. However, there is a large disease problem that the United States government has failed to address and, therefore, is afflicting many members of the American nation at a very high rate. America has that highest rate of Sexually Transmitted Diseases (STD's) in the developed world and the United States Government has continued to deny attention to this growing concern. In 1996, it was estimated that 12 million women and men were diagnosed with an STD. Of those, most were under the age of 25 (Laurence 1998).

Politicians have often been afraid to address this concern due to the sensitivity of the subject and therefore, have often denied monetary resources to programs with efforts to control and eradicate such diseases. Most of these diseases are curable and if the

appropriate antibiotics were made more readily available, it is expected that fewer people would become infected. Public awareness programs for STDs are rare (Laurence 1998).

These issues become very important to HIV/AIDS education programs because both STDs and HIV are most commonly spread through the same routes- sexual contact. Those people afflicted with an STD are at a much higher risk for contracting the HIV virus because of the vulnerability of the genitals to more infection (Laurence 1998, Yankauer 1994). "A statistical model by scholars at the University of Laval in Quebec City suggests that if all U.S. chlamydial infections between 1990 and 1994 had been treated, a full 95 percent of heterosexually transmitted HIV cases during those years could have been prevented." (Laurence 1998:201)

Another large problem is the focus American society and medical teams place on biological agents to control disease. Emily Martin (1994) explains the idea of the human body seen as a fighting machine developed to fight bacteria. Society has developed tools such as antibiotics and vaccines as weapons to assist in the fight should the attack prove to be too much for the body itself to effectively combat. Yankauer (1994) explains why Federal money was allocated to biological methods of treating AIDS rather than funding educational programs. "Given the faith of the public in medical technology, it was no accident that when government action finally came, the emphasis was on basic laboratory research into the disease's cause, cure, and possible prevention by immunization, rather than on the politics of social change, meaningful education, and field control programs. Such a choice was enhanced by the opposition of right-wing and fundamentalist groups to more visible field programs that would seem to condone what they perceived as sinful

behavior and by the insistence on absolute privacy by AIDS advocate groups.”

(Yankauer 1994:1896).

Often, educational prevention programs would reach more people and would be less costly than attempts to develop vaccines to an ever-changing virus. Recently, there has been more focus placed on education in the fight against HIV infection. This is largely due to the slow process in developing a vaccine against it.

Previous Studies on Migrant Populations

Information on migrant laborers is scarce and particularly on Mexican migrants. Organista et al. claims that a literature review “indicates that migrant laborers have inadequate knowledge about AIDS, are not engaging in safer sexual practices, and are at increasing risk of contracting HIV.” (Organista et al. 1996:393) Few studies were available on this topic. Goicoechea-Balbona (1994) researched the high incidence of HIV infection and AIDS in the Town of Belle Glade in Palm Beach County, Florida whose migrants follow the East Coast stream and use the town as a base. Although the subjects come from different parts of the globe to work in the agricultural sector, there are many similarities in the way that migrants are treated. In the study she addressed four primary patterns in the delivery of HIV-prevention messages: 1) the impact of the economic environment; 2) the impact of governmental policies; 3) the impact of the state and local health systems’ structure; and 4) the culture of the community.

In researching the economic environment, it was soon discovered that large sugar producers owned almost all of the land. Migrants were unable to grow their own gardens

because land was not available for their personal or collective use. This resulted in economic dependency on the growers/employers. Growers did not want health officials to be in the area and any negative attention attracted by a worker would result in his/her shipment home. Therefore, Goicoechea-Balbona (1994) reported that some of the workers who needed assistance requested that home visitors not return in fear of causing problems with neighbors and employers.

The research conducted on governmental policies revealed that funds to end such dependency on the seasonal agricultural system were insufficient. Additionally, it was found that all immigrant agricultural workers were tested for AIDS and other infectious diseases whenever they entered the country. If it was found that they had a disease, they were sent back to their country of origin or the immigrant would go into an underground way of life which put others in contact with them at risk for becoming infected with HIV.

Federal, State, and local health systems were not effective either. The Centers for Disease Control had funded a five-year grant to improve health education and outreach to this population in Palm Beach County, Florida. However, Goicoechea-Balbona reported that upon initial data collection, the program manager went back to an office 500 miles away and did not perform the tasks required by the grant. This situation created more distrust for health officials by the area residents and migrants.

The culture of the community was comprised of migrant laborers from Latin America and the Caribbean. Typically, their behavior practices included unprotected intercourse and multiple partners, distrust of health care practitioners, poor nutritional patterns, fear of deportation, and spiritual isolation. (Goicoechea-Balbona 1994).

Furthermore, the high rates of poverty left residents with few ways to affect change in their own community.

Problems with Reaching This Population

The structure of the public health system in the United States creates obstacles to migrant workers in their attempt to access medical care. Since state governments operate public health offices, the fragmentation and inconsistency of services is problematic to migrant workers and migrant clinics are only capable of serving 20 percent of those that need services (National Center for Farmworker Health 2003a). James Morrissey (1983) outlines some of the difficulties associated with providing health services to migrants and refugees. “Among the difficulties are such matters as language differences, failure to understand the culture of the migrants, difficulties in gaining access to the migrants (particularly in circumstances where they are refugees, or considered to be “illegal” in their new environment), the logistics of transportation of personnel and supplies, as well as higher-level administrative issues involving relief organizations, political considerations, international agreements, financing, planning, evaluation, etc.” (Morrissey 1983:13). Distrust of public health officials by migrants also complicates the access to services. Some migrants are afraid that should they utilize the services that are available, they will be turned into Immigration and Naturalization Services, particularly if they are undocumented immigrants. A lack of transportation and long work hours can also serve as barriers to accessing health care (Goicoechea-Balbona 1994; Arcury and Quandt 1998).

Another key issue is that of communication. Communication between a health professional and the migrant worker is imperative to develop a correct diagnosis. In some places, few health care workers are bilingual or can speak Spanish at all. In recent years, more pamphlets and brochures are being printed in Spanish for the patrons who need information in Spanish. However, migrants typically have low educational attainment and may not be able to read the materials provided. In cases where migrants typically utilize traditional medicine, they may not understand the medical terminology health professionals utilize.

Cultural norms and values can sometimes serve as a barrier if not properly understood. Such cultural barriers include the machismo attitude. Machismo refers to the Hispanic male's attitude of an overbearing attitude toward anyone he sees as inferior to himself (Kelly 1998). Consistently, women are inferior to men in Hispanic culture and women are subservient to men. Due to this cultural phenomenon, women find it difficult to take control of their sexuality. Mays and Cochran (1988) indicate that Hispanic men frequently perceive a woman as being "loose" if she requests that her partner wear a condom. Sometimes this suggestion can result in physical or verbal abuse. Marin, Tschann, Gomez and Kegeles conducted a survey in San Francisco in 1988 and 1989 on sexual behaviors and found that condom use was low among sexually active, Spanish-speaking Hispanic women. "These findings form part of a larger context in which Spanish-speaking women are less knowledgeable about HIV in general than non-Hispanic White women, carry condoms less often, and see condoms as unpleasurable." (Marin, Tschann, Gomez and Kegeles 1993:1761) This is consistent with the cultural norms for traditional Hispanics. However, as Hispanics become more acculturated to

United States mainstream culture, attitudes toward condom use improve and more concern for AIDS is developed (Organista, Organista, Garcia de Alba, Castillo Moran and Carillo 1996). Marin and Marin (1990) conducted a similar study measuring the knowledge of HIV transmission routes and the level of acculturation of Hispanics in San Francisco. This study revealed that lower educated individuals were less acculturated and these individuals needed information on how HIV is not transmitted. It was further suggested that any informational campaign would be more effective in Spanish than in English due to the lower acculturation levels.

Cultural taboos prevent Hispanic women from protecting themselves from HIV infection through the use of condoms. Most Hispanic women contract HIV through intimate contact with men and must know how to protect themselves from contracting it. However, women feel powerless in the bedroom and in the relationships they have with their male partner(s). This lack of power causes discomfort in discussing sexual relations and condom use (Martinez 1997). Furthermore, cultural values influence the amount of knowledge a woman can have about sexual practices and that they should depend on their husbands to share the information they need (1998). Hines and Graves (1998) echo this same concern about Hispanic women and the cultural norms about avoiding sexual assertiveness and expressiveness.

All of these factors combine to create a situation that makes it difficult for a woman to insist on using condoms. This is an obstacle that will need to be faced to effectively deal with the rising rates of HIV infection.

Chapter 3 Methodology

Data Collection

A literature review related to the study and method was conducted utilizing the University of Montana and East Tennessee State University Libraries. Additional sources included the Internet and interlibrary loans.

Questionnaire

During the literature review, two sources were identified and then used in developing the survey instrument. Barbara Van Oss Marin and Gerardo Marin of the Center for AIDS Prevention Studies in San Francisco, California developed the Hispanic Condom Questionnaire regarding the transmission routes of HIV. Some questions from the questionnaire they developed were used with Barbara Van Oss Marin's permission in the questionnaire for this survey. Kurt C. Organista from the University of California, Berkeley modified this survey instrument in his work with Mexican Migrant Laborers. The two studies were designed differently than the survey method selected for this thesis. Marin and Marin conducted a telephone survey with a sample of 460 Latinos in San Francisco while Organista et al. traveled to a small agricultural town in Mexico to interview migrants who have lived or worked in the United States during the past 10 years. (Organista, Organista, Garcia de Alba, Castillo Moran and Carillo 1996)

Additionally, research conducted by the Center for Intervention and Prevention at the University of Connecticut indicated ways to reduce HIV risk behavior through the Information-Motivation-Behavioral Skills Model. In order to change behaviors to reduce

HIV transmission risk, it is important to know what information the subjects currently have.

Since the study was designed to determine migrant workers' knowledge of HIV transmission routes and how that knowledge affected their behavior, it was determined that a confidential and anonymous survey was the best method for data collection. This avoided respondents' potential embarrassment about the nature of the questions and improved the likelihood that the survey would provide more accurate and reliable results. The survey was distributed to clients of the Montana Migrant Council at their main office in Billings and two field clinic sites in Fairview and Hardin as they waited to speak with the doctor or nurse. One hundred twenty surveys were provided to the Council for distribution. Four different survey forms were used. Listed below are the types of surveys and the number of each distributed:

1. Men in Spanish (40)
2. Women in Spanish (40)
3. Men in English (20)
4. Women in English (20).

The survey had three major categories of questions. The first 17 questions were designed to evaluate how much the individual knew about the transmission routes of HIV. The next six (6) questions focused on behavioral issues and how knowledge of the transmission routes affected the individual's behavior. Finally, the last category of questions was demographic in nature. Demographic questions were designed to give a picture of the individual through determining age, educational level, marital status, number of years traveling as a farmworker, as well as other items. Please see the

Appendix for copies of the Questionnaires. Questions for the survey were carefully selected in order to gain the most information for a brief survey. The survey was designed to be brief due to the fact that respondents would fill out the survey while they waited to see medical personnel at the main office or the two field clinics.

The questionnaires were distributed to clients of the Montana Migrant Council over the age of 18 as they waited to see medical personnel. The surveys were collected as the clients left the facility in an effort to retrieve a high number of surveys. The Institutional Review Board (IRB) of the University of Montana requested that only individuals over the age of 18 be surveyed. Therefore, as staff members of the Montana Migrant Council distributed the surveys, individuals were asked their age before being given a survey instrument.

Both English and Spanish surveys were used because some Spanish speakers are able to read English better than Spanish. The questionnaires were designed to be brief but collect the information needed for the study to generate meaningful data.

As previously mentioned, the survey had three (3) major categories of questions. Included in the first section were questions concerning the transmission routes of HIV such as: Do condoms prevent HIV transmission? Can you get HIV/AIDS from public toilets? These questions were designed to test the subjects' knowledge of HIV/AIDS transmission. The next section was focused on behavioral issues such as the frequency of condom use, conversations with partners about sexually transmitted diseases, and if the partner would think less of a woman should she ask him to wear a condom. This section was designed to determine if their knowledge affected the subjects' behavior. These

questions were separated from the knowledge questions so that more people would not answer as they thought they should which would further bias the study.

The last segment of questions focused on demographics. Age, sex, number of years traveled as a migrant, and educational attainment were included in this category. Questions concerning educational attainment and number of years served as a migrant farmworker were asked to identify differences between age groups and level of formal education.

Subjects

Data were collected from respondents 18 years and older during May through August of 1999. Ninety-one (91) of the 120 questionnaires were returned. Most of them were completely filled out but some did not finish. Therefore, the last few questions had fewer responses than the first set of questions.

As previously mentioned, Billings, Fairview, and Hardin were the locations from which the surveys were collected. Fairview had the largest number of respondents at 63 (69%); Hardin had 19 respondents (21%); and the main office in Billings had the fewest number of responses with 9 respondents (10%),

Women completed 55 (60%) of the 91 surveys and men completed the remaining 36 surveys (40%). *Figure 2* displays the age composition of the sample.

Figure 2. Age Composition of Sample

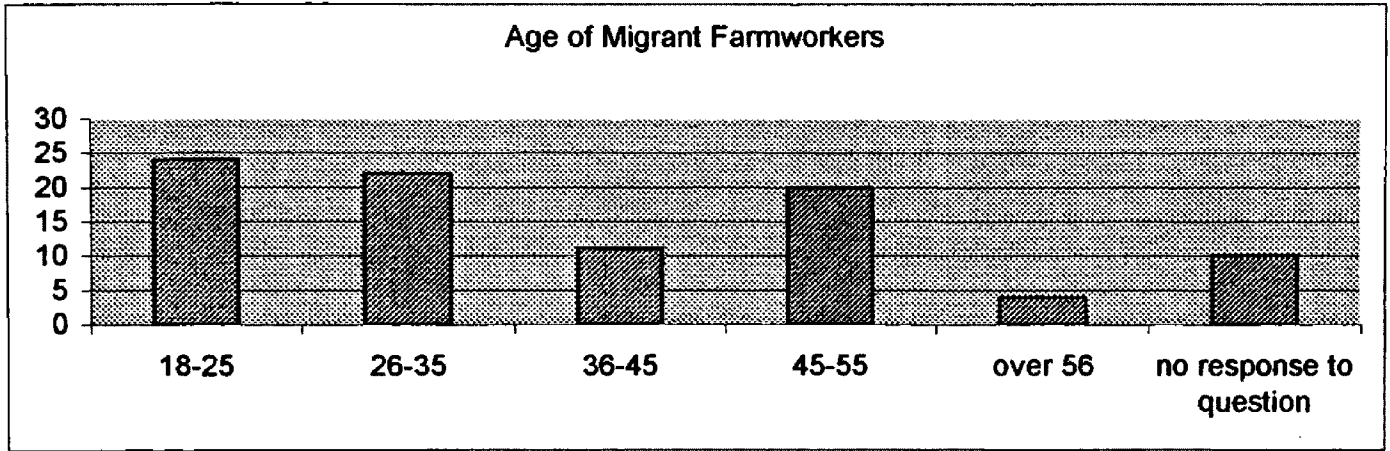
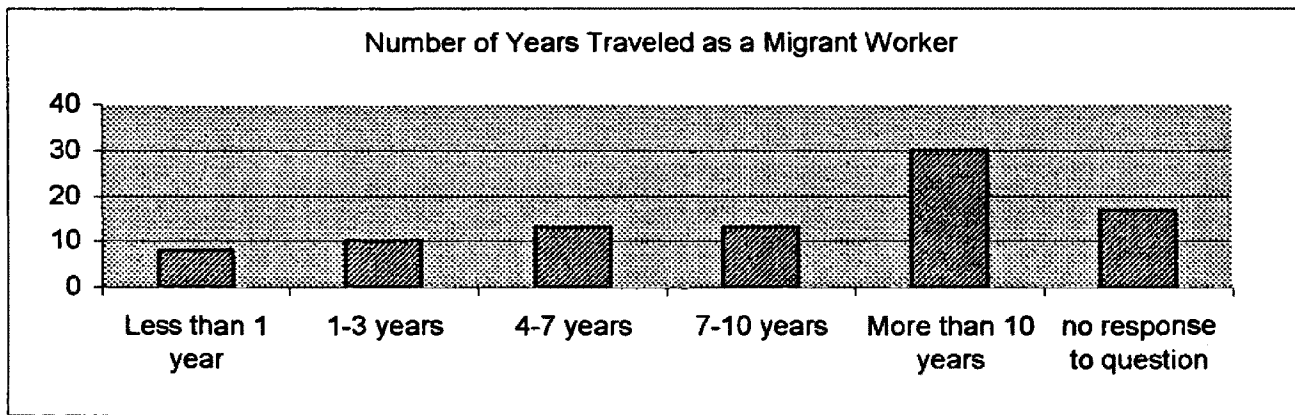


Figure 3 displays the number of years that a person has traveled as a migrant farmworker.

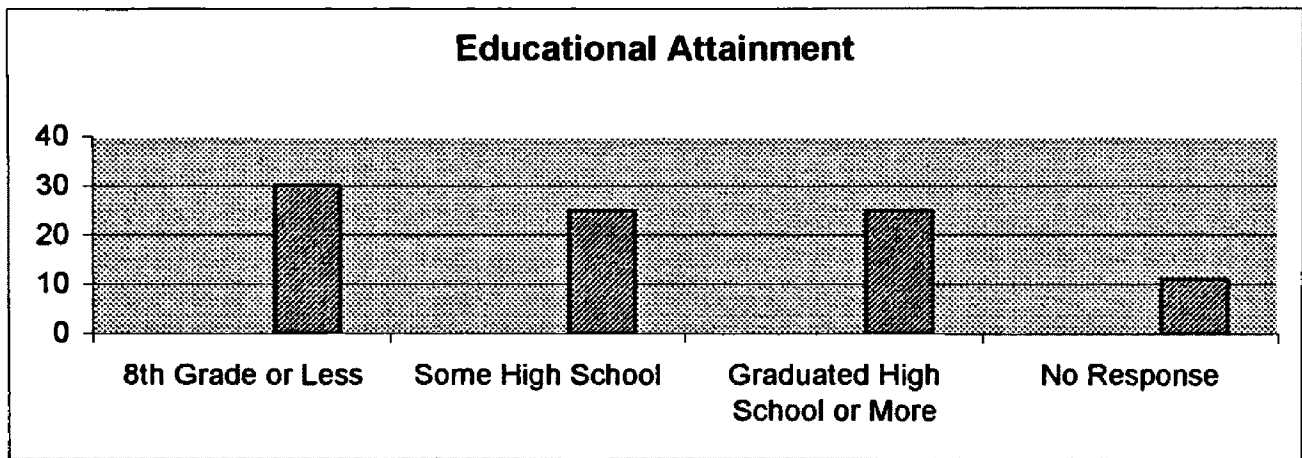
Figure 3. Number of Years Traveled as a Migrant Worker Based on Sample Population



Respondents to the survey reported their education attainment as such:

- Thirty respondents (33%) indicated that they had only completed eighth grade or less.
- Twenty-five (27.5%) indicated they had some high school but had not graduated
- Twenty-five (27.5%) indicated that they had graduated high school
- Eleven individuals (12%) did not answer the question

Figure 4. Educational Attainment of Sample Population



The remaining demographic questions concerned the origin of the migrant laborer. The question was carefully worded to avoid the respondents' potential distrust of the intention of the questionnaire. For example, a laborer may believe that he or she may be turned in to the Immigration and Naturalization Service regardless of their immigration status. The question, "Where are you originally from?" avoids legal/illegal issues. Furthermore, legal or not, people in this country can transmit and become infected with HIV; therefore, their status was not of concern. This question was not a condition of the Institutional Review Board (IRB).

Respondents to this question were asked to write in their answer. Responses ranged from "USA", to naming the State, to naming the town or city as their home. Due to the wide range of answers, four categories were established to more effectively conduct the crosstabulations. These four categories included the following:

- Montana- comprised of those only from Montana;
- Southwest- comprised of Arizona, Texas, Colorado, and California;
- Mexico- comprised of those originally from Mexico; and

- Other- Illinois, Minnesota, and those reporting USA without specifying a state.

Thirty-nine (55 percent) of the 71 individuals that responded to this question indicated that they were from the Southwestern United States. Only three of the 39 subjects indicated that were from Arizona, California, and Colorado. The remaining 36 in this category reported that they were from Texas. Seventeen reported that they were from Texas and did not list a city or town. The remaining 19 individuals reported origins from the following localities in Texas:

- 13 were from Eagle Pass;
- 3 were from Dallas;
- 2 were from Brackettville; and
- 1 was from San Antonio.

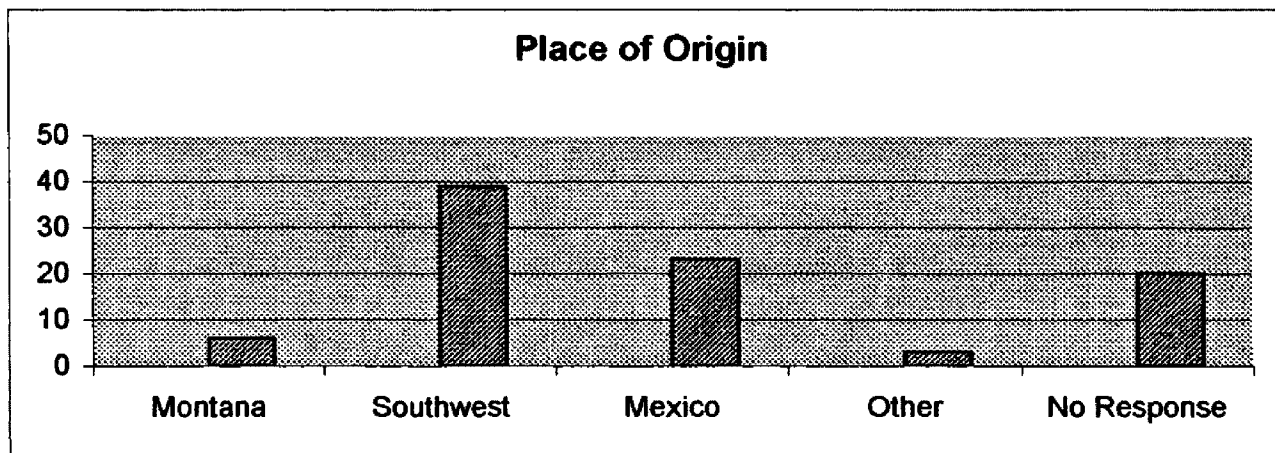
Both Eagle Pass and Brackettville are located southwest of San Antonio and close to the United States-Mexico border. Eagle Pass is less than five miles from the border and Brackettville is approximately 35 miles from the border. The region is sparsely populated and only 1,740 individuals live in Brackettville while Eagle Pass, Texas has a population of 20,651.

Twenty-three (23) individuals reported that they were from Mexico comprising 32 percent of those who answered this question. Nineteen simply answered that they were from Mexico while the remaining four indicated the localities. They were Cimadero in the Chihuahua region, Nuevo Leon region, Valle Hermoso, and Sinaloa. Valle Hermoso is within the Nuevo Leon region and is close to the United States-Mexico Border in

southern Texas near Brownsville. Valle Hermoso is approximately 25 miles from Brownsville, Texas and Matamoros, Mexico.

Six subjects (9 percent) of the 71 who answered the question indicated that they were originally from Montana. Three individuals (4 percent) reported that they were from other regions of the country. One subject indicated that he/she was from the “USA”, while the other two reported St. Cloud, Minnesota and Aurora, Illinois. Twenty individuals did not respond to this question.

Figure 5. Place of Origin as reported by Respondents



In an effort to support the theory that most migrants in Montana travel in the Mid-Continent migration stream and travel from Texas, the question “What state do you return to after working?” was asked. Of the 67 responses to this question, 45 (67percent) indicated that they return to Texas. Fourteen indicated that they remain in Montana. Eight individuals reported that they return to the following states: Arizona, Colorado, Florida, Iowa, Minnesota, and Washington. Specifically, the individual that returns to Florida, goes to Palm Beach, Florida which happens to have a very high HIV Infection rate and is the subject of numerous epidemiological studies (Goicoechea-Balbona 1994).

Surveys were available in English and Spanish and subjects were allowed to select the language that they preferred to utilize. Forty were available in English and 80 were available in Spanish. Thirty-two English surveys and 59 Spanish surveys were returned.

Biases

The largest bias of the survey was its distribution method. Because the survey was distributed to clients over the age of 18 as they came into the Montana Migrant Council Main Office in Billings or the mobile clinics in Hardin or Fairview, the surveys reached only the individuals who were informed of the available services and who attended within the study's time frame. Due to this bias, an assumption comes into place. This study assumes that the most informed migrant workers utilize the services the Montana Migrant Council provides. Therefore, this study assumes that the results of the questionnaires represent those of the most informed workers. It is assumed that those who are not being reached will have lower formal educational levels, lower acculturation levels and will have less understanding of the HIV transmission routes.

Another bias that may exist is that some of the farmworkers attending the Montana Migrant Council may be "settled out". This means that they may have been migrants for years but have settled year-round in the area because of other opportunities for employment or barriers keeping them from continuing to migrate; however, they continue to work in the fields during the planting or harvesting seasons. Other biases include the fact that illiterate individuals declined to respond to a questionnaire for embarrassment to the lack of literacy skills and those who attended the clinics were already having health problems.

Chapter 4 Analysis of Data

Study Results

In evaluating the results generated from the survey, the data will be reviewed in several different ways. In Chapter three, demographic information about the subjects was reviewed to determine the composition of the sample and also to determine if there were differences in HIV prevention knowledge between different segments of the sample. This chapter will focus on the answers the subjects provided. The answers were analyzed to determine the level of accurate information the respondents have about protecting themselves from HIV infection and the way that information affects their behavior.

This chapter is divided into two segments. The first section will focus on the subjects' knowledge of HIV transmission and discuss where gaps in that knowledge exist. Then, an evaluation of the impact of knowledge on behavioral patterns of the subjects will be presented. This component is critical for determining how individuals and the group perform in applying HIV information to their daily lives and activities. Throughout the chapter, demographic information will be used to determine if there are differences in knowledge and behavior between sexes, age groups, and different educational attainment levels. This demographic information, which is integrated throughout the chapter, is important in determining who is the most vulnerable to HIV infection due to lack of HIV prevention knowledge or risky behaviors. For example, without this information someone may think that the 18-25 age group is most at-risk of

contracting the HIV virus; however, the population segment at the highest risk may be the 46-55 age group, who more frequently uses medicine through injections.

Knowledge of HIV Transmission Routes

In the knowledge component, several questions were asked about HIV transmission routes. These data are grouped into the following categories: non-human vectors, non-sexual transmission, sexual transmission, and maternal-child transmission. The responses will be discussed in these categories to assist those developing educational programs to focus on certain topics.

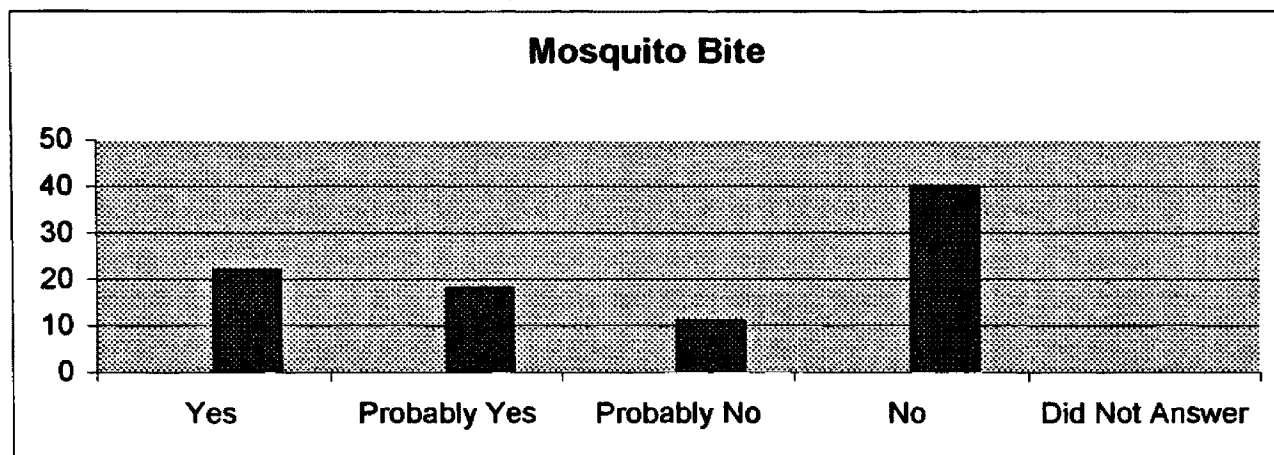
Non-human vectors

Non-human vectors for this study include the transmission routes of mosquito bites and sitting on public toilet seats where human contact is not required. HIV transmission cannot occur through mosquito bites or sitting on a public toilet (Frumkin and Leonard 1997).

Non-human vectors- HIV infection through a Mosquito Bite

In response to the question, “Do you think it’s possible to get the AIDS virus from a mosquito bite?” Forty-three point three percent (43.3 percent) of those responding to the survey answered, “yes” or “probably yes.” This is a clear indication that many people in this particular cohort are uninformed that mosquitoes are not vectors for the transmission of the virus.

Figure 6. Response to question regarding transmission of HIV through mosquito bites

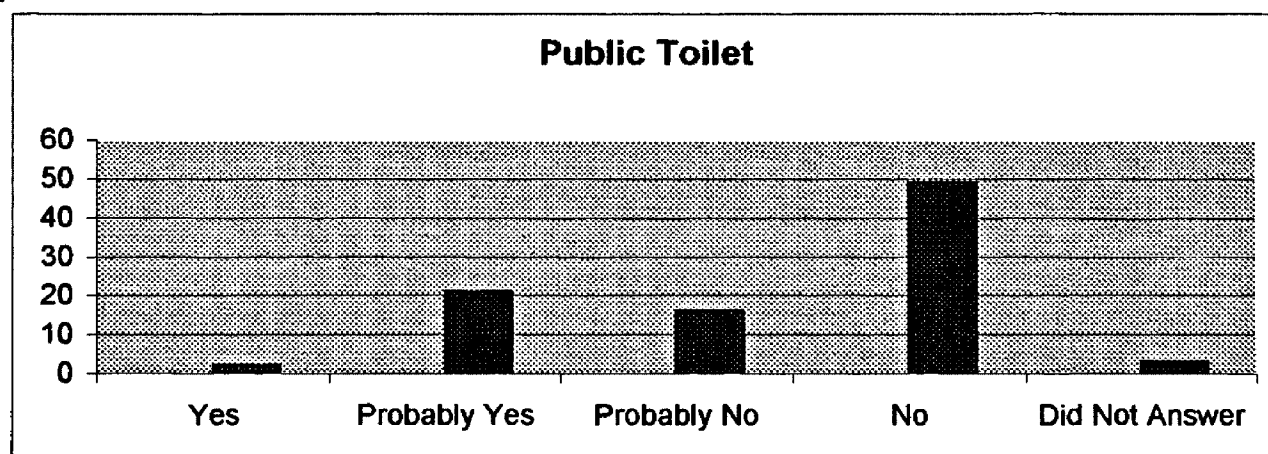


This knowledge gap will concern migrant workers since they frequently come in direct contact with mosquitoes.

Non-human vectors- HIV Transmission through Sitting on a Public Toilet Seat

However, when the subjects responded to the question, “Do you think it’s possible to get the AIDS virus by sitting on a public toilet?” The answers were surprisingly accurate. Sixty-five subjects (73.8 percent) indicated “No” or “Probably No”. Twenty-eight percent of the total did not know that HIV cannot be spread through sitting on a toilet seat in a public facility. Twenty-four people answered “Probably Yes,” while only two respondents answered, “Yes” to this question.

Figure 7. Response to question regarding transmission of HIV through sitting on a public toilet seat



Upon examining the subjects' answers and their educational level, the two respondents who answered, "Yes" had less than a high school education. One had 8th grade or less and the other had attended high school but did not graduate. However, three of the 24 subjects who responded "Probably Yes" had graduated from high school while the rest had not graduated. *Table 1* presents a crosstabulation of responses with respect to educational attainment and whether sitting on a public toilet seat can transmit HIV.

Table 1. Crosstabulation for Educational Attainment and Sitting on Public Toilet Seat

| Response to Question | 8th Grade or Less | Some High School | Graduated High School | Total |
|-----------------------------|-------------------------------------|----------------------------|------------------------------|-----------------------------|
| Yes | 1 3.3% | 1 4.0% | | 2 2.5% |
| Probably Yes | 8 26.7% | 7 28.0% | 3 12.0% | 18 22.5% |
| Probably No | 6 20.0% | 5 20.0% | 4 16.0% | 15 18.8% |
| No | 14 46.7% | 12 48.0% | 18 72.0% | 44 55.0% |
| Did Not Answer | 1 3.3% | | | 1 1.3% |
| Total | 30 100.0% | 25 100.0% | 25 100.0% | 80* 100.0% |

* Please note that eleven respondents did not indicate their level of educational attainment and are, therefore, not included in this crosstabulation.

Upon closer investigation of the age of the cohort, three trends were recognized:

- 1) In the 36-45 age group, there was an even split between "Probably Yes" and "No" answers indicating a need for more information to be made available to this age group; 2) Nine out of the 21 individuals that responded in the 26-35 age group answered "Probably Yes" indicating a need for additional information to be provided for this age group; and
- 3) Sixteen of the twenty subjects in the 46-55 age range answered the question correctly

which indicates this group has received correct information and understood it. This finding will be discussed in depth at the end of this chapter.

Table 2. Crosstabulation for Age and Sitting on Public Toilet Seat

| Response to Question | 18-25 | 26-35 | 36-45 | 46-55 | Over 56 | Total |
|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|----------------------------|
| Yes | 1 3.8% | | | 1 5.0% | | 2 2.4% |
| Probably Yes | 4 15.4% | 9 42.9% | 2 18.2% | 2 10.0% | 2 40.0% | 19 22.9% |
| Probably No | 6 23.1% | 1 4.8% | 4 36.4% | 1 5.0% | 1 20.0% | 13 15.7% |
| No | 15 57.7% | 10 47.6% | 5 45.5% | 15 75.0% | 2 40.0% | 47 56.6% |
| Did Not Answer | | 1 4.8% | | 1 5.0% | | 2 2.4% |
| Total | 26 100.0% | 21 100.0% | 11 100.0% | 20 100.0% | 5 100.0% | 83 100.0% |

* Please note that eight respondents did not indicate their age and are, therefore, not included in this crosstabulation.

Non-sexual Transmission Routes

Three questions focused on non-sexual transmission routes: casual contact, kissing, and intravenous drug use. Kissing was included in this category because kissing does not indicate the occurrence of sexual intercourse. Kissing and sexual intercourse have very different risk factors and are, therefore, in two different categories.

Non-Sexual Transmission Routes- Casual Contact

The question, “Can you catch the AIDS virus through casual contact such as hugging or shaking hands, or standing close to someone who has it?” revealed surprising results. Only six individuals (seven percent) answered “yes” and an additional three people (three percent) answered “Probably Yes.” Of the six answering yes, four were in the 46-55 age group, one was in the 36-45 age group, and one was in the 18-25 age

group. Only four of those six reported their educational attainment level. One of those four reported graduating from high school education while two reported some high school education. One person reported an eighth grade education or less. Two individuals answered “Probably Yes.” They were between the ages of 26-45. Both reported that they had not graduated from high school. Seventy-five subjects (79.5 percent) answered “No” and “Probably No” and were from varying age groups with wide ranging education levels (*Table 3*).

Table 3. Crosstabulation for Age and Casual Contact

| Response to Question | 18-25 | 26-35 | 36-45 | 46-55 | Over 56 | Total |
|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|----------------------------|
| Yes | 1 3.8% | | 1 9.1% | 4 20.0% | | 6 7.2% |
| Probably Yes | | 1 4.8% | 1 9.1% | | | 2 2.4% |
| Probably No | 1 3.8% | 6 28.6% | 1 9.1% | | 1 20.0% | 9 10.8% |
| No | 24 92.3% | 14 66.7% | 8 72.7% | 16 80.0% | 4 80.0% | 66 79.5% |
| Total | 26 100.0% | 21 100.0% | 11 100.0% | 20 100.0% | 5 100.0% | 83 100.0% |

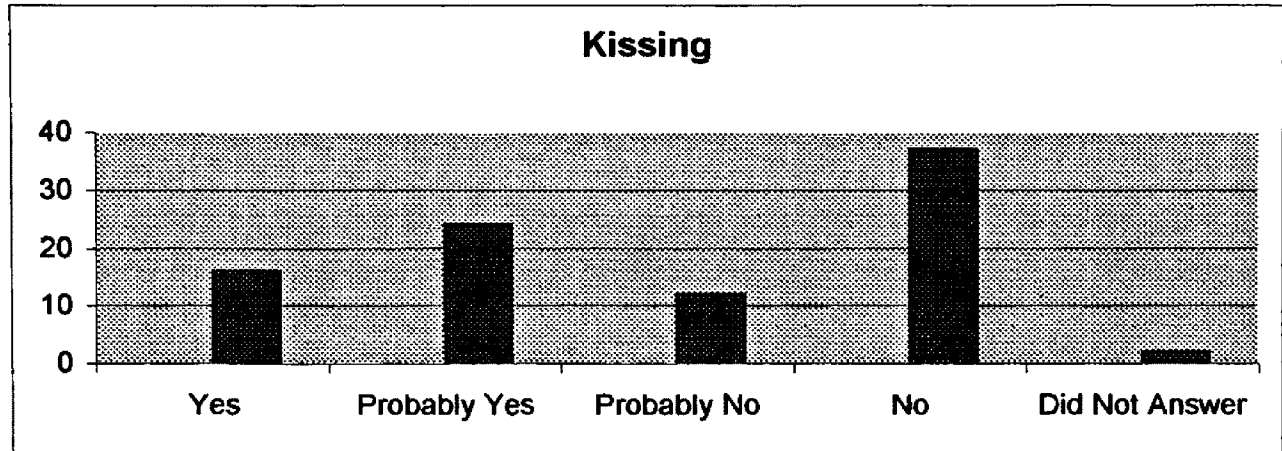
* Please note that eight respondents did not indicate their age and are, therefore, not included in this crosstabulation.

Non-Sexual Transmission Routes- Kissing

When the question was asked, “Can you catch the AIDS virus through kissing?” the correct answer is “no.” It is very unlikely that someone will catch the virus that causes AIDS through this transmission route. A case of transmission through kissing alone has never been recorded. According to Frumkin and Leonard (1997:93), saliva contains the virus; however, the amounts are so low that it is improbable that kissing will transmit HIV. Thirty-seven individuals (40 percent) of the 91 surveyed indicated that

HIV could not be transmitted through kissing. However, 40 subjects (44 percent) answered “Yes” or “Probably yes” that kissing transmits HIV. These results are in *Figure 8*.

Figure 8. Response to question regarding transmission of HIV through kissing



Furthermore, the crosstabulation of age with the subjects’ responses to this question did not provide a clear indication of which group needed additional information (*Table 4*).

Table 4. Crosstabulation for Age and Kissing

| Response to Question | 18-25 | 26-35 | 36-45 | 46-55 | Over 56 | Total |
|----------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|
| Yes | 3 11.5% | 5 23.8% | 2 18.2% | 4 20.0% | 1 20.0% | 15 18.1% |
| Probably Yes | 8 30.8% | 6 28.6% | 3 27.3% | 2 10.0% | 1 20.0% | 20 24.1% |
| Probably No | 3 11.5% | 3 14.3% | 2 18.2% | 2 10.0% | 1 20.0% | 11 13.3% |
| No | 12 46.2% | 6 28.6% | 4 36.4% | 11 55.0% | 2 40.0% | 35 42.2% |
| Did not Answer | | 1 4.8% | | 1 5.0% | | 2 2.4% |
| Total | 26 100.0% | 21 100.0% | 11 100.0% | 20 100.0% | 5 100.0% | 83 100.0% |

* Please note that eight respondents did not indicate their age and are, therefore, not included in this crosstabulation.

In the evaluation of educational attainment and the accuracy of the answers about HIV transmission through kissing, there wasn't a distinct difference between the formal educational levels among the respondents. Those who had graduated from high school were accurate more frequently than those who had not (*Table 5*).

Table 5. Crosstabulation for Educational Attainment and Kissing

| Response to Question | 8th Grade or Less | Some High School | Graduated High School | Total |
|-----------------------------|-------------------------------------|----------------------------|------------------------------|-----------------------------|
| Yes | 4 13.3% | 4 16.0% | 5 20.0% | 13 16.3% |
| Probably Yes | 12 40.0% | 8 32.0% | 4 16.0% | 24 30.0% |
| Probably No | 2 6.7% | 3 12.0% | 6 24.0% | 11 13.8% |
| No | 11 36.7% | 9 36.0% | 10 40.0% | 30 37.5% |
| Did Not Answer | 1 3.3% | 1 4.0% | 0 | 2 2.5% |
| Total | 30 100.0% | 25 100.0% | 25 100.0% | 80* 100.0% |

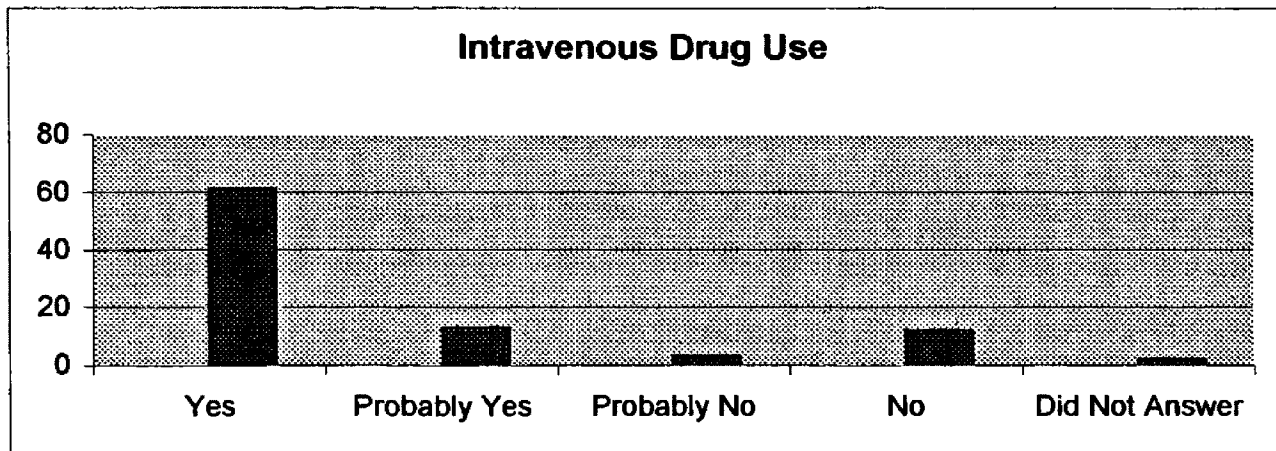
* Please note that eleven respondents did not indicate their level of educational attainment and are, therefore, not included in this crosstabulation.

Responses between males and females were slightly different. Of the 46 women responding to this question, 21 (45.7 percent) answered correctly by answering “No”; however, 14 (30.4 percent) indicated “Probably yes”. Five women (10.9 percent) answered, “Yes”. The responses from the 35 men were more evenly divided over all four possible answers: nine (25.7 percent) answered “Yes”; nine (25.7 percent) also answered “Probably Yes”; six (17.1 percent) responded with “Probably No”; and only 11 (31.4 percent) answered correctly by responding “No”. The data suggests that women are better informed that kissing is not a transmission route and that men could use more education on this topic.

Non-Sexual Transmission Routes- Intravenous (IV) Drug Use

The last question regarding non-sexual transmission routes was, “Can AIDS be transmitted through intravenous drug use?” Sixty-one individuals (67 percent) indicated they knew that HIV could be transmitted through this route. An additional 13 (14 percent) answered “Probably Yes”. Fifteen individuals (16 percent) responded “No” and “Probably No”. Two individuals did not answer the question (*Figure 9*).

Figure 9. Response to question regarding transmission of HIV through Intravenous Drug Use



Those who responded “Yes” and “Probably Yes” were almost evenly distributed over the educational attainment. For example, 25 subjects reporting 8th grade or less, 22 reporting some high school, and 21 reporting that they graduated high school answered the question correctly. This is a good indicator that those who do not have high educational attainment are being reached with this information and understand this transmission route.

In evaluating the age groups and their responses, the 46-55 age group had eight individuals answer “No”. This is a little more problematic in that members of this age group do not seem to be as well informed of this transmission vector as members of other age groups. Furthermore, this age group may be particularly vulnerable as they seek

medical assistance from *inyeccionistas*, or lay-healers that frequently use injectable medications (Lafferty, Foulk and Ryan 1991).

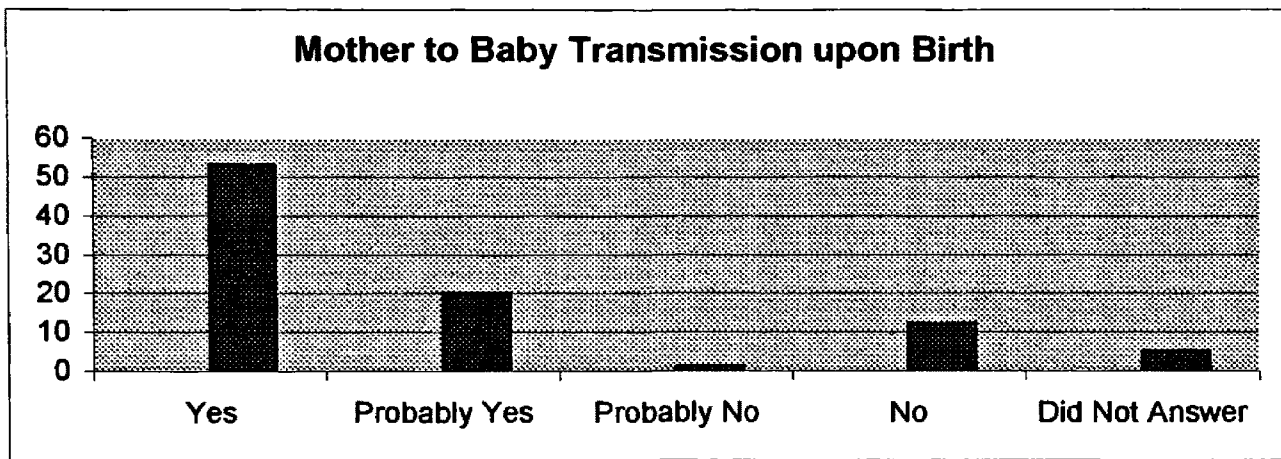
Maternal-Child Transmission

In this category, two questions were asked so that information could be collected on how much subjects knew about maternal-child transmission. This is a very large concern because of the recent increases in heterosexual transmission. As heterosexual transmission increases, so do maternal-child transmissions (MacQueen 1994: 511).

Maternal-Child Transmission- During Birth

The question was, "Can a mother transmit the AIDS Virus to her baby when it is born?" Only 13 subjects (15 percent) answered "No" or "Probably No" to this question. This is a very good rate. Information on this transmission route is being distributed and is being understood by both men and women. However, respondents from the 46-55 age group most frequently answered the question incorrectly. For example, of the 13 subjects that answered "No" or "Probably No", eight of them were in the 46-55 age group. This is encouraging considering that the chance of bearing children among this age group has significantly decreased, especially among women. Very little difference was evident based on the responses between men and women. Six subjects who answered "No" or "Probably No" were men while five were women (*Figure 10*).

Figure 10. Response to question regarding transmission of HIV upon birth of child



The evaluation of educational attainment and the responses to the question of transmission of HIV to a baby by its mother during birth revealed that those who graduated from high school more frequently answered correctly (92 percent of respondents in the cohort answered “yes” or “probably yes”). It does appear, however, that those in the 8th grade or less category, guessed more frequently by responding with “probably yes” and “probably no” answers (Table 6).

Table 6. Crosstabulation for Educational Attainment and Mother to Baby Transmission Upon Birth

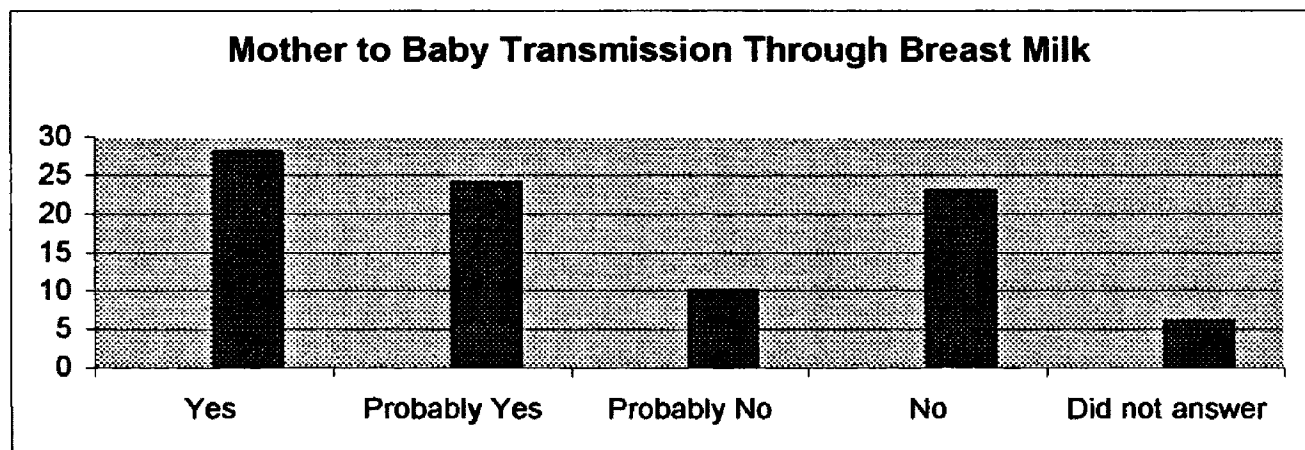
| Response to Question | 8 th Grade or Less | Some High School | Graduated High School | Total |
|----------------------|-------------------------------|----------------------------|----------------------------|-----------------------------|
| Yes | 15 50.0% | 16 64.0% | 17 68.0% | 48 60.0% |
| Probably Yes | 9 30.0% | 4 16.0% | 6 24.0% | 19 23.8% |
| No | 5 16.7% | 2 8.0% | 2 8.0% | 9 11.3% |
| Did Not Answer | 1 3.3% | 3 12.0% | 0 | 4 5.0% |
| Total | 30 100.0% | 25 100.0% | 25 100.0% | 80* 100.0% |

* Please note that eleven respondents did not indicate their level of educational attainment and are, therefore, not included in this crosstabulation.

Maternal-Child Transmission- Breast Feeding

The second question regarding Maternal-Child Transmission refers to breast-feeding. "Can a mother transmit the AIDS Virus to her baby through breast feeding?" Thirty-five (36 percent) individuals did not know that transmission could occur this way and answered "No" or "Probably No." Six individuals did not answer the question. The majority (57 percent) of subjects answered correctly. Furthermore, twelve of those who answered "No" or "Probably No" reported that they were 46 or older. Three of the six who did not answer the question were also older than 46.

Figure 11. Response to question regarding transmission of HIV through breast milk



Little difference existed between educational levels of the group (*Table 7*).

However, a comparison between age groups revealed that 50 percent of the individuals in the 46-55 age group were unaware of this transmission route. As previously mentioned, this age group has lower fertility due to the onset of menopause in women. *Tables 7 and 8* contain data in response to this question for educational attainment levels and age, respectively.

Table 7. Crosstabulation for Educational Attainment and Mother to Baby Transmission Through Breast Milk

| Response to Question | 8th Grade or Less | Some High School | Graduated High School | Total |
|-----------------------------|-------------------------------------|----------------------------|------------------------------|-----------------------------|
| Yes | 8 26.7% | 10 40.0% | 8 32.0% | 26 32.5% |
| Probably Yes | 9 30.0% | 8 32.0% | 6 24.0% | 23 28.8% |
| Probably No | 3 10.0% | 0 | 4 16.0% | 7 8.8% |
| No | 7 23.3% | 5 20.0% | 6 24.0% | 18 22.5% |
| Did Not Answer | 3 10.0% | 2 8.0% | 1 4.0% | 6 7.5% |
| Total | 30 100.0% | 25 100.0% | 25 100.0% | 80* 100.0% |

* Please note that eleven respondents did not indicate their level of educational attainment and are, therefore, not included in this crosstabulation.

Table 8. Crosstabulation for Age and Mother to Baby Transmission Through Breast Milk

| Response to Question | 18-25 | 26-35 | 36-45 | 46-55 | Over 56 | Total |
|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|----------------------------|
| Yes | 9 34.6% | 6 28.6% | 3 27.3% | 7 35.0% | 1 20.0% | 26 31.3% |
| Probably Yes | 6 23.1% | 12 57.1% | 2 18.2% | 1 5.0% | 1 20.0% | 22 26.5% |
| Probably No | 2 7.7% | 2 9.5% | 1 9.1% | 2 10.0% | 1 20.0% | 8 9.6% |
| No | 7 26.9% | 1 4.8% | 5 45.5% | 8 40.0% | 1 20.0% | 22 26.5% |
| Did not Answer | 2 7.7% | 0 | 0 | 2 10.0% | 1 20.0% | 5 6.0% |
| Total | 26 100.0% | 21 100.0% | 11 100.0% | 20 100.0% | 5 100.0% | 83 100.0% |

* Please note that eight respondents did not indicate their age and are, therefore, not included in this crosstabulation.

Sexual Transmission

The next segment of questions pertained to the knowledge of transmission routes through sexual contact and consists of seven questions. This category will reveal if subjects know how HIV is transmitted sexually.

Sexual Transmission- HIV Infection through Sexual Relations

The first question in this category is “Can you catch the AIDS virus through sexual relations with men, women, or both?” Of the 83 people who responded to this question, 71 (78.0 percent) accurately indicated that HIV could be transmitted through sexual contact with either sex. Although women can transmit HIV to both men and other women, women are least likely to infect a partner with HIV and are most likely to contract it in heterosexual relationships. Only four individuals (4.4 percent) reported that neither sex could transmit the virus. Six (6.6 percent) indicated that men are the only ones who transmit the virus through sexual contact while two (2.2 percent) reported that women are the only ones who transmit HIV.

In evaluating the differences in age groups, four respondents (19.0 percent) in the 26-35 age group indicated that only men can transmit HIV while two (9.5 percent) others in the same age group indicated that neither could transmit it (*Table 9*).

Table 9. Crosstabulation for Age and HIV Transmission through Sexes

| Response to Question | 18-25 | 26-35 | 36-45 | 46-55 | Over 56 | Total |
|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|----------------------------|
| Men | 1 3.8% | 4 19.0% | 0 | 1 5.0% | 0 | 6 7.2% |
| Women | 0 | 0 | 1 9.1% | 1 5.0% | 0 | 2 2.4% |
| Both | 22 84.6% | 15 71.4% | 8 72.7% | 15 75.0% | 5 100.0% | 65 78.3% |
| Neither | 0 | 2 9.5% | 0 | 2 10.0% | 0 | 4 4.8% |
| Did not Answer | 3 11.5% | 0 | 2 18.2% | 1 5.0% | 0 | 6 7.2% |
| Total | 26 100.0% | 21 100.0% | 11 100.0% | 20 100.0% | 5 100.0% | 83 100.0% |

* Please note that eight respondents did not indicate their age and are, therefore, not included in this crosstabulation.

More inaccurate answers were reported among those with an 8th grade education or less. Interestingly, more people in this group did not answer the question. *Table 10* outlines the numbers of responses by educational attainment.

Table 10. Crosstabulation for Educational Attainment and HIV Transmission through Sexes

| Response to Question | 8th Grade or Less | Some High School | Graduated High School | Total |
|-----------------------------|-------------------------------------|----------------------------|------------------------------|-----------------------------|
| Men | 3 10.0% | 2 8.0% | 0 | 5 6.3% |
| Women | 0 | 1 4.0% | 1 4.0% | 2 2.5% |
| Both | 23 76.7% | 20 80.0% | 22 88.0% | 65 81.3% |
| Neither | 1 3.3% | 0 | 1 4.0% | 2 2.5% |
| Did Not Answer | 3 10.0% | 2 8.0% | 1 4.0% | 6 7.5% |
| Total | 30 100.0% | 25 100.0% | 25 100.0% | 80* 100.0% |

* Please note that eleven respondents did not indicate their level of educational attainment and are, therefore, not included in this crosstabulation.

Upon evaluation of the differences between the men and women's responses to the question of which sex can transmit HIV, a big difference was found between men and women. For example, those who answered that only men can transmit HIV through sexual acts is one (2.9 percent) out of the 35 men and five (10.9 percent) out of the 36 women. Eight percentage points between the two sexes may indicate that women are not receiving all of the information they need to know. Thirty-one men (88.6 percent) and 36 women (78.3 percent) indicated that HIV could be sexually transmitted by both sexes.

Sexual Transmission- Multiple Sexual Partners

Question Nine in the survey was "Do you think having several sexual partners increases the chance of getting the AIDS Virus?" Seventy-nine (88.8 percent) out of 89 individuals who answered the question answered "Yes" or "Probably Yes". The other 11.2 percent answered "No" or "Probably No". In the attempt to determine demographic information on the individuals who responded with "No" or "Probably No", crosstabulations of age, educational attainment, and sex were examined. It was found that seven of the eight individuals who answered "No" were in the 46-55 age group. The remaining individual who answered "No" was in the 26-35 age group. However, educational attainment was not an indicator. *Table 11* outlines specific information on the responses from individuals.

Table 11. Crosstabulation for Educational Attainment and Having Several Sexual Partners as an Increased Risk of Contracting HIV

| Response to Question | 8th Grade or Less | Some High School | Graduated High School | Total |
|-----------------------------|-------------------------------------|----------------------------|------------------------------|-----------------------------|
| Yes | 21 70.0% | 19 76.0% | 19 76.0% | 59 73.8% |
| Probably Yes | 5 16.7% | 5 20.0% | 2 8.0% | 12 15.0% |
| Probably No | 1 3.3% | 0 | 1 4.0% | 2 2.5% |
| No | 2 6.7% | 1 4.0% | 2 8.0% | 5 6.3% |
| Did Not Answer | 1 3.3% | 0 | 1 4.0% | 2 2.5% |
| Total | 30 100.0% | 25 100.0% | 25 100.0% | 80* 100.0% |

* Please note that eleven respondents did not indicate their level of educational attainment and are, therefore, not included in this crosstabulation.

Of the ten people who answered “No” or “Probably No”, five were men and three were women and two individuals did not indicate their sex.

Sexual Transmission- Sexually Transmitted Disease

The next question on the survey was “Can having a Sexually Transmitted Disease (STD), like herpes, syphilis, or gonorrhea, increase one’s risk for getting the AIDS virus?” The correct answer is “Yes”. Frequently, STD’s will cause damage to the genital tissue through open sores or lesions or can reduce the body’s ability to fight HIV infection. Public health officials have long recognized the co-occurrence of STD’s and HIV. Surprisingly, 66 (77.6 percent) of the 85 individuals who responded to the question answered “Yes” or “Probably Yes”.

Table 12. Crosstabulation for Educational Attainment and Having a Sexually Transmitted Disease as an Increased Risk of Contracting HIV

| Response to Question | 8 th Grade or Less | Some High School | Graduated High School | Total |
|----------------------|-------------------------------|----------------------------|----------------------------|-----------------------------|
| Yes | 13 43.3% | 8 32.0% | 12 48.0% | 33 41.3% |
| Probably Yes | 13 43.3% | 11 44.0% | 4 16.0% | 28 35.0% |
| Probably No | 1 3.3% | 2 8.0% | 1 4.0% | 4 5.0% |
| No | 2 6.7% | 2 8.0% | 6 24.0% | 10 12.5% |
| Did Not Answer | 1 3.3% | 2 8.0% | 2 8.0% | 5 6.3% |
| Total | 30 100.0% | 25 100.0% | 25 100.0% | 80* 100.0% |

* Please note that eleven respondents did not indicate their level of educational attainment and are, therefore, not included in this crosstabulation.

Furthermore, when an analysis was performed on the answers provided to this question and the age of the respondent, the 46-55 age group had a concentration or inflated number of incorrect responses that indicates more targeted information which need to be provided to this particular group of people (*Table 13*).

Table 13. Crosstabulation for Age and Having a Sexually Transmitted Disease as an Increased Risk of Contracting HIV

| Response to Question | 18-25 | 26-35 | 36-45 | 46-55 | Over 56 | Total |
|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|----------------------------|
| Yes | 12 46.2% | 6 28.6% | 7 63.6% | 8 40.0% | 2 40.0% | 35 42.2% |
| Probably Yes | 6 23.1% | 12 57.1% | 1 9.1% | 3 15.0% | 3 60.0% | 25 30.1% |
| Probably No | 3 11.5% | 0 | 1 9.1% | 0 | 0 | 4 4.8% |
| No | 2 7.7% | 2 9.5% | 1 9.1% | 9 45.0% | 0 | 14 16.9% |
| Did not Answer | 3 11.5% | 1 4.8% | 1 9.1% | 0 | 0 | 5 6.0% |
| Total | 26 100.0% | 21 100.0% | 11 100.0% | 20 100.0% | 5 100.0% | 83 100.0% |

* Please note that eight respondents did not indicate their age and are, therefore, not included in this crosstabulation.

Sexual Transmission- Condoms as HIV Preventive Measure

Question number 11 was “Do condoms help prevent getting the AIDS virus?” This question was asked to determine if individuals knew this method to protect them from HIV infection should they decide to engage in sexual activity. Forty-two (48.3 percent) out of the 87 who answered the question accurately answered, “Yes” while another 19 (21.8 percent) answered “Probably Yes”. Twenty-six people (28.6 percent) answered “No” or “Probably No”. This indicates a lack of knowledge about the HIV preventive attributes of condoms among more than one quarter of the surveyed population.

Among those who answered the question, women more accurately answered the question than men. *Table 14* is a table that shows the responses as compared men to women.

Table 14. Crosstabulation for Sex and Condom Use as a HIV Infection Preventive Measure

| Response to Question | Men | Women | Total |
|-----------------------------|----------------------------|----------------------------|----------------------------|
| Yes | 15 42.9% | 24 52.2% | 39 48.1% |
| Probably Yes | 6 17.1% | 10 21.7% | 16 19.8% |
| Probably No | 6 17.1% | 3 6.5% | 9 11.1% |
| No | 7 20.0% | 8 17.4% | 15 18.5% |
| Did not Answer | 1 2.9% | 1 2.2% | 2 2.5% |
| Total | 35 100.0% | 46 100.0% | 81 100.0% |

* Please note that ten respondents did not indicate their sex and are, therefore, not included in this crosstabulation.

Upon further review of the answers provided by the subjects, it was found that those who had graduated from high school more frequently answered incorrectly “No”

and “Probably No” to condom use as a preventive measure for HIV infection. Nine (36 percent) out of the 25 in this educational group answered the question incorrectly. One possible reason for this is that health education frequently teaches that condom use is not a good contraceptive method. People who have heard this may not understand that condoms are still good at protecting one from HIV infection if used properly.

Table 15. Crosstabulation for Education and Condom Use as a HIV Infection Preventive Measure

| Response to Question | 8 th Grade or Less | Some High School | Graduated High School | Total |
|----------------------|-------------------------------|----------------------------|----------------------------|-----------------------------|
| Yes | 10 33.3% | 15 52.0% | 13 60.0% | 38 47.5% |
| Probably Yes | 10 33.3% | 6 24.0% | 1 4.0% | 17 21.3% |
| Probably No | 4 13.3% | 2 8.0% | 3 12.0% | 9 11.3% |
| No | 4 13.3% | 4 16.0% | 6 24.0% | 14 17.5% |
| Did Not Answer | 2 6.7% | 0 | 0 | 2 2.5% |
| Total | 30 100.0% | 25 100.0% | 25 100.0% | 80* 100.0% |

* Please note that eleven respondents did not indicate their level of educational attainment and are, therefore, not included in this crosstabulation.

The entire Over 56 age group was unsure of the use of condoms as a way to prevent AIDS because all five responses from this age group were “Probably Yes” (1) and “Probably No” (4). However, there were many “No” answers in each of the age groups. The highest number of incorrect answers (six) was in the 46-55 age group. Both the 18-25 and the 36-45 age groups had four each who answered “No” and three people in the 26-35 age group answered incorrectly. This is an indication that more information on HIV preventive measures should be made available. *Table 16* provides more detailed information on this topic by age groups.

Table 16. Crosstabulation for Age and Condom Use as a HIV Infection Preventive Measure

| Response to Question | 18-25 | 26-35 | 36-45 | 46-55 | Over 56 | Total |
|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|-----------------------------|
| Yes | 16 61.5% | 8 38.1% | 5 45.5% | 11 55.0% | 0 | 40 48.2% |
| Probably Yes | 3 11.5% | 9 42.9% | 0 | 2 10.0% | 1 20.0% | 15 18.1% |
| Probably No | 3 11.5% | 0 | 1 9.1% | 0 | 4 80.0% | 8 9.6% |
| No | 4 15.4% | 3 14.3% | 4 36.4% | 6 30.0% | 0 | 17 20.5% |
| Did not Answer | 0 | 1 4.8% | 1 9.1% | 1 5.0% | 0 | 3 3.6% |
| Total | 26 100.0% | 21 100.0% | 11 100.0% | 20 100.0% | 5 100.0% | 83* 100.0% |

*Please note that eight respondents did not indicate their age and are, therefore, not included in this crosstabulation.

Question number 12, “Is AIDS fatal?” on the survey was designed to determine if the subjects in the study recognized the severity of AIDS. Although the symptoms of AIDS can be treated with medical “cocktails” that are frequently too expensive for the average person to purchase, AIDS is fatal if left untreated. Currently, there is no cure or vaccine to prevent it. Prevention through behavioral modification is the only appropriate method of avoiding the disease. Both men and women have similar levels of information on this topic: 37 women (80.4 percent) and 26 men (74.3 percent) correctly answered, “Yes”. Additionally, six women (13.0 percent) and four men (11.4 percent) answered “Probably Yes”. Very few subjects incorrectly answered this question. Women had a lower incorrect response rate than men. Three women (6.5 percent) answered “No” and five men (14.3 percent) answered “No” or “Probably No.”

Little difference was noted between respondents with varying levels of educational attainment. This means that the information being distributed has been accurately designed to reach all educational levels (*Table 17*).

Table 17. Crosstabulation for Education and “Is AIDS fatal?”

| Response to Question | 8th Grade or Less | Some High School | Graduated High School | Total |
|-----------------------------|-------------------------------------|----------------------------|------------------------------|-----------------------------|
| Yes | 19 63.3% | 21 84.0% | 23 92.0% | 63 78.8% |
| Probably Yes | 8 26.7% | 1 4.0% | 1 4.0% | 10 12.5% |
| Probably No | 1 3.3% | 0 | 0 | 1 1.3% |
| No | 1 3.3% | 3 12.0% | 1 4.0% | 5 6.3% |
| Did Not Answer | 1 3.3% | 0 | 0 | 1 1.3% |
| Total | 30 100.0% | 25 100.0% | 25 100.0% | 80* 100.0% |

* Please note that eleven respondents did not indicate their level of educational attainment and are, therefore, not included in this crosstabulation.

The crosstabulation of age and the answers to this question revealed a high number of incorrect responses among the 46-55 age group. Six of the eight people who inaccurately answered this question were in the 46-55 age group (*Table 18*).

Table 18. Crosstabulation for Age and “Is AIDS fatal?”

| Response to Question | 18-25 | 26-35 | 36-45 | 46-55 | Over 56 | Total |
|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|-----------------------------|
| Yes | 25 96.2% | 15 71.4% | 7 63.6% | 12 60.0% | 3 60.0% | 62 74.7% |
| Probably Yes | 1 3.8% | 4 19.0% | 2 18.2% | 1 5.0% | 2 40.0% | 10 12.0% |
| Probably No | 0 | 1 4.8% | 0 | 1 5.0% | 0 | 2 2.4% |
| No | 0 | 1 4.8% | 1 9.1% | 6 30.0% | 0 | 8 9.6% |
| Did not Answer | 0 | 0 | 1 9.1% | 0 | 0 | 1 1.2% |
| Total | 26 100.0% | 21 100.0% | 11 100.0% | 20 100.0% | 5 100.0% | 83* 100.0% |

* Please note that eight respondents did not indicate their age and are, therefore, not included in this crosstabulation.

Sexual Transmission- Heterosexual Couples

The next question, “Does the AIDS virus infect heterosexual couples?” was designed to determine if the subjects understand that HIV can infect heterosexual couples. Twenty-nine (63.0 percent) out of 46 women accurately answered, “Yes” while 20 (57.1 percent) out of 35 men completing the survey answered correctly. Six men (17.1 percent) reported that they did not think the AIDS virus could infect heterosexual couples. Five women (10.9 percent) also reported “No”. This lack of accurate information could cause HIV infection to occur more frequently if not changed. As mentioned in Chapter two, men may expose their female partners to HIV infection through extramarital affairs with other women or even men or IV drug users. If these men are not aware that they can transmit HIV to their wives, these same men may continue to participate in sexual activities with other partners or continue to use intravenous drugs.

In the evaluation of educational attainment, the subjects who had graduated from high school answered the question more accurately than the other groups did; however, four members of that group answered “Probably No” and one responded “No”. This indicates that despite the more accurate responses from those with a high school education, there is still a need to provide the information to the entire population. *Table 19* reports the results of that question as broken down into the respondents’ appropriate educational category.

Table 19. Crosstabulation for Education and Infection among Heterosexual Couples

| Response to Question | 8th Grade or Less | Some High School | Graduated High School | Total |
|-----------------------------|-------------------------------------|----------------------------|------------------------------|-----------------------------|
| Yes | 17 56.7% | 16 64.0% | 17 68.0% | 50 62.5% |
| Probably Yes | 6 20.0% | 5 20.0% | 2 8.0% | 13 16.3% |
| Probably No | 0 | 0 | 4 16.0% | 4 5.0% |
| No | 4 13.3% | 3 12.0% | 1 4.0% | 8 10.0% |
| Did Not Answer | 3 10.0% | 1 4.0% | 1 4.0% | 5 6.3% |
| Total | 30 100.0% | 25 100.0% | 25 100.0% | 80* 100.0% |

* Please note that eleven respondents did not indicate their level of educational attainment and are, therefore, not included in this crosstabulation.

In reviewing the responses by age categories, it was found that nine out of twenty individuals in the 46-55 group answered “No”; they did not believe that HIV could affect heterosexual couples. In this age group, 50 percent of the individuals were incorrect (*Table 20*).

Table 20. Crosstabulation for Age and Infection among Heterosexual Couples

| Response to Question | 18-25 | 26-35 | 36-45 | 46-55 | Over 56 | Total |
|-----------------------------|--------------|--------------|--------------|--------------|----------------|---------------|
| Yes | 18 69.2% | 10 47.6% | 7 63.6% | 9 45.0% | 5 100.0% | 49 59.0% |
| Probably Yes | 5 19.2% | 4 19.0% | 2 18.2% | 1 5.0% | 0 | 12 14.5% |
| Probably No | 1 3.8% | 2 9.5% | 1 9.1% | 0 | 0 | 4 4.8% |
| No | 1 3.8% | 3 14.3% | 0 | 9 45.0% | 0 | 13 15.7% |
| Did not Answer | 1 3.8% | 2 9.5% | 19.1% | 1 5.0% | 0 | 5 6.0% |
| Total | 26 100.0% | 21 100.0% | 11 100.0% | 20 100.0% | 5 100.0% | 83* 100.0% |

* Please note that eight respondents did not indicate their age and are, therefore, not included in this crosstabulation.

Question number 15 addressed the issue of appearances as a way to determine if someone is infected with HIV. “Do you think it is possible to know by looking at someone if they have the AIDS virus?” The correct answer is “No” and 64 (74.4 percent) out of the 86 who answered the question were accurate. Eleven (12.8 percent) individuals responded with “Probably No”. The three individuals who responded “Yes” were all women and had less than a high school education. Eight subjects responded “Probably Yes” and were evenly distributed over the three educational categories: three had completed 8th grade or less; two had attended high school; and three had graduated from high school.

Question number 16 was “Can a person get the AIDS virus from someone that doesn’t show any symptoms of AIDS?” HIV Transmission can occur even if an individual does not have any symptoms. Seemingly healthy people can transmit the virus to those whom he or she engages in sexual activities or shares needles. Women more frequently answered this question correctly. Twenty-five (54.3 percent) of the women

responding to this question answered correctly by answering “Yes” and nine (19.6% percent) women responded “Probably Yes.” A high rate of men also answered correctly; however, their accurate response rate was not as high as the women. Sixteen men (45.7 percent) answered “Yes” and six (17.1 percent) answered “Probably Yes”. Incorrect responses are as follows: 13 men (37.2 percent) and 11 women (23.9 percent) indicated “No” or “Probably No”. One woman did not answer the question.

Educational Attainment categories revealed a difference between correct and incorrect answers. Those subjects with lower formal educational attainment more frequently answered this question incorrectly.

Table 21. Crosstabulation for Education and HIV Transmission from Someone without Symptoms

| Response to Question | 8th Grade or Less | Some High School | Graduated High School | Total |
|-----------------------------|-------------------------------------|----------------------------|------------------------------|-----------------------------|
| Yes | 10 33.3% | 13 52.0% | 20 80.0% | 43 53.8% |
| Probably Yes | 8 26.7% | 4 16.0% | 3 12.0% | 15 18.8% |
| Probably No | 6 20.0% | 2 8.0% | 0 | 8 10.0% |
| No | 6 20.0% | 5 20.0% | 2 8.0% | 13 16.3% |
| Did Not Answer | 0 | 1 4.0% | 0 | 1 1.3% |
| Total | 30 100.0% | 25 100.0% | 25 100.0% | 80* 100.0% |

* Please note that eleven respondents did not indicate their level of educational attainment and are, therefore, not included in this crosstabulation.

In evaluating the answers to this question, again, 12 out of 20 (60 percent) subjects in the 46-55 age group answered incorrectly by responding “No”. The other age groups reported very low incorrect answers (*Table 22*).

Table 22. Crosstabulation for Age and HIV Transmission from Someone without Symptoms

| Response to Question | 18-25 | 26-35 | 36-45 | 46-55 | Over 56 | Total |
|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|-----------------------------|
| Yes | 16 61.5% | 11 52.4% | 8 72.7% | 5 25.0% | 2 40.0% | 42 50.6% |
| Probably Yes | 4 15.4% | 5 23.8% | 0 | 2 10.0% | 2 40.0% | 13 15.7% |
| Probably No | 3 11.5% | 2 9.5% | 2 18.2% | 1 5.0% | 1 20.0% | 9 10.8% |
| No | 3 11.5% | 2 9.5% | 1 9.1% | 12 60.0% | 0 | 18 21.7% |
| Did not Answer | 0 | 1 4.8% | 0 | 0 | 0 | 1 1.2% |
| Total | 26 100.0% | 21 100.0% | 11 100.0% | 20 100.0% | 5 100.0% | 83* 100.0% |

* Please note that eight respondents did not indicate their age and are, therefore, not included in this crosstabulation.

The next question was designed to determine if individuals saw themselves at risk even if they were not a homosexual or a drug addict. “Do you think AIDS is a problem only for homosexuals and drug addicts?” The correct answer is “no”. Of the 84 subjects who answered the question, 54 (64.3 percent) answered correctly while an additional five (6 percent) answered “Probably No”. However, approximately 30 percent of the respondents answered this question incorrectly and may not be using precautions to protect themselves from infection simply because they do not understand all of the risks. In a comparison between men and women’s responses, 65.2 percent of the women answered correctly while men closely followed at 60.0 percent of correct responses.

In comparing the educational attainment levels, the group who answered this question incorrectly most frequently was the 8th grade or less group. Only 43.3 percent of this group answered “no” as compared to those reporting some high school education

(72.0 percent) and those who graduated from high school (68.0 percent). *Table 23* below reports the exact numbers.

Table 23. Crosstabulation for Education and AIDS as a problem only for homosexuals and drug addicts

| Response to Question | 8 th Grade or Less | Some High School | Graduated High School | Total |
|----------------------|-------------------------------|----------------------------|----------------------------|-----------------------------|
| Yes | 5 16.7% | 4 16.0% | 5 20.0% | 14 17.5% |
| Probably Yes | 6 20.0% | 3 12.0% | 1 4.0% | 10 12.5% |
| Probably No | 4 13.3% | 0 | 1 4.0% | 5 6.3% |
| No | 13 43.3% | 18 72.0% | 17 68.0% | 48 60.0% |
| Did Not Answer | 2 6.7% | 0 | 1 4.0% | 3 3.8% |
| Total | 30 100.0% | 25 100.0% | 25 100.0% | 80* 100.0% |

* Please note that eleven respondents did not indicate their level of educational attainment and are, therefore, not included in this crosstabulation.

In an evaluation of the answers provided as broken down into various age groups, no one group seemed to have more educational needs than another (*Table 24*).

Table 24. Crosstabulation for Age and AIDS as a problem only for homosexuals and drug addicts

| Response to Question | 18-25 | 26-35 | 36-45 | 46-55 | Over 56 | Total |
|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|-----------------------------|
| Yes | 6 23.1% | 2 9.5% | 2 18.2% | 4 20.0% | 1 20.0% | 15 18.1% |
| Probably Yes | 2 7.7% | 5 23.8% | 0 | 2 10.0% | 0 | 9 10.8% |
| Probably No | 0 | 1 4.8% | 1 9.1% | 0 | 1 20.0% | 3 3.6% |
| No | 17 65.4% | 12 57.1% | 7 63.6% | 14 70.0% | 3 60.0% | 53 63.9% |
| Did not Answer | 1 3.8% | 1 4.8% | 1 9.1% | 0 | 0 | 3 3.6% |
| Total | 26 100.0% | 21 100.0% | 11 100.0% | 20 100.0% | 5 100.0% | 83* 100.0% |

* Please note that eight respondents did not indicate their age and are, therefore, not included in this crosstabulation.

HIV Preventive Behavior and Attitudes

This section evaluates the responses to questions concerning behavior and attitudes toward HIV prevention. A comparison between the responses to the knowledge and behavior questions will be reviewed in Chapter five (5). This will be done to examine if the application of knowledge affects behavior.

Worry/ Concern about HIV Infection

The first of the behavioral questions is “How Often do you worry about AIDS?” This question was asked to expose the number of people who are concerned that they might be at risk for contracting HIV and if they thought of HIV as a possibility in their lives. Of the 81 people who answered the question, 47 (58.0 percent) indicated that they never worried about HIV infection. Another 19 (23.5 percent) indicated that they “sometimes” worried about it. Eleven percent (9 people) indicates they worried “very often” about contracting HIV. Twenty-eight women (62.2 percent) of the 45 women responding to this question reported that they never worried about it while 16 men (48.5 percent) out of 33 did not worry about infection.

In a comparison of educational attainment levels, those reporting that they worry “Very Often” or “Often” were in the 8th grade or less group (*Table 25*).

Table 25. Crosstabulation for Education and Frequency of worrying about AIDS

| Response to Question | 8 th Grade or Less | Some High School | Graduated High School | Total |
|----------------------|-------------------------------|----------------------------|----------------------------|-----------------------------|
| Very Often | 5 18.5% | 3 12.5% | 1 4.3% | 9 12.2% |
| Often | 3 11.1% | 2 8.3% | 1 4.3% | 6 8.1% |
| Sometimes | 5 18.5% | 6 25.0% | 6 26.1% | 17 23.0% |
| Never | 14 51.9% | 13 54.2% | 15 65.2% | 42 56.8% |
| Total | 27 100.0% | 24 100.0% | 23 100.0% | 74* 100.0% |

* Please note that seventeen respondents did not indicate their level of educational attainment or did not answer the question and are, therefore, not included in this crosstabulation.

A comparison of age groups revealed a very high number of people in the 18-25 and the 46-55 age groups who worried “sometimes” about contracting the virus (Table 26).

Table 26. Crosstabulation for Age and Frequency of worrying about AIDS

| Response to Question | 18-25 | 26-35 | 36-45 | 46-55 | Over 56 | Total |
|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|-----------------------------|
| Very Often | 1 4.2% | 3 15.8% | 2 20.0% | 3 16.7% | 0 | 9 11.8% |
| Often | 3 12.5% | 2 10.5% | 1 10.0% | 0 | 0 | 6 7.9% |
| Sometimes | 7 29.2% | 3 15.8% | 1 10.0% | 6 33.3% | 1 20.0% | 18 23.7% |
| Never | 13 54.2% | 11 57.9% | 6 60.0% | 9 50.0% | 4 80.0% | 43 56.6% |
| Total | 26 100.0% | 21 100.0% | 11 100.0% | 20 100.0% | 5 100.0% | 83* 100.0% |

* Please note that eight respondents did not indicate their age and are, therefore, not included in this crosstabulation.

Frequency of Condom Use

Question number 18 was designed to determine if people are using condoms to protect themselves from HIV infection. “In general, when you have sexual intercourse, how often do you use condoms?” Seventy-six people answered this question and 33 (43.4 percent) indicated they never use them. Although 46.2 percent of the respondents indicated that condoms help prevent the spread of HIV as recorded previously in this chapter only 14.5 percent indicated that they use condoms all of the time (*Table 27*).

Table 27. Crosstabulation for Education and Frequency of Condom Use

| Response to Question | 8th Grade or Less | Some High School | Graduated High School | Total |
|-----------------------------|-------------------------------------|----------------------------|------------------------------|-----------------------------|
| All of the Time | 4 15.4% | 3 12.0% | 3 13.6% | 10 13.7% |
| Most of the Time | 4 15.4% | 5 20.0% | 2 9.1% | 11 15.1% |
| Only Sometimes | 5 19.2% | 6 24.0% | 8 36.4% | 19 26.0% |
| Never | 13 50.0% | 11 44.0% | 9 40.9% | 33 45.2% |
| Total | 26 100.0% | 25 100.0% | 22 100.0% | 73* 100.0% |

* Please note that eighteen respondents did not indicate their level of educational attainment or answer the question and are, therefore, not included in this crosstabulation.

During the process of evaluating the differences between age groups, it was noticed that the age group over 56 never wear condoms. More outreach is necessary to reach those in the 18-25 and the 26-35 age groups because of their high numbers of reporting using condoms “only sometimes” and “never”.

Table 28. Crosstabulation for Age and Frequency of Condom Use

| Response to Question | 18-25 | 26-35 | 36-45 | 46-55 | Over 56 | Total |
|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|-----------------------------|
| All of the Time | 2 9.1% | 4 20.0% | 2 18.2% | 2 12.5% | 0 | 10 13.5% |
| Most of the Time | 5 22.7% | 0 | 2 18.2% | 5 31.3% | 0 | 12 16.2% |
| Only Sometimes | 7 31.8% | 8 40.0% | 3 27.3% | 2 12.5% | 0 | 20 27.0% |
| Never | 8 36.4% | 8 40.0% | 4 36.4% | 7 43.8% | 5 100.0% | 32 43.2% |
| Total | 26 100.0% | 21 100.0% | 11 100.0% | 20 100.0% | 5 100.0% | 74* 100.0% |

* Please note that 17 respondents did not indicate their age or answer the question and are, therefore, not included in this crosstabulation.

Condom Use During the Last Time Sexual Intercourse Occurred

Question 19 was “The last time you had sexual intercourse did you use a condom?” Very little difference exists between men and women on this question. Seventy-two point one (72.1) percent of the women and 68.6 percent of the men responded that the last time they had sexual intercourse, they did not use a condom. The majority of people in all categories answered “no” to this question. The individuals reporting they had attended some high school had a higher use of condoms than the other two groups.

Table 29. Crosstabulation for Education and Condom Use Last Time of Intercourse

| Response to Question | 8th Grade or Less | Some High School | Graduated High School | Total |
|-----------------------------|-------------------------------------|----------------------------|------------------------------|-----------------------------|
| Yes | 8 29.6% | 10 40.0% | 4 19.0% | 22 30.1% |
| No | 19 70.4% | 15 60.0% | 17 81.0% | 51 69.9% |
| Total | 30 100.0% | 25 100.0% | 25 100.0% | 73* 100.0% |

* Please note that 18 respondents did not indicate their level of educational attainment or answer the question and are, therefore, not included in this crosstabulation.

According to the responses indicated on the survey. The age group 36-45 utilized condoms at a higher rate than the other groups did. *Table 30* provides all of the data for this question.

Table 30. Crosstabulation for Age and Condom Use Last Time of Intercourse

| Response to Question | 18-25 | 26-35 | 36-45 | 46-55 | Over 56 | Total |
|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|-----------------------------|
| Yes | 7 29.2% | 4 20.0% | 5 45.5% | 7 43.8% | 0 | 23 30.3% |
| No | 17 70.8% | 16 80.0% | 6 54.5% | 9 56.2% | 5 100.0% | 53 69.7% |
| Total | 24 100.0% | 21 100.0% | 11 100.0% | 20 100.0% | 5 100.0% | 76* 100.0% |

* Please note that eight respondents did not indicate their age and seven did not answer the question. Therefore, 15 respondents are not included in this crosstabulation.

Embarrassment of Discussing Sexual Issues

To identify the subjects' attitudes toward open discussion of sexual issues with their partner, the statement was made that "It is often more embarrassing for couples to talk about sexual issues, like the AIDS virus than to have sex." The subjects in the study were asked to indicate if they agreed or disagreed with the comment. The ideal answer would be that they disagreed. Surprisingly, women answered that they disagreed more frequently than expected. Twenty-three (53.5 percent) of the 43 women disagreed with this comment while 17 (54.8 percent) of the 31 men disagreed. Another surprising finding was that those who had graduated from high school agreed with this comment. The assumption was made that the higher the education attainment, the easier it would be for partners to discuss sexual issues (*Table 31*).

Table 31. Crosstabulation for Education and Embarrassment of Discussing Sexual Issues

| Response to Question | 8 th Grade or Less | Some High School | Graduated High School | Total |
|----------------------|-------------------------------|----------------------------|----------------------------|-----------------------------|
| Agree | 6 25.0% | 13 61.9% | 13 54.2% | 32 46.4% |
| Disagree | 18 75.0% | 8 38.1% | 11 45.8% | 37 53.6% |
| Total | 24 100.0% | 21 100.0% | 24 100.0% | 69* 100.0% |

* Please note that eleven respondents did not indicate their level of educational attainment. Eleven others did not answer the question. Therefore, 22 respondents are not included in this crosstabulation.

The age group reporting the most discomfort in discussing this issue with a partner was the 18-25 age group, which may be the most vulnerable to HIV infection. The majority of those in the 26-35 age category also reported embarrassment in discussing sexual issues and concerns (Table 32).

Table 32. Crosstabulation for Age and Embarrassment of Discussing Sexual Issues

| Response to Question | 18-25 | 26-35 | 36-45 | 46-55 | Over 56 | Total |
|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|-----------------------------|
| Agree | 13 56.5% | 9 52.9% | 5 50.0% | 5 27.8% | 1 20.0% | 33 45.2% |
| Disagree | 10 43.5% | 8 47.1% | 5 50.0% | 13 72.2% | 4 80.0% | 40 54.8% |
| Total | 23 100.0% | 17 100.0% | 10 100.0% | 18 100.0% | 5 100.0% | 73* 100.0% |

* Please note that eight respondents did not indicate their age and ten did not answer the question. Neither is included in this crosstabulation.

Discussion with Partner about Risk of STD Infection

Question 21 asked “Have you ever had a conversation with a sexual partner about your risk of infecting each other with a sexually transmitted disease?” Forty-five (54.9 percent) of the 82 people who answered this question answered “No”. Men reported a higher rate of discussion with their partners and 15 (46.9 percent) out of 32 answered that

they had such a conversation. Women reported a slightly lower rate at 43.2 percent (19 out of 44 women). This is consistent with cultural norms of women not knowing much about sexual acts and their potential consequences. Chapter two reviewed such norms and values.

When educational attainment was considered as a variable for this question, it was recognized that those with an 8th grade education or less discussed STD's with their partner more than any other group (*Table 33*).

Table 33. Crosstabulation for Education and Discussion of Infecting a Partner with a Sexually Transmitted Disease

| Response to Question | 8 th Grade or Less | Some High School | Graduated High School | Total |
|----------------------|-------------------------------|----------------------------|----------------------------|-----------------------------|
| Yes | 15 55.6% | 8 32.0% | 11 50.0% | 34 45.9% |
| No | 12 44.4% | 17 68.0% | 11 50.0% | 40 54.1% |
| Total | 27 100.0% | 25 100.0% | 22 100.0% | 74* 100.0% |

* Please note that eleven respondents did not indicate their level of educational attainment and are, therefore, not included in this crosstabulation.

The age group 26-35 reported a higher rate (57.9 percent) of such a discussion than any other group. The 36-45 age group followed close behind in the percentage (54.5 percent) of positive responses (*Table 34*).

Table 34. Crosstabulation for Age and Discussion of Infecting a Partner with a Sexually Transmitted Disease

| Response to Question | 18-25 | 26-35 | 36-45 | 46-55 | Over 56 | Total |
|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|-----------------------------|
| Yes | 9 37.5% | 11 57.9% | 6 54.5% | 6 30.0% | 1 25.0% | 33 42.3% |
| No | 15 62.5% | 8 42.1% | 5 45.5% | 14 70.0% | 3 75.0% | 45 57.7% |
| Total | 24 100.0% | 19 100.0% | 11 100.0% | 20 100.0% | 4 100.0% | 78* 100.0% |

* Please note that eight respondents did not indicate their age and five did not answer the question. These are not included in this crosstabulation.

Initiator of the Conversation about HIV/STD Risk

Question 22 is a follow-up question to the previous question. It asks, “The last time you had a conversation like this, who brought up the topic, you or your partner?” Only 73 people answered this question and 33 (41.4 percent) indicated they did not know who initiated the conversation. Men actually reported a slightly higher rate of bringing up the topic at 23.3 percent. Nine women (22.0 percent) reported that they began the conversation. Women tended to report that both partners brought up the conversation together.

When evaluating the educational attainment levels, those with less than an 8th grade education more frequently reported that they both brought up the conversation (Table 35).

Table 35. Crosstabulation for Education and Who Brought up the Topic of Sexually Transmitted Disease Infection

| Response to Question | 8th Grade or Less | Some High School | Graduated High School | Total |
|-----------------------------|-------------------------------------|----------------------------|------------------------------|-----------------------------|
| You | 4 17.4% | 4 19.0% | 5 22.7% | 13 19.7% |
| Partner | 3 13.0% | 1 4.8% | 1 4.5% | 5 7.6% |
| Both | 9 39.1% | 5 23.8% | 7 31.8% | 21 31.8% |
| Don't Know | 7 30.4% | 11 52.4% | 9 40.9% | 27 40.9% |
| Total | 23 100.0% | 21 100.0% | 22 100.0% | 66* 100.0% |

* Please note that 11 respondents did not indicate their level of educational attainment and 14 did not answer this question. Therefore, 25 individuals are not included in this crosstabulation.

No one age group showed a concentration of responses. Please see Table 36 for the actual responses as it relates to the age of the subject.

Table 36. Crosstabulation for Age and Who Brought up the Topic of Sexually Transmitted Disease

| Response to Question | 18-25 | 26-35 | 36-45 | 46-55 | Over 56 | Total |
|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|-----------------------------|
| You | 4 20.0% | 5 29.4% | 1 10.0% | 6 31.6% | 0 | 16 22.5% |
| Partner | 1 5.0% | 1 5.9% | 1 10.0% | 1 5.3% | 0 | 4 5.6% |
| Both | 6 30.0% | 7 41.2% | 5 50.0% | 2 10.5% | 2 40.0% | 22 31.0% |
| Don't Know | 9 45.0% | 4 23.5% | 3 30.0% | 10 52.63% | 3 60.0% | 29 40.8% |
| Total | 20 100.0% | 17 100.0% | 10 100.0% | 20 100.0% | 5 100.0% | 71* 100.0% |

* Please note that eight respondents did not indicate their age and 12 did not answer the question. These respondents are not included in this crosstabulation.

Perception of Condom Use

This question was modified between the male and the female version. The one in the male version asked, “Would you think less of a woman if she asked you to wear a condom?” The version provided to women asked, “Would you be afraid to ask a man to wear a condom because he might think less of you?” The purpose of this question was two-fold: 1) to determine if women are afraid to ask men to use condoms and 2) to evaluate the legitimacy of that fear as based on men’s responses to the question.

Eight men (23.5 percent) of the 34 who answered the question indicated that they would think less of a woman if she asked him to wear a condom. However, only four women (8.9 percent) indicated a fear of what a man thought of her should she ask him to wear a condom. The vast majority of women (73.3 percent) indicated that they would not be afraid of the man’s opinion of her while 55.9 percent of the men would not think less of a woman due to that issue. This finding is opposite of what was expected for this question. This finding presents educators with positive information that female Hispanic

farmworkers are more assertive than previously thought and may be more responsive to behavioral modifications due to appropriate educational campaigns.

Those answering, “Yes” or “Probably Yes” tended to be in the 8th grade or less age group and four individuals who responded as such had graduated from high school (Table 37).

Table 37. Crosstabulation for Education and Perception of Condom Use

| Response to Question | 8 th Grade or Less | Some High School | Graduated High School | Total |
|----------------------|-------------------------------|------------------|-----------------------|------------|
| Yes | 5 | 1 | 4 | 10 |
| Probably Yes | 3 | 2 | 1 | 6 |
| Probably No | 6 | 2 | 0 | 8 |
| No | 12 | 20 | 20 | 52 |
| Did Not Answer | 4 | 0 | 0 | 4 |
| Total | 30 | 25 | 25 | 80* |

* Please note that eleven respondents did not indicate their level of educational attainment and are, therefore, not included in this crosstabulation.

A slight trend was noticed in the “Yes” responses. As the age increases, so does the negative impression of condom use. This is a good indication that cultural values toward protection are changing. As indicated by this survey, the younger age groups do not worry about the stigma of condom use.

Table 38. Crosstabulation for Age and Perception of Condom Use

| Response to Question | 18-25 | 26-35 | 36-45 | 46-55 | Over 56 | Total |
|----------------------|---------------------|---------------------|---------------------|---------------------|--------------------|----------------------|
| Yes | 2 7.7% | 2 10.0% | 2 20.0% | 5 25.0% | 1 20.0% | 12 14.8% |
| Probably Yes | 3 11.5% | 2 10.0% | 0 | 2 10.0% | 0 | 7 8.6% |
| Probably No | 2 7.7% | 1 5.0% | 1 10.0% | 1 5.0% | 1 20.0% | 6 7.4% |
| No | 19 73.1% | 15 75.0% | 7 70.0% | 12 60.0% | 3 60.0% | 56 69.1% |
| Total | 26 100.0% | 20 100.0% | 10 100.0% | 20 100.0% | 5 100.0% | 81* 100.0% |

* Please note that eight respondents did not indicate their age and two did not answer the question. A total of 10 respondents are not included in this crosstabulation.

Perhaps one of the most surprising findings of this study was that regarding the perception of condom use. Many of the previous studies performed indicated that Hispanic women were not able to ask a man to wear a condom due to cultural values. These cultural values dictated that a woman should be virginal and submissive to her husband or male partner. The majority of men (55.9 percent) indicated that they would not think less of a woman if she asked him to wear a condom. Additionally, 73.3 percent of the women responding to this question answered that they would not be afraid to ask a man to wear a condom. Few men (23.5%) answered, “yes” to this question.

Table 39. Crosstabulation for Sex and Fear of Asking a Man to Use a Condom

| Response to Question | Men | Women | Total |
|-----------------------------|----------------------------|----------------------------|----------------------------|
| Yes | 7 23.3% | 4 8.9% | 12 15.2% |
| Probably Yes | 3 8.8% | 4 8.9% | 7 8.9% |
| Probably No | 4 11.8% | 4 8.9% | 8 10.1% |
| No | 19 55.9% | 33 73.3% | 52 65.8% |
| Total | 34 100.0% | 45 100.0% | 79 100.0% |

* Please note that ten respondents did not indicate their sex and two did not answer this question. Twelve respondents are not included in this crosstabulation.

In Chapter five, suggestions will be made on which subjects will need more attention in a public health campaign for HIV/AIDS education among migrant workers. Additionally, suggestions will be made on how to deliver a culturally appropriate program that will make the program more successful in reaching the target population.

Chapter 5 Summary and Recommendations

“Biology determines that an infection can occur. Culture determines who is exposed, when they are exposed and how rapidly the disease microorganism is disseminated.”

(Clark 1994:55)

Previous chapters have provided the reader with information about the migrant farmworkers and the public health concerns associated with their migration. Chapter two discussed the theoretical considerations of poor health among migrant workers and highlighted some of the key studies that have been conducted in various areas across the United States on migrants. Chapter three discussed the methodology selected for the survey while chapter four presented the survey results. In this chapter, the information from Chapter four will be used to identify which sectors of the population need more focused attention in their education.

Utilizing the survey results, several trends and segments of the population requiring additional information were identified. Based upon this identification, suggestions for topics that need to be covered with those segments of the population are presented. More specifically, the following groups needed more information to protect themselves appropriately from HIV infection.

Overall, men scored lower on the knowledge questions than did women. For example, of the 35 men who responded to this question, only 42.8 percent correctly answered that condoms prevented HIV transmission. Thirteen men (37.1 percent) answered “no” and “probably no”. This incorrect perception that condoms do not prevent

infection can place sexual partners, male or female, at high risk of infection.

Furthermore, this can cause problems between couples when women ask their male partners to wear condoms because the men do not see the necessity of using them as a preventive tool. Almost one out of four (23.8%) women answered this same question incorrectly and more attention needs to be given to this topic in any educational program.

Age Groups

The age group with the highest need for educational programs is that of the 46-55 year olds. Those in this age group understand that mosquitoes do not transmit HIV and that transmission cannot occur due to sitting on a public toilet seat. However, in comparisons with other age groups, they do not understand the other vectors very well at all. Forty percent of those in the 46-55 age group answered that HIV is not transmitted through IV drug use. Furthermore, this population may utilize *inyeccionistas*, or lay-healers, for injectable medications and may not see this as a risk factor for HIV infection. Any educational program provided to this age group should include information on the dangers of transmission through this route. In the questions regarding transmission from the mother to child during birth and through breast milk, this group consistently had high incorrect answers at 40.0% and 50.0%, respectively. This group also indicated that HIV transmission could not occur from a person without AIDS symptoms (65.0 percent). This group also reported the highest incorrect response rate for the question regarding increased risk of HIV infection with a higher number of sexual partners.

Across the age groups, two trends were evident. First, between 18.2 percent and 36-45 age group and 33.3 percent in the 26-35 age group indicated that AIDS was a

problem only for homosexuals and IV drug users. This is disturbing in that many respondents do not consider HIV infection to be a possibility for them. Public health education and awareness campaigns must inform people that heterosexual couples could be at risk as well. Secondly, all groups indicated that kissing was a possible vector for transmission. Public health educators will have to determine if this is a topic they want to correct the misconceptions.

Respondents in the 18-25 age group more frequently answered the following questions incorrectly:

- 70.0 percent believe that HIV is transmitted by mosquitoes;
- 34.6 percent do not know that a mother with HIV can infect her baby through her breast milk;
- 19.2 percent did not know that having an STD could make one more vulnerable to HIV infection; and
- 23.0 percent did not know that someone who did not exhibit any symptoms could transmit HIV.

Respondents in the 26-35 age group needed additional information as well on several topics. Those topics that respondents from this group scored the worst on included: only men can transmit HIV (19.0 percent); the virus can be spread by sitting on public toilet seats (42.9 percent); and that HIV cannot infect heterosexual couples (23.8 percent). Public health campaigns must include information about the fact that women can contract and spread the virus and that HIV can affect heterosexual couples.

The respondents in the 36-45 age cohort demonstrated low levels of knowledge on the following transmission routes: 27.0 percent indicated that a mother could not pass

HIV infection on to her infant during child birth; 45.5 percent indicated that condoms would not reduce one's risk of becoming infected; and 27.3 percent said that HIV transmission could not occur from someone who did not exhibit symptoms of AIDS.

Overall, the few respondents in the Over 56 age category did surprisingly well with educational deficiencies in: transmission through sitting on a public toilet seat; transmission through an infected mother's breast milk; and transmission from someone who demonstrated no symptoms of AIDS.

Educational Attainment Groups

Although this was used as a comparison tool in this study, public health campaigns should be designed to reach a wide variety of educational levels. Public health educators can more effectively design programs to reach specific age groups or genders rather than educational attainment levels. Therefore, in designing public health campaigns, educational attainment should be used lastly or not at all. Due to the difficulties educators would have in separating those who have a high school diploma from those who have less than an 8th grade education, this information has little value. Furthermore, separation of people due to this topic is likely to further alienate the target population. The value that it does have is the formal educational level they have earned which can be used as an indicator of the overall ability of the cohort to understand written materials.

In the evaluation of how knowledge affects behavior, 46.2 percent of the respondents knew that condom use reduced the risk of HIV infection; however, only 14.5

percent indicated that they use condoms all of the time. One issue that couples may have is that sometimes one partner may have multiple sex partners outside of the relationship and may infect the partner that believes he or she is in a monogamous relationship. More education needs to be done on this topic and informing both partners of the risks unprotected sex outside of the relationship can cause for both people.

Few people indicated that they worried about contracting HIV. Fifty-eight percent said that they never worry about it while only eleven percent worried “very often” about contracting it. This may be due to two different reasons: 1) the respondents feel like they are in a monogamous relationship; and 2) they do not consider themselves to be at risk. For example, 36.0 percent of all respondents in the study indicated that HIV was a problem only for IV drug users and homosexuals. According to Barker, Battle, Cummings and Bancroft (1998), knowledge alone does not change behavioral patterns. As the authors state, “Many studies support the idea that having a high level of knowledge about AIDS, or even a perception of being at risk, does not necessarily reduce a person’s risky behaviors.” (Barker, Battle, Cummings and Bancroft 1998:274) Behaviors must be changed through social and cultural modifications. This can be accomplished through a variety of methods including sexual assertiveness training that may be in direct conflict with cultural values. Kelly, et al. (1994) indicates that “[r]ecent research has shown that group behavioral risk reduction skills training interventions that combine risk education, sexual assertiveness and communication skills training, risk reduction problem solving, and similar health counseling approaches can produce sexual risk behavior changes in gay men and adolescents.” (Kelly, et al. 1994:1918). This also can be accomplished through role-playing so that one will have witnessed first-hand how

to react to a given situation. Positive peer support was crucial for the success of the interventions as well (Kelly, et al. 1994).

Suggestions for HIV/AIDS Prevention Education

Due to the high rate of turnover among migrant workers, public health programs must be conducted regularly for the migrants who come to Montana. Although coordination with other public health campaigns in other states directed toward migrants would be ideal, it is difficult to coordinate in such a manner. Additionally, since public health programs are paid for on a state-by-state basis, it is more difficult to structure a program that crosses state lines.

Frequently, STD's and HIV infection are linked through similar risk factors such as unprotected sex and sexual relations with multiple partners (Stine 1998, Laurence 1998, Yankauer 1994, and Marin, Gomez and Hearst 1993). According to Stine (1998), one in four Americans will contract an STD at some point in his/her life. Having an STD increases the possibility of HIV infection; therefore, HIV prevention and awareness campaigns should also include information about STD's. "It seems rational to treat the control of all sexually transmitted diseases as a single public health program. Infection with one of the non-AIDS sexually transmitted diseases increases the risk and contributes to the severity of AIDS, and vice versa." (Yankauer 1994:1896).

Difficulties with Reaching the Hispanic Culture

In Chapter two, several issues were discussed concerning outreach to Hispanic populations. These include both language and cultural barriers. Cultural norms serve as deterrents to women as they attempt to take control of their sexuality and their own bodies (Mays 1988). Furthermore, women feel powerless in their relationship to men and may find it difficult to suggest that he wear a condom. Marin, Tschann, Gomez and Kegeles (1993) claim that traditional Hispanic culture will serve as an obstacle to public health educators as they attempt to reach less acculturated Hispanic women. Despite all of the published information concerning Hispanic women being less sexually assertive, this study indicates otherwise based on the responses to the questions regarding the fear of asking a man to wear a condom because he might think less of the woman because she did so. This finding could prove to be beneficial to educators as they work with women of this ethnicity.

Another factor that must be considered is that of the distrust of medical personnel by Hispanic people. As mentioned in Chapter two, Congress enacted laws in 1998 that required aliens to be tested for HIV (Lee 2000b). Medical personnel are then seen as people who can have one deported based on a positive test.

Suggestions for Overcoming Cultural Barriers

Lee (2000a) suggests six methods of improving HIV/AIDS Outreach for Non-English Speakers. The first concept is that literal translations from English to another language for brochures and other publications may be culturally inappropriate. For example,

dialects within the same language may use words in different ways and assign different subtle meanings to those words. If the message is not linguistically appropriate, it may cause more barriers in reaching the population. Secondly, sub-populations must be considered in outreach efforts rather than lumping groups together. This is closely linked to the first concept in that different subgroups may assign different meanings to items. A suggestion would be to have readers from different subgroups closely review any literature to ensure it is accurate and will have meaning for the target population. The third concept is to be keenly aware and conscious of language in both written and oral communication. Fourth, ensure that quality interpreter services are available for patients. It is crucial that public health and medical personnel do not rely on the patient's family members or friends to serve as an interpreter. This may keep important information from being shared between patient and educator/medical personnel due to discomfort in allowing a family member or friend know about their risky behaviors. The fifth concept is to consider the culture's attitude about health. If traditional healers or medicines are used frequently, do not degrade the value of such systems. Instead use that system to help inform the individual. The use of *inyeccionistas*, or lay-healers, that frequently use injectable medications should be used to help educate individuals. Also, by educating the *inyeccionistas*, they should be more careful in making sure that sterile needles are used for each injection. The last suggestion that Lee (2000a) provides is to use an effective messenger. If a leader within the population understands the importance of HIV/AIDS and STD prevention, this person can have considerable influence on the group regarding the dissemination of information and in modifying risky behaviors.

Public health educators can effectively reach migrant workers with HIV/AIDS education if they are careful and patient with the population. Changes will not occur immediately but positive change will occur if proper respect is given to cultural values.

Future Research

Much more information can be generated around the issue of HIV/AIDS education and existing knowledge and behavioral patterns exhibited by members of this population. A couple of suggestions for research include a series of surveys being distributed annually much as this one was over a three or four year period. Additionally, it would be beneficial to conduct a survey in coordination with another clinic serving migrant farmworkers. For example, a similar survey could be conducted in Texas and the results compared to that generated in Montana. In that survey, it would be important to focus more on behavioral issues as well.

APPENDIX

SURVEY INSTRUMENTS

1. **Men in Spanish**
2. **Men in English**
3. **Women in Spanish**
4. **Women in English**

{Please Note: Inflections and accents were placed on the copies of the survey instrument manually and are not in this document.}

Hombre en Espanol

1. ¿Cree que es posible contraer el virus del SIDA de una picada de mosquito?
A. Si B. Probablemente Si C. Probablemente No D. No
2. ¿Cree que es posible contraer el virus del SIDA al sentarse en un baño publico?
A. Si B. Probablemente Si C. Probablemente No D. No
3. ¿Se puede contraer el SIDA a craves del contacto informal, como puede seTun abrazo, un apretón de manos, o el estar cerca de alguien que lo tiene?
A. Si B. Probablemente Si C. Probablemente No D. No
4. ¿Se puede contraer el virus del SIDA a craves de un beso?
A. Si B. Probablemente Si C. Probablemente No D.No
5. ¿Puede transmitirse el SIDA a través del uso intravenoso de drogas?
A. Si B. Probablemente Si C. Probablemente No D. No
6. ¿Puede transmitirse el virus del SIDA de madre a hijo al nacer el hijo?
A. Si B. Probablemente Si C. Probablemente No D. No
7. ¿Puede transmitirse el virus del SIDA de madre a hijo al darle de mamar al hijo?
A. Si B. Probablemente Si C. Probablemente No D. No
8. ¿Puede contagiarse del SIDA a través de la relaciones sexuales con hombres? Con mujeres? Con los dos?
A. Hombres B. Mujeres C. Los Dos D. Ninguno
9. ¿Cree que el hecho de tener varias parejas sexuales hace crecer el riesgo de contraer el virus del SIDA?
A. Si B. Probablemente Si C. Probablemente No D. No
10. ¿Hace aumentar el riesgo de contraer el SIDA el hecho de tener alguna enfermedad de transmisión sexual como la herpes, sífilis o gonorrea?
A. Si B. Probablemente Si C. Probablemente No D. No
11. ¿El uso de los condones ayuda a evitar contraer el virus del SIDA?
A. Si B. Probablemente Si C. Probablemente No D. No
12. ¿ Es mortal el SIDA?
A. Si B. Probablemente Si C. Probablemente No D. No

13. ¿Con que frecuencia queda Ud. preocupado(a) que haya podido contagiarse del virus que causa el SIDA?
- A. Frecuentemente B. A Menudo C. A Veces D. Nunca
14. ¿Puede el Virus del SIDA infectar a las parejas normales heterosexuales?
- A. Si B. Probablemente Si C. Probablemente No D. No
15. ¿Cree que es posible detectar que alguien tiene el virus del SIDA solo mirandolo?
- A. Si B. Probablemente Si C. Probablemente No D. No
16. ¿Es posible contraer el virus del SIDA de alguien que no demuestra ningun sintoma del SIDA?
- A. Si B. Probablemente Si C. Probablemente No D. No
17. ¿Cree que el SIDA es un problema solo de los homosexuales y droadictos?
- A. Si B. Probablemente Si C. Probablemente No D. No
18. En general, cuando Ud. tiene relaciones sexuales, ¿con que frecuencia usa condones?
- A. Todo el tiempo B. Casi todo el tiempo C. Algunas veces D. Nunca
19. La ultima vez que tuvo relaciones sexuales, ¿utilizo un condon?
- A. Si B. No
20. Para las parejas es casi mas embarazoso hablar de asuntos sexuales, como puede ser el SIDA, que participar en el acto sexual.
- A. Acordar B. de acuerdo
21. ¿Ha comentado alguna vez con una pareja sexual riesgo de contagiarse mutuamente de alguna enfermedad de transmision sexual?
- A. Si B. No
22. ¿La ultima vez que tuvo una conversaci3n de este tipo, ¿quien menciono el tema, ¿Ud. o su pareja?
- A. Yo B. Mí pareja C. Los dos D. No sabe
23. ¿Desestimaria a una mujer si le pidiese que llevara un condon?
- A. Si B. Probablemente Si C. Probablemente No D. No
24. ¿Cual es su sexo?
- A. Hombre B. Mujer
25. ¿De donde son, originariamente?
- Por favor, escriba su repuesta: _____

26. ¿Si sigue aqui en Estados Unidos ¿A cual estado ha de regresar despues de su trabajo en el campo?

Por favor, escriba su repuesta: _____

27. ¿Durante cuanto tiempo ha trabajado como trabajador migrante en los campos?

A. Menos de 1 ano

B. 1-3 anos

C. 4-7 anos

D. 7-10 anos

E. Mas de 10 anos

28. ¿Que edad tiene?

A. 18-25

B. 26-35

C. 36-45

D. 46-55

E. Mas de 56

29. ¿Cual es el ultimo grado que ha completado en la escuela?

Por favor, escriba su repuesta: _____

30. ¿Le ha ayudado alguien a rellenar este cuestionario?

A. Si

B. No

Gracias par su tiempo. Le agradecemos su cooperacion.

Male in English

1. Do you think it's possible to get the AIDS virus from a mosquito bite?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
2. Do you think it's possible to get the AIDS virus by sitting on a public toilet?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
3. Can you catch the AIDS virus through casual contact such as hugging or shaking hands or standing close to someone who has it?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
4. Can you catch the AIDS virus through kissing?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
5. Can AIDS be transmitted through intravenous drug use?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
6. Can a mother transmit the AIDS virus to her baby when it is born?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
7. Can a mother transmit the AIDS virus to her baby through breast feeding?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
8. Can you catch the AIDS virus through sexual relations with men, women, or both?
A. MEN B. WOMEN C. BOTH D. NEITHER
9. Do you think having several sexual partners increases the chances of getting the AIDS virus?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
10. Can having a Sexually Transmitted Disease (STD), like herpes, syphilis, or gonorrhea, increase one's risk for getting the AIDS virus?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
11. Do condoms help prevent getting the AIDS virus?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
12. Is AIDS fatal?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
13. How often do you worry that you might get the virus that causes AIDS?
A. VERY OFTEN B. OFTEN C. SOMETIMES D. NEVER

14. Does the AIDS virus infect heterosexual couples?
 A. YES B. PROBABLY YES C. PROBABLY NO D. NO
15. Do you think it's possible to know by looking at someone if they have the AIDS virus?
 A. YES B. PROBABLY YES C. PROBABLY NO D. NO
16. Can a person get the AIDS virus from someone that doesn't show any symptoms of AIDS?
 A. YES B. PROBABLY YES C. PROBABLY NO D. NO
17. Do you think AIDS is a problem only for homosexuals and drug addicts?
 A. YES B. PROBABLY YES C. PROBABLY NO D. NO
18. In general, when you have sexual intercourse, how often do you wear a condom?
 A. All of the time B. Most of the time C. Only Sometimes D. Never
19. The last time you had sexual intercourse did you use a condom?
 A. YES B. NO
20. It is often more embarrassing for couples to talk about sexual issues, like the AIDS virus, than to have sex.
 A. AGREE B. DISAGREE
21. Have you ever had a conversation with a sexual partner about your risk of infecting each other with a sexually transmitted disease?
 A. YES B. NO
22. The last time you had a conversation like this, who first brought up this topic, you or your partner?
 A. YOU B. PARTNER C. BOTH D. DON'T KNOW
23. Would you think less of a woman if she asked you to wear a condom?
 A. YES B. PROBABLY YES C. PROBABLY NO D. NO
24. What is your sex?
 A. MALE B. FEMALE
25. Where are you originally from?
 Please write in answer: _____
26. If you remain in the United States, what state do you return to after working on the farms?
 Please write in answer: _____

27. How long have you migrated as a farmworker?
- A. Less than 1 year
 - B. 1-3 years
 - C. 4-7 years
 - D. 7-10 years
 - E. More than 10 years
28. What is your age?
- A. 18-25
 - B. 26-35
 - C. 36-45
 - D. 46-55
 - E. Over 56
29. What was the last grade you completed in school?
Please write in answer: _____
30. Did someone help you with this questionnaire?
- A. YES
 - B. NO

Thank you for your time. We appreciate your cooperation.

{Please Note: Inflections and accents were placed on the copies of the survey instrument manually and are not in this document. }

Mujer en Espanol

1. ¿Cree que es posible contraer el virus del SIDA de una picada de mosquito?
A. Si B. Probablemente Si C. Probablemente No D. No
2. ¿Cree que es posible contraer el virus del SIDA al sentarse en un baño publico?
A. Si B. Probablemente Si C. Probablemente No D. No
3. ¿Se puede contraer el SIDA a craves del contacto informal, como puede seTun abrazo, un apretón de manos, o el estar cerca de alguien que lo tiene?
A. Si B. Probablemente Si C. Probablemente No D. No
4. ¿Se puede contraer el virus del SIDA a craves de un beso?
A. Si B. Probablemente Si C. Probablemente No D.No
5. ¿Puede transmitirse el SIDA a través del uso intravenoso de drogas?
A. Si B. Probablemente Si C. Probablemente No D. No
6. ¿Puede transmitirse el virus del SIDA de madre a hijo al nacer el hijo?
A. Si B. Probablemente Si C. Probablemente No D. No
7. ¿Puede transmitirse el virus del SIDA de madre a hijo al darle de mamar al hijo?
A. Si B. Probablemente Si C. Probablemente No D. No
8. ¿Puede contagiarse del SIDA a través de la relaciones sexuales con hombres? Con mujeres? Con los dos?
A. Hombres B. Mujeres C. Los Dos D. Ninguno
9. ¿Cree que el hecho de tener varias parejas sexuales hace crecer el riesgo de contraer el virus del SIDA?
A. Si B. Probablemente Si C. Probablemente No D. No
10. ¿Hace aumentar el riesgo de contraer el SIDA el hecho de tener alguna enfermedad de transmisión sexual como la herpes, sífilis o gonorrea?
A. Si B. Probablemente Si C. Probablemente No D. No
11. ¿El uso de los condones ayuda a evitar contraer el virus del SIDA?
A. Si B. Probablemente Si C. Probablemente No D. No
12. ¿ Es mortal el SIDA?
A. Si B. Probablemente Si C. Probablemente No D. No

13. ¿Con que frecuencia queda Ud. preocupado(a) que haya podido contagiarse del virus que causa el SIDA?
- A. Frecuentemente B. A Menudo C. A Veces D. Nunca
14. ¿Puede el Virus del SIDA infectar a las parejas normales heterosexuales?
- A. Si B. Probablemente Si C. Probablemente No D. No
15. ¿Cree que es posible detectar que alguien tiene el virus del SIDA solo mirandolo?
- A. Si B. Probablemente Si C. Probablemente No D. No
16. ¿Es posible contraer el virus del SIDA de alguien que no demuestra ningun sintoma del SIDA?
- A. Si B. Probablemente Si C. Probablemente No D. No
17. ¿Cree que el SIDA es un problema solo de los homosexuales y droadictos?
- A. Si B. Probablemente Si C. Probablemente No D. No
18. En general, cuando Ud. tiene relaciones sexuales, ¿con que frecuencia usa condones?
- A. Todo el tiempo B. Casi todo el tiempo C. Algunas veces D. Nunca
19. La ultima vez que tuvo relaciones sexuales, ¿utilizo un condon?
- A. Si B. No
20. Para las parejas es casi mas embarazoso hablar de asuntos sexuales, como puede ser el SIDA, que participar en el acto sexual.
- A. Acordar B. de acuerdo
21. ¿Ha comentado alguna vez con una pareja sexual riesgo de contagiarse mutuamente de alguna enfermedad de transmision sexual?
- A. Si B. No
22. ¿La ultima vez que tuvo una conversaci3n de este tipo, ¿quien menciono el tema, ¿Ud. o su pareja?
- A. Yo B. Mi pareja C. Los dos D. No sabe
23. ¿Tendria miedo de pedir a un hombre que llevara un condon ya que podria pensar mal o menos de Ud.?
- A. Si B. Probablemente Si C. Probablemente No D. No
24. ¿Cual es su sexo?
- A. Hombre B. Mujer
25. ¿De donde son, originariamente?
- Por favor, escriba su respuesta: _____

26. ¿Si sigue aqui en Estados Unidos ¿A cual estado ha de regresar despues de su trabajo en el campo?

Por favor, escriba su repuesta: _____

27. ¿Durante cuanto tiempo ha trabajado como trabajador migrante en los campos?

A. Menos de 1 ano

B. 1-3 anos

C. 4-7 anos

D. 7-10 anos

E. Mas de 10 anos

28. ¿Que edad tiene?

A. 18-25

B. 26-35

C. 36-45

D. 46-55

E. Mas de 56

29. ¿Cual es el ultimo grado que ha completado en la escuela?

Por favor, escriba su repuesta: _____

30. ¿Le ha ayudado alguien a rellenar este cuestionario?

A. Si

B. No

Gracias par su tiempo. Le agradecemos su cooperacion.

Female in English

1. Do you think it's possible to get the AIDS virus from a mosquito bite?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
2. Do you think it's possible to get the AIDS virus by sitting on a public toilet?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
3. Can you catch the AIDS virus through casual contact such as hugging or shaking hands or standing close to someone who has it?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
4. Can you catch the AIDS virus through kissing?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
5. Can AIDS be transmitted through intravenous drug use?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
6. Can a mother transmit the AIDS virus to her baby when it is born?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
7. Can a mother transmit the AIDS virus to her baby through breast feeding?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
8. Can you catch the AIDS virus through sexual relations with men, women, or both?
A. MEN B. WOMEN C. BOTH D. NEITHER
9. Do you think having several sexual partners increases the chances of getting the AIDS virus?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
10. Can having a Sexually Transmitted Disease (STD), like herpes, syphilis, or gonorrhea, increase one's risk for getting the AIDS virus?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
11. Do condoms help prevent getting the AIDS virus?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
12. Is AIDS fatal?
A. YES B. PROBABLY YES C. PROBABLY NO D. NO
13. How often do you worry that you might get the virus that causes AIDS?
A. VERY OFTEN B. OFTEN C. SOMETIMES D. NEVER

14. Does the AIDS virus infect heterosexual couples?
 A. YES B. PROBABLY YES C. PROBABLY NO D. NO
15. Do you think it's possible to know by looking at someone if they have the AIDS virus?
 A. YES B. PROBABLY YES C. PROBABLY NO D. NO
16. Can a person get the AIDS virus from someone that doesn't show any symptoms of AIDS?
 A. YES B. PROBABLY YES C. PROBABLY NO D. NO
17. Do you think AIDS is a problem only for homosexuals and drug addicts?
 A. YES B. PROBABLY YES C. PROBABLY NO D. NO
18. In general, when you have sexual intercourse, how often do you wear a condom?
 A. All of the time B. Most of the time C. Only Sometimes D. Never
19. The last time you had sexual intercourse did you use a condom?
 A. YES B. NO
20. It is often more embarrassing for couples to talk about sexual issues, like the AIDS virus, than to have sex.
 A. AGREE B. DISAGREE
21. Have you ever had a conversation with a sexual partner about your risk of infecting each other with a sexually transmitted disease?
 A. YES B. NO
22. The last time you had a conversation like this, who first brought up this topic, you or your partner?
 A. YOU B. PARTNER C. BOTH D. DON'T KNOW
23. Would you be afraid to ask a man to wear a condom because he might think less of you?
 A. YES B. PROBABLY YES C. PROBABLY NO D. NO
24. What is your sex?
 A. MALE B. FEMALE
25. Where are you originally from?
 Please write in answer: _____
26. If you remain in the United States, what state do you return to after working on the farms?
 Please write in answer: _____

27. How long have you migrated as a farmworker?
- A. Less than 1 year
 - B. 1-3 years
 - C. 4-7 years
 - D. 7-10 years
 - E. More than 10 years
28. What is your age?
- A. 18-25
 - B. 26-35
 - C. 36-45
 - D. 46-55
 - E. Over 56
29. What was the last grade you completed in school?
Please write in answer: _____
30. Did someone help you with this questionnaire?
- A. YES
 - B. NO

Thank you for your time. We appreciate your cooperation.

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