

1999

HIV Risk Factors in Migrant Farmworkers

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HIV RISK FACTORS IN MIGRANT FARMWORKERS

By

Gina Rosenberg, BSN, RN-C

A THESIS

**Submitted to
Grand Valley State University
in partial fulfillment of the requirements for the
degree of**

MASTER OF SCIENCE IN NURSING

Kirkhof School of Nursing

1999

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ABSTRACT

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The purpose of this study was to examine the HIV/AIDS knowledge level and risk behaviors in Hispanic migrant farmworkers in west and southwest Michigan. A secondary data analysis was performed to measure HIV/AIDS-related knowledge and risk behaviors. Overall knowledge level and risk behavior scores were developed for further data analysis. A Pearson R Correlation Coefficient was calculated and showed that the relationship between knowledge level and risk behaviors was not statistically significant.

Coefficients were also calculated for age, educational levels, and number of months spent in Michigan first with the knowledge level index, and then with the risk behavior index. There was a weak, negative, relationship found between knowledge level and the age of the respondents ($r=-.122$, $p=.021$). A weak, positive relationship was found between knowledge level and years of education ($r=.31$, $p=.00$). There was a weak, negative relationship between the age of the respondent and years of

education completed ($r=-.35$, $p=.00$). No significant relationships were identified between risk behaviors and the demographic variables.

The results of this study showed that migrant farmworkers had a high level of HIV/AIDS knowledge related to modes of transmission. Risk behavior scores showed high HIV/AIDS risk behaviors of multiple sex partners, alcohol use before sexual relationships, and low condom use.

DEDICATION

This thesis is dedicated to Ken, who took on the role of Mr. Mom and made incredible sacrifices to support my studies; to Tony, Hannah, and Therese, who continued to believe they really had a mother through the whole educational process; and my two mentors throughout my entire degree process, Eileen Stryker and Kathy Fuller who always believed in me even when I didn't believe in myself. To all of you, my many thanks and love for being so supportive and patient through my course of study.

ACKNOWLEDGEMENTS

I wish to express my appreciation to my thesis committee chairperson, Lorraine Rodrigues-Fisher, Ed.D., R.N., for her constant support, encouragement, and enthusiasm; Eileen Stryker, Ed.D., for her support and assistance with data analysis; and Linda Scott, PhC., R.N., for her guidance and insight into scholarly nursing research.

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CHAPTER 1

THE PROBLEM

Introduction

A worldwide picture of acquired immunodeficiency syndrome (AIDS) shows that most often the transmission of its causative agent, human immunodeficiency virus (HIV), is through heterosexual intercourse (Clark, 1994). However, this picture differs in the United States. Acquired immunodeficiency syndrome was first identified and spread in this country by the male homosexual and drug using populations (Clark, 1994). Due to the “coming out” period homosexuals experienced in the late 1960s and early 1970s, many then unknown HIV risk behaviors related to drug use and sexual practices flourished. Through these behaviors, HIV was spread to every major city in the United States (Clark, 1994). From this point, infectivity reached out and has permeated every identifiable group in the United States.

The first case of AIDS was documented in 1981 by the Centers for Disease Control (Clark, 1994). As of June 1996, the estimated prevalence of AIDS was 223,000 cases in United States in residents age thirteen and older (Morbidity and Mortality Weekly Report, 1997). Prevalence is defined as both the rate of new infections and the duration of illness (Morbidity and

Mortality Weekly Report, 1997). Prevalence of AIDS is used by the Centers for Disease Control (CDC) as a method of tracking AIDS statistics in the United States because there is currently no other national reporting system in use.

As the statistics for AIDS prevalence in the United States are broken down by ethnic and racial background, more of this illness's elusive quality is revealed. One ethnic group that is of great concern is the Hispanic population. This group consistently has disproportionately high rates of HIV/AIDS cases. The total percentage of Hispanics in the United States population is 11% (American Association for World Health, 1997).

However, according to the 1990 census report, the cumulative rate of AIDS cases in this group is 18% of total cases (Community Public Health Agency, 1998).

The Hispanic population also includes the majority of the United States migrant farmworkers which is one of the most difficult populations to track in terms of any reportable infection or disease. The Office of Migrant Health, Department of Health and Human Services, estimates that the migratory farmworker population in the United States is 1.6 million (National Commission to Prevent Infant Mortality, 1993). Due to their transience and multiple other factors, accurate counts of the HIV status and AIDS cases in this population are estimates at best. It is known that the three states with the most farmworkers (Texas, California, and Florida), also report more than one-third of the AIDS cases in the United States (Bletzer, 1995).

Approximately 104,000 seasonal (working less than 150 days annually) and regular (working more than 150 days) hired workers, most of whom are Hispanic, comprise the migrant farmworker population in Michigan each year (Rochin & Siles, 1994). Hispanics account for 3% of living AIDS cases and 2.5% of confidentially reported cases of HIV infections in Michigan (Michigan Department of Community Health, 1997).

A review of published studies related to HIV/AIDS knowledge among migrant farmworkers suggested relatively low levels of knowledge and many misconceptions related to HIV transmission modes (Organista, Organista, Carrillo, & Moran, 1996). Limited access to health care, language barriers, lack of transportation, and infrequent use of condoms contribute to the spread of HIV among migrant farmworkers (National Commission to Prevent Infant Mortality, 1993).

While these studies offer important findings related to HIV/AIDS knowledge and risk behaviors among migrant farmworkers, they are not inclusive of the entire migrant farmworker population in the United States. There is much movement of migrant farmworkers throughout the country; however, it occurs in predominantly three distinct patterns or streams. These have been named by the geographic areas of the country where the migration occurs. They are the West Coast, East Coast, and Midwest streams.

The West Coast stream begins (its home base) in southern California and moves into Arizona, Idaho, Oregon, and Washington. Latinos of

Mexican origin constitute about 90% of this stream's population (Mishra, Conner, & Magana, 1996).

Florida is the home base for the East Coast stream. Its migration pattern moves along the Atlantic Coast to New York State. African-Americans, Mexican-Americans, Mexicans, Puerto Ricans, Haitians, and Jamaicans make this stream the most ethnically diverse (Mishra et al., 1996).

The majority of migrant farmworkers who are employed in Michigan follow the Midwest Stream. The home base of those who migrate to West and Southwest Michigan is most often Florida, Texas, or Mexico. The racial background of this group of migrant farmworkers is most often Hispanic, with ethnic roots that are Mexican or Mexican-American (Mishra et al., 1996).

While a literature review reveals HIV/AIDS awareness studies that have been done, none are identified as focusing on the Midwest stream. Due to the ethnic and racial differences of each stream's population and the influences different geographic areas of the country have on its migrant populations, studies from one stream should not automatically be applied to either of the other streams. This poses both a public health and nursing challenge.

Justification

Human immunodeficiency virus, which causes AIDS, was first identified in this country predominantly in the gay male population (Clark,

1994). The initial major modes of transmission of the virus in the United States were by men having sex with men, and through shared dirty needles used for intravenous drug abuse (Clark, 1994).

Since its introduction into the United States, Caucasian and African-American males have had, and continue to have, the largest reported proportions of persons with AIDS (American Association of World Health, 1997). The farmworker population is clearly a group raising much concern, but one on which it is very difficult to obtain data. There is a reluctance among undocumented workers to use health facilities and a resistance to become involved in medical studies (Mishra et al., 1996). There is also a tendency for this population to return home when illness, including HIV/AIDS, occurs (Mishra et al., 1996). Due to these factors, and that the few seroprevalence studies that have been conducted have had variable results, the true seroprevalence among migrant farmworkers is not well established.

While Organista & Organista (1997b) found that HIV/AIDS knowledge and risk behaviors among migrant farmworkers are of concern, the authors' work did not include workers in the Midwest stream. This research addresses this issue by studying two major variables: knowledge of HIV transmission modes and HIV risk behaviors. Of concern in examining these variables are the culturally specific beliefs and practices that affect HIV transmission among migrant farmworkers including: shared use of needles and syringes for self-injecting medications and vitamins; low

use of latex condoms to prevent the spread of sexually transmitted infections including HIV, and low knowledge levels regarding HIV transmission modes.

The knowledge gained from conducting this research will enhance nursing's ability to practice in a culturally competent manner. In addition, the findings will increase nursing's ability to meet the HIV-related health care needs of the migrant farmworker population in the Midwest stream.

Purpose

The purpose of this study was to determine HIV/AIDS knowledge and risk behaviors among Hispanic migrant farmworkers in the Midwest stream with the goal being to develop culturally appropriate nursing care.

Problem Statement

What were the HIV/AIDS knowledge levels and risk behaviors of Hispanic migrant farmworkers in the Midwest stream?

Chapter 2

CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

Conceptual Framework

By the year 2000, Hispanics will outnumber African Americans as the majority minority (Caudle, 1993). Hispanics have been called the "silent or invisible minority" because there have been few researchers who have studied Hispanics' health needs and status, beliefs, behavior, or family roles (Caudle, 1993). Health problems of the three main groups of Hispanics in this country-Puerto Ricans, Mexicans, and Cubans and their needs related to their culture, are not being well met (Caudle, 1993). Porter and Villaruel (1993) describe a documented disparity in health outcomes between majority and ethnic/racial minority groups. They also state that dramatically shorter life spans, higher morbidity rates and the inaccessibility to quality health care pose real and constant threats to members of this country's ethnically/racially diverse minority groups (Porter & Villaruel, 1993).

According to Madeleine Leininger (1995), nursing as a profession has a societal mandate to serve people. Leininger explains this by stating that nurses must realize that they are responsible for, and accountable to, people in a particular society or culture to give care that will help people regain and maintain their health and to prevent illness.

Leininger (1995) then uses these knowledge sources to develop three kinds of culturally-based nursing care actions that are predicted to be congruent with and beneficial to clients. These are defined as follows:

1. Culture care preservation (or maintenance): Those culturally based assistive, facilitative, or enabling phenomena that help individuals to preserve or maintain favorable health and caring lifeways.
2. Culture care accommodation (or negotiation): Refers to those culturally based assistive, facilitative, or enabling phenomena that help individuals adapt to or negotiate with others for a beneficial or satisfying health outcome.
3. Cultural care repatterning (or restructuring): Reconstructed or altered designs to help clients change health or life patterns that are meaningful to them.

These tenets are outcomes derived from using Leininger's Sunrise Model. The Sunrise Model is a depiction of the multiple components of Leininger's Culture Care Theory and ways to study the major tenets (Leininger, 1995). The model can be divided into four areas: Culture care world view, cultural and social structure dimensions, diverse health systems, and nursing care decisions and actions. It is flexible in that it can be used starting with any of the four areas and working in either direction (Leininger, 1995).

The second level of the Sunrise Model will be used in this study. This level includes the Culture Care Worldview and Cultural and Social Structure Dimensions. As this study examined HIV/AIDS risk behaviors and knowledge level of Hispanic migrant farmworkers, it was important that these components were considered.

The specific components of the second level of the Sunrise Model are technological factors, religious and philosophical factors, kinship and social factors, cultural values and lifeways, political and legal factors, economic factors, and educational factors. An understanding of these concepts as they apply to the Hispanic migrant farmworker is essential. This understanding enhances the use of Culture Care Theory in research study development, and in the interpretation of research study results. The concepts are explained below. It is important to note that the cultural theory used in this explanation is that of the Mexican and Mexican/American population as this subpopulation of Hispanics has been most frequently studied and is the largest subpopulation in the United States. (Also, the observations recorded and not documented were based on this author's experience working with this population).

Technological Factors

1. Fear and lack of understanding of organized medicine practices and settings due to unfamiliarity with procedures, equipment, providers, health care delivery system, and language barrier.

2. (Reliable) transportation (Salazar, 1996).
3. Lack of exposure (television, radio, print) to media information (Saint-Germain & Longman, 1993).

Religious and Philosophical Factors

1. God, fate, or luck is responsible for life events of illness, recovery, and death (Leininger, 1995).
2. Prayers, bargaining, promises to God or other patron saints to change, guarantee, or prevent the course of certain life events for themselves and family members (Leininger, 1995).

Kinship and Social Factors

1. The family, including the extended family and people close to the family members, is the focus of life (Leininger, 1995b).
2. Women seek help and information from other female family members (Flores & Mata, 1995).

Cultural Values and Lifeways

1. One stays within his/her culture and follows those teachings throughout life. Help is sought within the culture before moving outside the culture norms.
2. Women "run" the household and make all decisions for the family.
3. It is inappropriate for women to seek medical care from male providers (Salazar, 1996).

Political and Legal Factors

1. The father is responsible for family business outside the home.

Economic Factors

1. Mothers ideally do not work outside the home.
2. Low-paying jobs as unskilled laborers and poor health insurance coverage decrease access to appropriate health care (Mishra et al., 1996).

Educational Factors

1. Due to migration, and the necessity to begin working at an early age, low levels of education are obtained.
2. Farmworkers often lack appropriate access to the educational services that can decrease the transmission of HIV (National Commission to Prevent Infant Mortality, 1993) .

Literature Review

During the past few years, the Hispanic migrant farmworker population has caught the attention of many who work with or study HIV/AIDS. It is well documented that Hispanics show disproportionately high numbers of HIV/AIDS in the United States. In 1996, Hispanics accounted for 19 percent of reported AIDS cases while their total percentage in the United States population is 11 percent. (American Association for World Health, 1997). The prevalence rates of HIV are difficult to obtain in the migrant farmworker population, but available reports indicate similar disproportionately high rates of infection (National

Commission to Prevent Infant Mortality, 1993; Organista & Organista, 1997a). Seroprevalence studies done in this population report rates from 0.5 percent to 13 percent (Mishra et al., 1996).

Other than regional seroprevalence studies, very few investigations have been done to assess HIV/AIDS knowledge and risk behaviors among migrant farmworkers. Bletzer (1995) has done the only currently published study in Michigan on HIV/AIDS education levels among Hispanic migrant farmworkers. It was an ethnographic study, conducted in the West Michigan area. Data collection occurred over three migrant seasons. Bletzer used his data to evaluate the design of the HIV/AIDS curriculum for camp outreach education and to review the format of the presentations conducted in the camps. Bletzer did not publish any outcomes of his study, other than descriptions of particular situations that indicated culturally consistent sexual practices and knowledge related to HIV. This description included low condom use and suggested necessary educational techniques to increase condom use in the population. Bletzer also briefly discussed the low knowledge levels of HIV/AIDS that Hispanic migrant farmworkers possessed, and some common situations that the farmworkers could relate to in terms of transmission modes.

Another study done by Organista et al. (1996) assessed AIDS and condom-related knowledge, beliefs, and behaviors in Mexican migrant laborers using a modified version of the Hispanic Condom Questionnaire (HCQ). With this tool, AIDS and condom-related knowledge, beliefs, and

reported sexual practices, as well as the level of acculturation and sociodemographic background information, were assessed by single items and subscales (Organista et al., 1996).

The study sample consisted of 87 Mexican migrants who had lived and worked in the United States since 1982. Fifty-five were men, and thirty-two were women. Results of this study were consistent with others that have been done, but without the same level of integrity. Important outcomes were as follows:

1. Knowledge of actual major modes of HIV transmission was high. However, other incorrect modes of transmission were identified 25 to 50 percent of the time as well.
2. Knowledge of correct condom use was shown in between two-thirds and one-half of the sample.
3. Condom use was low for both women and men.
4. Younger subjects worried more about contracting AIDS than did older subjects. There were no differences by gender, marital status, or education.
5. There were low responses to negative beliefs about condom use and there was no difference between men and women subjects' feelings about condom use.
6. Both men and women felt that it was the responsibility of both men and women to carry condoms, although there was a slight

bias toward men. Men did not feel that there was a negative social reaction to carrying condoms, but women were uncertain on this item.

There were several limitations in Organista et al.'s (1996) study. One limitation was that the sample size was very small ($n=87$). The study should be repeated using a larger sample, and perhaps in more than one area or migratory stream. Another measure to strengthen the study would be to compare the results of persons who reside in the United States year-round to the results obtained from those who live in Mexico while not working here. A third limitation, as mentioned by the authors, is that some of the subscales need to be improved in terms of their reliability. The tool was modified for this study, questioning the tool's reliability, as no psychometric analyses were reported. It would be beneficial to administer one version of the tool to different populations in order to compare data across populations and different samples, while examining the psychometric properties of the instrument. Using one version of the tool would improve the ability to assess its reliability and validity.

A third study conducted in 1993 by Skerdal and Benavides-Vaello as cited by Mishra et al. (1996) assessed the impact of HIV/AIDS on the migrant and seasonal farmworker community. This study specifically examined a national sample of farmworking women of childbearing age and their children. Telephone interviews were conducted with representatives from 60 health and social service organizations. These health and social

service providers gave qualitative and quantitative data to the researchers on the farmworker families who received services in their agency.

Three criteria were used for inclusion in the study by Skerdal and Benavidas-Vaello (Mishra et al., 1996). First, the participating organizations had to have at least one of the following: receive federal funding through the Migrant Health, Migrant Education, Migrant Head Start and the Job Training Partnership Act programs; second, have a location in an area anecdotally known to have a high incidence of HIV/AIDS; or third, be located in one of the three major agricultural streams.

Prior to the actual interview, each provider was contacted and informed of the study goals. A self-report questionnaire was used to collect data during a prescheduled telephone interview. Each interview took about forty-five minutes.

Quantitative data collected included the providers' knowledge about their organizations' HIV/AIDS caseloads and the modes of HIV transmission among their clientele. The providers' perceptions of the prevalence of risk factors and the levels of knowledge, attitudes, beliefs, and prevalent practices among farmworkers were collected, as were the providers' assessments of the availability and configuration of prevention education, screening, and treatment services for farmworkers.

Qualitative data were collected on issues including attitudes of community members in the providers' area about farmworkers and the impact of these attitudes on service provision to farmworkers. Also

obtained were the providers' perspectives on farmworkers' reactions to an HIV/AIDS diagnosis as well as the cultural and linguistic variations in the provision of services. Included in this study were issues related to HIV/AIDS knowledge and beliefs, as well as HIV/AIDS risk factors.

In the area of HIV/AIDS knowledge and beliefs, 72 percent of providers reported that their farmworking women clients held the belief that they could not acquire AIDS if they were faithful to their husbands. Other beliefs were as follows: AIDS only affects gay males (52%); if a person is clean, he/she will not give you AIDS (50%); AIDS can be acquired by giving blood (48%); people catch AIDS from mosquitoes (41%), and AIDS affects only men (37%).

Findings also revealed that the most prominent mode of transmission identified by the sample was through heterosexual contact (62%). Needle use comprised 15% of transmission modes and vertical transmission (mother to fetus) was 4%.

The HIV/AIDS risk factors that were examined included IV drug use with which 40 percent of farmworkers were thought to be involved. Sexually transmitted diseases were 88 percent; other drug and alcohol use were 35 percent and 77 percent respectively; and tuberculosis as a risk factor was 63 percent.

Although this study by Skerdal and Benavidas-Vaello (1993) and cited by Mishra et al. (1996) provided important information about HIV/AIDS among Hispanic migrant farmworkers, several major weaknesses were

identified. While using providers from facilities where migrant and seasonal farmworkers receive care is an innovative method of data collection, information given about an ethnic population other than one's own may reflect the informants' biases about the population. Secondly, no information was provided on the reliability and validity of the data collection tools. Thirdly, the study sample was very small for a national study that included health care and social service providers throughout the country.

Implications for Study

As can be deduced from the studies described above, there is little in the literature that offers a foundation on which to build new research. The limited studies do however provide some information and pose a nursing challenge. Since the migrant population is so transient and difficult to track, additional research was needed.

As was previously mentioned, there are currently no data for the Midwest stream related to HIV/AIDS knowledge and risk behaviors of Hispanic migrant farmworkers. In addition, there are few data nationally that can help reduce the threat of HIV/AIDS in the Hispanic migrant farmworker population. The large variances in numbers of reported HIV/AIDS cases in this population also indicate that current tracking methods and access to appropriate health care for this population need to be considered. As Michigan has the fourth largest number of migrant farmworkers that come to work every year, access to appropriate health

care in migrant clinics and other service agencies can help improve the health of all of its residents, as well as its migrant farmworkers.

Research Questions

What were the HIV/AIDS knowledge level and risk behaviors of Hispanic migrant farmworkers in the Midwest stream? What was the relationship between the HIV/AIDS knowledge level and risk behaviors?

CHAPTER 3

Method

Design

A secondary analysis of data from a descriptive study of migrant farmworkers' HIV/AIDS-related knowledge level and risk behaviors was completed. The original study was funded by the Michigan Department of Community Health/HIV-AIDS Prevention Intervention Services (MDCH/HAPIS); Community AIDS Resource and Education Services (CARES) in Kalamazoo, Michigan was awarded a contract for the initial investigation. Preliminary data analysis was completed and was reported to Michigan Department of Community Health-HIV/AIDS Prevention Intervention Services.

Primary Study

The instrument used to collect data for the primary study was developed by a CARES research team. The items selected for audit are described in Chapter 4. The tool was developed by examining other tools, such as instruments developed by the Michigan Department of Community Health (MDCH), the Centers for Disease Control and Prevention (CDC), and the Center for AIDS Prevention Studies at the University of San Francisco, and extracting those items which the research team felt to be

pertinent to the research objectives. Information obtained from outreach workers was also used to assure a culturally sensitive instrument. The final instrument and protocols for instrument administration were approved by the CARES research team, migrant HIV prevention education staff, and MDCH/HAPIS staff. The CARES research team, migrant HIV prevention education staff, and MDCH/HAPIS staff all agreed on the protocol and instrument.

Statistical validity and reliability studies of this instrument were not conducted. In the protocol agreement with the Michigan Department of Community Health, time and funds were not allocated for such studies.

Population and Sample

Data collection occurred during the 1997 migrant season, July through October. The questionnaires were administered in Regions three and five of the State of Michigan. Region three consisted of the counties of Allegan, Barry, Eaton, Van Buren, Kalamazoo, Calhoun, Berrien, Cass, St. Joseph, Branch, and Hillsdale. Region five included Kent, Ionia, Ottawa, Muskegon, Newago, Mecosta, Oceana, Mason, Lake, and Manistee counties. Data collection occurred in counties with high migrant populations: Van Buren, Berrien, Allegan, Kent, and Ottawa counties. Data were collected at MDCH-licensed migrant camps, migrant clinics, and health fairs.

Subject selection criteria for this project were well determined before data collection began. The minimum age for participation was set at

thirteen years (to be determined from the demographic information on the questionnaire). Both females and males were included. Subjects had to be able to give verbal consent to participate. The ability to understand the spoken word in Spanish, English, or a combination of the two languages was also required. An assessment of the potential subject's ability to be truthful in answering questions was done by the interviewer. No one could be interviewed more than once.

Procedures

Trained data collectors worked in teams of two or three. All data collectors were trained HIV/AIDS educators and certified HIV/AIDS counselors capable of doing pre- and post-test counseling, as well as the HIV/AIDS testing procedure using the Orasure HIV antibody test. All data collectors were also bilingual, bicultural, and able to administer the questionnaire in either Spanish or English. The questionnaires were administered in individual face-to-face interviews, or in some cases when respondents were able to read and write, in small groups of two to five persons, with each person answering individually. At each camp/clinic/health fair that a data collector attended, the same process of arbitrarily asking persons to participate was used. All settings and situations allowed for appropriate confidentiality.

The total sample for this project was 373 participants. Data collector training began in July, shortly after notification by the Michigan Department of Community Health that the project had been funded. Available time in

the field for actual data collection was approximately ten weeks. Four trained data collectors worked approximately ten hours per week to complete this number of questionnaires.

Subject recruitment was done by the following method:

1. A list of MDCH licensed camps in Regions three and five was compiled by the program coordinator.
2. Data collectors went to the chosen camps in the evenings, arriving between 6:30pm and 7:00pm and occasionally on Saturdays during the day.
3. Data collectors walked through the camp looking for residents that were outdoors.
4. Introduction of self, possible casual conversation, reason for presence in the camp, and a brief description of the research study were given.
5. After determining through conversation that a resident met the requirements to participate in the study, the data collector asked the resident if he/she was willing to participate.

Current Study

The current study was a secondary data analysis. This was done to identify the knowledge level and risk behaviors of the sample population. The relationship between those scores was also examined.

Characteristics of the Sample

The sample consisted of 361 males and 36 females. Their ages ranged from 15 to 65 years (Table 1) with a mean age of 30.5. Two hundred thirteen (57%) of the participants did not consider themselves to be married, while 160 (43%) did consider themselves to be married. The number of years of school completed ranged from 0 to post-secondary (Table 2) with a mean of 7.8 years for the 372 respondents who answered that question.

Most of the respondents (274 or 77%) identified Mexico as their birthplace. The second most frequent birth place was Central America with 47 (13%) having been born there. The remaining 33 (10%) were born in the United States. Participants were asked how many of the 12 months prior to the interview they had lived in Michigan. Their responses ranged from 0 (indicates having lived less than one month in Michigan) to 12 months (Table 3) with a mean of 4.9 months. Of the 366 people who responded to the item regarding language preference, 322 (88%) said they preferred to have the interview conducted in Spanish; 17 (5%) preferred English; and 27 (7%) had no preference.

Table 1

Age Distribution of Participants (n=373)

Age category	Number of Participants	Percentage of Participants
15-19	26	7%
20-24	66	18%
25-29	100	27%
30-34	84	23%
35-39	56	15%
40-44	17	5%
45-49	7	2%
50-54	6	1%
55-59	6	1%
60-65	5	1%

Table 2

Education Level of Participants (n=372)

<u>Years of Education</u>	<u>Number of Participants</u>	<u>Percentage of Participants</u>
0	8	2%
1	3	1%
2	14	4%
3	16	4%
4	15	4%
5	13	3%
6	67	18%
7	21	6%
8	41	11%
9	53	14%
10	51	14%
11	21	6%
12	42	11%

Note. Seven participants reported vocational or technical education (3) or higher education (4).

Table 3

Months Lived in Michigan in Past Year (n=373)

Number of Months	Number of Participants	Percentage of Participants
0	9	2%
1	31	8%
2	35	9%
3	19	5%
4	41	11%
5	79	21%
6	102	27%
7	17	5%
8	16	4%
9	4	1%
10	4	1%
11	0	0%
12	16	4%

CHAPTER 4

RESULTS AND DATA ANALYSIS

For the purposes of this study, a secondary data analysis was conducted to answer the following questions: "What were the HIV/AIDS knowledge levels and risk behaviors of Hispanic migrant farmworkers in the Midwest stream?" and "What was the relationship between HIV/AIDS knowledge level and risk behaviors?"

Descriptive statistics were used to describe the population in terms of sex, age, marital status, educational status, birthplace, migration pattern, and language preference. Response frequencies to Knowledge Level and Risk Behavior Index Items were determined. Index scores were compared using a Pearson R Correlation Coefficient. Alpha levels were set at $p < .05$ for this test.

Knowledge Levels

The knowledge index was comprised of 12 items (see Table 4). Each item had 3 response options: "yes", "no", or "not sure". For each item, the correct answer was given a score of 1; the incorrect answer and "not sure" were given a score of 0. The knowledge index score was comprised of the sum of the 12 knowledge item scores; thus, total scores could range from 0 through 12, with 12 indicating the highest level of

knowledge. Three-hundred-fifty-five respondents completed all 12 items comprising the knowledge index score. Their responses are reflected in Table 4.

Table 4

Overall Knowledge Scores

Total Number of Correct Responses	Number of Respondents	Percent of Respondents
1	2	1%
2	0	0%
3	6	2%
4	15	4%
5	29	8%
6	28	8%
7	43	12%
8	43	12%
9	66	18%
10	6	10%
11	48	14%
12	39	11%

Of the 355 respondents who answered all 12 knowledge questions, only 23 (7%) answered fewer than 5 questions correctly. Most respondents

knew the correct modes of transmission; however, many believed that there were more modes than do exist. Incorrect knowledge scores included the belief or an uncertainty that AIDS could be transmitted by mosquitoes (53%). Also included in incorrect modes of transmission was the belief or uncertainty that AIDS could be transmitted from a toilet seat (71%).

Other large numbers of incorrect answers were obtained from the questions asking if there was a cure for AIDS and if it could be told by a person's looks if he/she had AIDS. One-hundred-eighty respondents (49%) either believed that there was a cure for AIDS or were unsure. Respondents who thought that one could tell whether a person had AIDS by the way he/she looked, or were unsure, numbered 201 (55%).

Of importance in the overall knowledge score is that respondents are very familiar with the correct routes of transmission of the virus that causes AIDS. This information then allows nursing to focus its education efforts on other aspects of HIV/AIDS. The results of each knowledge statement were:

1. Can a person get the virus that causes AIDS from a mosquito bite?

Of the 369 respondents who answered, 131 (36%) thought that mosquitoes can transmit the virus that causes AIDS. Sixty one (17%) respondents were uncertain if mosquitoes could transmit the virus that causes AIDS, and 177 (48%) did not think that mosquitoes can transmit the virus.

2. Can a person get the virus that causes AIDS if they hug a person

infected with HIV?

Of the 368 respondents who answered this question, 51 (14%) thought that a person can get the virus that causes AIDS from hugging a person with AIDS; 44 respondents (12%) were unsure if a person could get the virus that causes AIDS from hugging a person with AIDS, and 273 (74%) stated that a person could not get AIDS from hugging a person with the virus that causes AIDS.

- 3. Can a person get the virus that causes AIDS from sharing dishes and silverware with an infected person?**

The total number of respondents who answered this question was 368. Of that number, 61 (17%) thought that HIV could be transmitted by sharing dishes and silverware; 53 (14%) were not sure; and 254 (69%) respondents answered no.

- 4. Can a person get the virus that causes AIDS if they eat food prepared by an infected person?**

Three-hundred-sixty-nine persons responded to this question.

Sixty nine (19%) answered that the virus that causes AIDS could be transmitted by sharing food; 66 (18%) were unsure, and 234 (63%) answered that the virus that causes AIDS could not be transmitted by sharing food.

- 5. Can a person get the virus that causes AIDS if they share syringes and/or needles with an infected person?**

Of the 367 respondents who answered this question, 355 (97%) answered that the virus that causes AIDS can be transmitted by sharing syringes and/or needles with an infected person; 8 (2%) were unsure, and 4 (1%) answered the virus that causes AIDS cannot be transmitted by sharing syringes and/or needles with an infected person.

6. Can a person get the virus that causes AIDS by sitting on a toilet seat after an infected person?

There were 365 respondents for this question. Of these, 178, (49%) answered that the virus that causes AIDS can be transmitted from a toilet seat; 80 (22%) were not sure, and 107 (29%) answered that the virus that causes AIDS could not be acquired from a toilet seat.

7. Can a person get the virus that causes AIDS through having sex with an infected person without using a condom?

Of the 368 respondents for this question, 3 (1%) answered that AIDS could not be transmitted during sex without a condom; 11 (3%) were unsure, and 354 (96%) stated that the virus that causes AIDS could be transmitted through sex if a condom was not used.

8. Can you tell if a person has AIDS by the way he/she looks?

Of the 367 responses, 121 (33%) believed that the way a person looks could indicate whether he/she has AIDS. Eighty (22%)

respondents were uncertain if it could be told from a person's looks whether he/she has AIDS and 166 (45%) responded no.

9. Can a person get the virus that causes AIDS from a woman?

Of the 366 responses to this item, 341 (93%) stated that a person could get the virus that causes AIDS from a woman; 19 (5%) were not sure if the virus that causes AIDS could be acquired from a woman, and 6 (2%) answered no.

10. Can a person get AIDS if he/she is not gay or an IV drug user?

Of the 368 persons that responded to this question, 306 (83%) answered that persons who were not gay or IV drug users could get the virus that causes AIDS; 32 (9%) were unsure; and 30 (8%) did not think persons who were not gay or did not use IV drugs could get the virus that causes AIDS.

11. Can AIDS be cured?

Of the 367 responses to this question, 77 (21%) believed that AIDS can be cured; 103 (28%) were unsure, and 187 (51%) believed that AIDS cannot be cured.

12. Can a pregnant woman who has the virus that causes AIDS pass the virus to her baby?

There were 370 responses to this item. Three hundred forty five (93%) respondents believed that a woman can pass the virus that causes AIDS to her baby, while 16 (4%) were unsure, and 9 (2%)

answered no.

Risk Behaviors

The risk behavior index is comprised of 6 items to assess behaviors that increase the opportunity for HIV transmission. These 6 items and their response frequencies follow.

1. In the last 12 months, how many persons have you had sex with?

Of the 373 people who responded to this item, 154 (41%) responded by answering 0 or 1 partners. These were given an index score of 0. Two hundred nineteen (59%) responded that they had had more than 1 partner in the past year and were given an index score of 1.

2. During the past 12 months, have you used alcohol before having sex?

The 126 (34%) responses of "never" were given an index score of 0, while the 247 (66%) responses of "sometimes" to "always" were given a 1.

3. During the past 12 months, have you used drugs before having sex?

The 312 (84%) responses of never were given a score of 0, while the 61 responses of "sometimes" to "always" were given a score of 1.

4. In the last ten times you have had sex, how many times have you

or your partner used condoms?

Of the 373 persons who responded to the question about condom use, 47 (13%) were given a score of 0 for an answer of "10" or "have never had sex", while the 326 (87%) respondents who answered "1, 2, 3, 4, 5, 6, 7, 8, or 9" were given a score of 1.

5. During the last 12 months, have you injected medicine or drugs without the help of a doctor or nurse?

Of the 373 persons who responded to the question of injecting drug use, 357 (96%) were given a score of 0 for the answer "no "; while 16 (4%) were given the score of 1 for answering "yes".

6. Have you ever been told that you have a sexually transmitted disease?

Of the 368 persons who responded to this question, 16 (4%) answered "yes" while 311 (85%) answered "no", and 41 (11%) answered "not sure".

There were 363 respondents included in the overall risk behavior index. The overall risk behavior scores ranged from 0 to 6 with respect to the total number of risk behaviors practiced. One hundred four (29%) respondents reported practicing one risk behavior. Seventeen (5%) respondents practiced no risk behaviors, and 4 (1%) respondents practiced 6 risk behaviors as is shown in Table 5. Sixty-seven percent practiced or were engaged in 2 to 6 risk behaviors.

Table 5

Risk Behaviors Practiced by Participants (n=363)

Number of Risks Practiced	Number of Persons Practicing Risks	Percent of Persons Practicing Risks
0	17	5%
1	104	29%
2	70	19%
3	101	28%
4	52	14%
5	15	4%
6	4	1%

Three of the six risk behaviors assessed in this study were found to have especially important implications for nursing practice. While drug use before sex, injecting drug use, and a history of sexually transmitted infections were not found to be common occurrences among those studied, multiple sex partners, alcohol use before sex, and low condom use were. When nursing focuses on HIV transmission in this population, it is best to put prevention education efforts toward decreasing these known risk behaviors.

Relationship Between Knowledge Level and Risk Behaviors

A research question of this study was to establish whether or not there was a relationship between the HIV/AIDS knowledge level and risk

behaviors of migrant farmworkers. A Pearson R Correlation Coefficient was calculated to determine the existence of this relationship. There was no significant relationship found between HIV/AIDS knowledge level and risk behaviors ($r = -.072$, $p = .179$).

Data were further examined to determine whether there were additional trends or salient knowledge or risk items that might have important implications for nursing practice. Respondents' age, education, and the number of months spent in Michigan in the past year were compared first to knowledge level and then to risk behaviors using a Pearson R Correlation Coefficient. Two significant relationships were identified between the demographic characteristics of the respondents with respect to knowledge level. There was a weak, negative, yet statistically significant relationship found between knowledge level and the age of the respondents ($r = -.122$, $p = .021$). A weak, positive relationship was found between knowledge level and years of education ($r = .31$, $p = .00$). There was also a weak, negative relationship between the age of the respondent and years of education completed ($r = -.35$, $p = .00$). No significant relationships between the demographic variables and risk behaviors were identified.

As the study questionnaire was developed specifically for use in the primary study, no reliability analysis existed. A Kuder-Richardson 20 (KR-20) was calculated for the knowledge level index and risk behavior index items. For the knowledge level index, the reliability coefficient was .737 and it was .461, for the risk behavior index.

Summary

The results of this study indicated an overall high HIV/AIDS knowledge level among Hispanic migrant farmworkers in the Midwest stream. There was a weak, significant relationship between knowledge level and age ($r=-.122$, $p=.021$). Those who had more education also had higher knowledge levels.

Even though a high HIV/AIDS knowledge level was identified, a high level of HIV/AIDS risk behavior was also identified. The specific risk behaviors identified in this study were multiple sexual partners, alcohol use before sexual activity, and infrequent condom use.

While the reliability coefficient for the knowledge items was greater than 0.70 which is sufficient for comparisons (Polit & Hungler, 1995) the coefficient for the risk behavior items were low. This may be reflective of the small number of items used in the index (6) or the recency of the instrument itself.

CHAPTER 5

DISCUSSIONS AND IMPLICATIONS

The purposes of this study were to identify HIV/AIDS knowledge levels and risk behaviors of Hispanic migrant farmworkers in west and southwest Michigan and to examine the relationship between the knowledge levels and risk behaviors.

In this study migrant farmworkers had high levels of HIV/AIDS-related knowledge. The correct modes of transmission were well identified, along with some incorrect modes. This outcome is consistent with that of Organista et al. in their 1996 study. They reported that knowledge levels of correct modes of transmission were high, with the inclusion of some incorrect modes of transmission. Another study done by Skerdal and Benavides-Vaello (1993) as cited by Mishra et al., (1996) also reported similar outcomes regarding HIV/AIDS knowledge levels. There was one study, however, that showed a different outcome for HIV/AIDS knowledge levels among migrant farmworkers. That study, done by Bletzer (1995) in the West Michigan area over three migrant seasons showed low knowledge levels among Hispanic migrant farmworkers.

While there was disagreement in these two studies concerning HIV/AIDS knowledge levels of Hispanic migrant farmworkers, Bletzer's

study did show agreement regarding low condom use. Even though sexual transmission of HIV was generally well understood by the respondents, inconsistent use of condoms was reported in that study. This finding is also consistent with other risk behaviors related to HIV transmission in this study. This gap between knowledge and risk behavior was mirrored for other behaviors, including number of sex partners, and alcohol use before sex.

No relationship between HIV/AIDS knowledge level and risk behaviors was shown to exist in this study. It is encouraging to know that the knowledge level is high, in general. However, it is of great concern to know that while the knowledge level is high, participation in risk behaviors is also. Nursing should then place its focus on decreasing HIV/AIDS risk behaviors in this population.

Applications to Practice, Administration, Education, and Research

The principles of Leininger's Culture Care Theory can guide nursing in its development of methods focused on decreasing HIV risk behaviors among migrant farmworkers. These efforts can be grounded in the six components of Leininger's Cultural and Social Structure Dimensions as described in Chapter 2. The high level of HIV/AIDS knowledge among Hispanic migrant farmworkers shown in this study presents the opportunity to develop culturally appropriate methods to decrease the risk behaviors leading to the transmission of HIV.

The second level of the Sunrise Model, the Culture Care Worldview, guides the development of nursing care planning related to HIV risk behavior reduction. Such planning should include consideration of migrant farmworkers' culturally specific learning needs and strengths. The components of the Worldview are described in Leininger's Cultural and Social Structure Dimensions are explained in the following paragraphs.

Application of the Cultural and Social Structural Dimensions can begin with Technological factors. Due to a fear and lack of understanding of organized medicine practices and settings, other settings would increase the opportunity to give information and education. A community health setting (e.g. a home visit with a nurse) or other non-traditional educational settings would facilitate teaching/learning capabilities.

The religious and philosophical factors of this population are based on Christian church teachings, particularly those of the Catholic Church. Because it is believed that all life events are decided upon and controlled by higher beings, there is less of an intellectual understanding of and responsibility for one's own health requirements. This affects the ability to decrease risk behaviors for HIV transmission. An understanding of these beliefs is important in decreasing risk behaviors.

With regard to kinship and social factors, a focus on mother-figures when disseminating information regarding risk reduction offers support and information to all family members. This will naturally occur due to the structure of the family, including extended family members. As the women

in the families are most often those who model and teach culturally appropriate behaviors, this information can also be modeled in Cultural Values and Lifeways.

Political and Legal Factors generally are dealt with in this culture by the men. This would include handling any necessary interactions outside the home concerning immediate or extended family members. Nursing's focus on decreasing HIV risk behaviors should appropriately acknowledge and respect these masculine roles when working with this population.

Economic factors affect the opportunity to disseminate information and offer support on many levels. Since routine health care is not normally obtained due to lack of health care insurance and inadequate incomes, part of effective nursing care is to use every possible opportunity to assess and teach about HIV risk behavior reduction (e.g. integration of pertinent written and verbal information at every appointment, participation in community activities, programming to allow time in migrant camps for HIV/AIDS education that focuses on decreasing risk behaviors).

Combining the need for HIV risk behavior reduction with the specific characteristics of this population should lead to the development of culturally congruent nursing care. Throughout the above mentioned components of provision of culturally congruent care, is the repetitive theme that the focus for risk behavior reduction should occur out in the community rather than in a formally structured health care setting.

It is important that nursing administrators understand and support the need for culturally appropriate nursing practice. This helps assure that nursing provides the highest level of care to our increasingly diverse population by being sensitive to specific cultural issues and needs. Incorporation of culture care theory into nursing education at all levels will also facilitate this goal and impact other areas of nursing practice as well. As was shown in this study, nursing research is one area that needs continued input to build a larger and better body of knowledge, as well as improve nursing practice.

Limitations

The limitations of this study were identified and evaluated. Too few women participated to meaningfully evaluate any gender-related response differences. The lack of validity and reliability studies of the interview protocol may limit its credibility, particularly for subsequent use by others. Time for interview protocol development and pilot testing was limited. The lack of disclosure of same-sex activities by any respondents suggests that something in the data collection process may have inhibited full disclosure in particularly sensitive areas.

A secondary data analysis always has inherent limitations due to the fact that there is no opportunity to change any part of the data collection process for improvement or better study outcomes. There is a need to rely on the capabilities of the original data collector(s) to have done a credible

job, and in an unbiased manner. Sample selection was the responsibility of interviewers, which may have introduced an unknown bias.

Suggestions for Further Research/Modifications

This would be an ideal study to repeat in a different area of the Midwest migrant stream, as well as in other migrant streams. Comparisons of HIV/AIDS-related knowledge level and risk behaviors for migrant farmworkers in other streams using the same tool have not yet been published.

A replication of this study with more women, or only women, would offer the opportunity to expand the knowledge base for transcultural nursing in the area of women's health. The data set from this study offers the opportunity to continue other types of data analysis and examine other aspects of existing relationships for future use (e.g. the relationship of knowledge level and risk behaviors to birthplace).

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