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AN ADAPTATION OF THE PAULO FREIRE METHOD FOR HEALTH AND NUTRITION EDUCATION AMONG MEXICAN-AMERICAN MIGRANT FAMILIES

By

Beth Sandlin Witcher Pruitt

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF SCIENCE

Department of Food Science and Human Nutrition

1980

ABSTRACT

AN ADAPTATION OF THE PAULO FREIRE METHOD
FOR HEALTH AND NUTRITION EDUCATION
AMONG MEXICAN-AMERICAN MIGRANT FAMILIES

By

Beth Sandlin Witcher Pruitt

Demographic, health status and dietary pattern data were collected from nineteen Mexican-American migrant homemakers residing at the Basore Farm migrant camp, July-August, 1979. High blood pressure, anemia and obesity were found to be the most reported health conditions among these homemakers. The calculations of percent of the Recommended Dietary Allowances (RDA) adjusted for sex, age and weight resulted in means of less than 66 percent of the RDA's for vitamin B_6, vitamin B_{12}, folic acid, total vitamin A, vitamin D and calcium. An adaptation of the Paulo Freire method was used to determine if Mexican-American migrant families could be involved in meetings about health and nutrition. The Paulo Freire method, as adapted for this study, did not result in problem-solving sessions about health and nutrition topics. Local residence at the camp was a significant indicator of attendance at camp meetings.

DEDICATION

to

MARISA IARA PRUITT,

for her patience.

ACKNOWLEDGMENTS

The author extends deepest appreciation to:

Dr. Kathryn Kolasa for her support and encouragement of both the research project and the researcher.

Dr. Paulo Freire for his personal guidance during the early stages of this project.

Dr. Carolyn Lackey, Dr. John Hunter and Ms. Margaret Bucklin for their participation in my graduate program and in this project.

Carmen Martinez, for her insights and for the time and energy she devoted to being a research assistant.

The Basore family for their cooperation.

The families of Basore Farm migrant camp for welcoming me into their homes and lives and for their cheerful participation in this project.

Harriet and Sidney Beckwith for shelter, peace and harmony.

Amy Slonim and Jose Lucindio for their love, support and unrelenting encouragement.

Financial support for this project which came from Biomedical Research Funds through Michigan Agricultural Experiment Station (Project No. 3172); Michigan Cooperative Extension Service; Department of Food Science and Human Nutrition; Center for Nutrition Education; and Michigan Economics for Human Development.

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CHAPTER I

INTRODUCTION

A high incidence of health and nutrition problems among Mexican-American migrant families had been reported by professionals working with them. The Migrant Legal Action Program (1974) found that a farmworker's life expectancy is twenty years less than that of the average American and that infant and maternal mortality rates are two and a half times higher than the national average.

In August, 1976 a study of migrant farmworkers was conducted in Kent County, Michigan (Callaghan, 1977). Overweight and obesity were found to be occurring in 76 percent of the adult population. Callaghan's summary of factors adversely affecting the health status of these migrant farmworkers indicated additional nutrition-related problems: diabetes, hypertension, dental problems and a lack of knowledge of nutritional needs. Observations at the Mason, Michigan Migrant Health Clinic confirmed that the migrant population is overweight with little knowledge of nutritional needs. Limitations in cooking, eating and storage facilities were reported to have a negative effect on migrant nutritional status (Zeigler, 1978). In a needs assessment prepared by Michigan Economics for Human Development (MEHD), Potashnik

(1979) stated that obesity, diabetes and hypertension were frequently seen in the adult migrant population in Michigan. Many of the health and nutrition problems observed in this population resulted from conditions inherent to their nomadic lifestyle, such as poor housing conditions, health care and education.

Educational intervention with this population has been hampered by a high rate of mobility as well as language and cultural barriers. Migrants have not been educationally oriented in their lives nor do they view education programs as relevant to their needs (Mikrut, 1970). Evaluations of intervention programs have shown that traditional methods have met with little success in changing behavior patterns of this population. Bailey (1970) reviewed the Texas Agriculture Cooperative Extension Study of 1,700 Mexican-American families completed in the 1960's. Pfannstiel and Hunter (1967) sought to determine the most effective teaching method to reach this group and found little evidence of change in basic dietary intake after intervention regardless of which educational method was used. Chase, Larson, Massoth, Martin and Hierenberg (1973) found that Expanded Nutrition Aides (ENP) may have helped Mexican-American families improve their nutritional status but the effectiveness of the aides when measured by nutrient intake of the homemaker was not statistically significant.

The data from these nutritional studies indicate a persistence of dietary problems among the Mexican-American

population over a twenty year period. Researchers who have attempted to evaluate nutrition intervention programs with migrant populations, Mexican-American populations and Mexican-American migrant populations have found current methods ineffective in changing behavior.

This study assesses the potential use of an adaptation of the Paulo Freire method of education (a process of problem solving, dialogue, reflection and action) as a means of nutrition and health education among Mexican-American families. Freire's methods were originally developed and implemented for the purpose of literacy training in northeastern Brazil, Chile and later in Guinea-Bissau (Freire, 1970a, 1970b, 1978). Freire viewed the act of acquiring knowledge as a means through which people can analyze critically the culture which has shaped them and move toward reflection and positive action upon their world. The Freire method demands that people learning concepts also be involved in the critical analysis of the social framework in which they exist.

Drummond (1975) researched an adaptation of the Freire method for nutrition education in northeastern Brazil. It was found that the people in the four villages studied were interested in participation in meetings about nutrition. These village people responded to these meetings by discussing with the researcher the topics presented. The researcher concluded that these meetings led to a beginning of a community understanding of their nutritional situation and an expressed desire to instigate action to ameliorate their situation.

The objective of this study was to identify if Mexican-American migrant families on a Michigan farm could be involved in meetings about health and nutrition in such a way that they would become aware of their health and nutrition problems and want to be involved in action to correct them. The Paulo Freire method of coded visual aids from which uncoding would lead to group identification and understanding of these nutritional problems was selected to establish if the objective could be accomplished. Demographic, health status and dietary pattern data were collected via participant-observation, an interview schedule and an oral twenty-four hour dietary recall. This information served as background material for the implementation of the Freire method by this researcher.

Working Definitions

Coordinator: The researcher who interacts with the participants in dialogue and exchange to educate and be educated.

Participants: Target group with whom the coordinator is researching the thematic universe, coding and decoding.

Generative Words and Concepts: The ideas, values, concepts and hopes of a specific group of people at a given point in time, as well as the obstacles which impede the attainment of them.

Codification: The representation of a situation depicting some of its constituent elements in interaction. These situations must be those easily recognized by the people, presented in the form of posters, painting or slides.

Decoding: The description and discussion of the coded elements such that the participants enter into the situation and achieve an understanding and a perception of their own cultural reality.

Conscientization: An awakening by which people achieve a deepening awareness of the socio-cultural reality which shapes their lives and of their capacity to transform that reality.

Thematic Universe: The composite of all the ideas, values, concepts and hopes of a specific group of people at a given point in time.

CHAPTER II

REVIEW OF LITERATURE

The Migrant Farmworker: A National Overview

A migrant farmworker is defined as "a seasonal farmworker who performs or has performed farmwork during the preceding twenty-four months which requires travel such that the worker is unable to return to his/her domicile (permanent place of residence) within the same day" (Garcia, 1979). Almost two-thirds of the migrants in the United States are of Hispanic origin, including Puerto Ricans, Mexican-Americans and legally or illegally entered Mexicans.

The socio-economic situation of the Mexican-American migrant farmworker has been described as bleak (Lindborg and Ovando, 1977; and Dunbar and Kravitz, 1976). Some have suggested that these workers are the most poorly paid and least protected group of workers in the United States. Their wages are low, and they lack political representation because they are migratory. No government agency effectively monitors the conditions under which they work, live and travel.

Migrant farmwork is the only option for a group of people for whom there is no other means of earning a living and for whom no better opportunities exist (Dunbar and Kravitz, 1976). They have migrated because of the lack of work

or the lack of availability of work they could do in home communities (Reul, 1967).

Migrants have the lowest educational level of any occupational group in the country (Lindborg and Ovando, 1977). In 1970, the average migrant farmworker had completed only five years of school. Ninety percent of the children of migrant farmworkers do not complete high school.

Ill health is a problem of migrant farmworkers (Reul, 1967; Dunbar and Kravitz, 1976; Shenkin, 1974; and Lindborg and Ovando, 1977). Infant mortality for migrants is twenty percent higher than any other group in the United States. Life expectancy is twenty years less than the average American. The evidence of infectious and parasitic diseases of the respiratory and digestive systems is five hundred percent higher among migrant workers than among the population as a whole (Dunbar and Kravitz, 1976). Nutritional deficiencies of the B vitamins, vitamin A and iron are also frequent among migrant workers, especially children. Migrants, in general, suffer more chronic and acute illness than the majority of the American population (Shenkin, 1974). The level of health is low, and so is the level and amount of medical treatment.

The Migrant Farmworker: Michigan

Michigan has the second largest seasonal farm labor force in the country (National Migrant Information Clearinghouse (NMIC), 1974). Tens of thousands of out-of-state migrant farmworkers have been employed annually in the

harvesting of crops. These migrants form part of the mid-continent stream that has come from the lower Rio Grande valley in Texas to the midwest (Reul, 1967; Shenkin, 1974; and Dunbar and Kravitz, 1976). In the lower peninsula of Michigan, migrants have been employed in approximately fifty counties from early May through November (State Health Planning Advisory Council, 1974). In 1963, the seasonal peak was close to 70,000 workers. This figure declined to 25,000 workers by 1974. Mechanization and an increase in the minimum wage are cited as reasons for the decline in migrant workers.

Davila (1979) of Michigan Econimics for Human Development (MEHD) estimated 30,000-40,000 migrants in the State of Michigan for the 1979 season. This agency actually served 5,000 migrants during 1979, impacting upon a total of 12,000 persons. Eshaki (1979) of the Rural Manpower Division, Michigan Employment Security Commission, estimated 22,450 migrant workers in Michigan during 1979.

The Michigan Civil Rights Commission (1969) studied the status of migrant farmworkers and reached the following conclusions: 1) The migrant population is excluded from full participation in the life of our society; 2) The network of laws, policies and practices traps migrants economically and politically; and 3) The migrants' position is substantially damaged by lack of adequate housing, lack of minimal social and health services and lack of reasonable educational benefits.

Although conditions have improved in the last ten years, further studies of migrant workers in Michigan (Ferguson, Haney and Ready, 1974; Callaghan, 1977; Zeigler, 1978; and Potashnik, 1979) indicated that the status of the Michigan migrant farmworker continued to parallel that of other farmworkers in the United States. Occupational status was low while occupational hazards remained high. The educational level of the Michigan migrant farmworker was comparable to the national educational level of migrant farmworkers. Housing conditions remained poor. Health problems were varied and multiple and continually aggravated by the migratory lifestyle.

Mexican-American and Migrant Nutrition in the U.S.A.

Nutrition studies of migrant populations in the United States were limited in both scope and depth. As a body of work, all studies verified that the Mexican-American migrant population is a nutritionally high risk population with many and varied problems.

Two national studies, the Ten State Nutrition Survey (U.S. Department of Health, Education and Welfare (USDHEW), 1972) and the Preschool Nutrition Survey (Owen and Jetal, 1974), identified some nutritional problems of the Mexican-American population.

In the Ten State Nutrition Survey (USDHEW, 1972), seventeen percent of the 40,000 persons sampled were Mexican-Americans. The results indicated: 1) Malnutrition or the risk of malnutrition among low income persons, especially

among Black and Mexican-American populations; 2) Obesity among adult women, children and adolescents; 3) A high incidence of vitamin A deficiency, especially among Mexican-Americans in Texas; 4) Poor dental health; 5) Widespread iron deficiency anemia; and 6) Protein, riboflavin, vitamin C and growth/development inadequacies.

The Preschool Nutrition Survey (Owen and Jetal, 1974) had a lower percentage of Mexican-Americans in the sample than the Ten State Study. However, Mexican-American children in the south-central and southwestern states had the lowest levels of plasma retinal (vitamin A) measurement.

Lanz and Wood (1958) surveyed 365 elementary children in Las Cruces, New Mexico. The Mexican-American diets were lower than their Anglo counterparts in energy, calcium, vitamin A, riboflavin and ascorbic acid. In 1971 (Chase, Kumar, Dodds, Sauberlich, Hunter, Burton and Spalding), 300 Mexican-American migrant children were studied in Colorado. Vitamin A deficiency was the major nutritional problem of these children. Larson, Dodds, Massoth and Chase (1974) also found vitamin A deficiency to be the most common and critical nutritional deficiency among Mexican-American children in the lower Rio Grande valley in Texas. Supportive dietary data suggested that vitamin D deficiency might also be widespread. The heights and weights of these children were below standard indicating general under nutrition. One-third of the preschool population measured in San Ysidro, California (Acosta, Aranda, Lewis and Read, 1974) had heights one or more

standard deviations below the mean of the Iowa growth standards and one-fourth of the children had weights below the sixteenth percentile.

Serum folic acid was the most common deficiency observed in low income pregnant women of Mexican descent in California (Jacob, Hunt, Dirige and Swendseid, 1976). Thirty percent of the women had low hematocrits and fifteen percent showed biochemical evidence of multiple nutrient deficiencies of the B vitamins, vitamin A and iron. Cardenas, Gibbs and Young (1976) investigated the nutritional beliefs and practices of primagravida Mexican-American women. These women showed little knowledge of food as a nutrient source. Their diets were found to be low in iron, calcium and vitamin A.

Working conditions in the field, lack of shelter and poor sanitation in the camps and the fields have been factors contributing to the health and nutritional problems of the migrant population (Bradfield and Brun, 1970). Larson et al. (1974) concluded that limitations in cooking and eating facilities affect the types of foods eaten and the frequency of meals and question whether the extreme poverty of this population renders good nutritional status an unattainable goal.

Mexican-American Dietary Patterns

The basic trilogy of the Mexican diet has been chile, tortillas and beans (Leon, 1961). These foods have also been found to be the basis of the Mexican-American diet. Bruhn and Pangborn (1971) found beans and tortillas to be foods liked by 100 percent of their Mexican-American migrant

sample population. These two foods were also found to be among those most frequently served. These same foods were frequently served by Spanish-speaking homemakers in New Mexico (Day, Lentner and Jaquez, 1978). Tirado (1977) found chile, beans and tortillas to be the most frequently served foods among Mexican-Americans in the Lansing, Michigan area.

Research describing Mexican-American dietary patterns indicated that the Mexican trilogy of chile, beans and tortillas is still common. This basic diet is supplemented by other typically Mexican foods such as rice, tacos, tamales, enchiladas and picadillo (Bruhn and Pangborn, 1971 and Tirado, 1977).

Migrant Nutrition: Michigan

In August, 1976 a study of migrant farmworkers was conducted in Kent County, Michigan (Callaghan, 1977). In that study, primarily English-speaking farmworkers were interviewed because the Mexican-American migrant population (a majority of Michigan's migrant farmworkers) had already left Michigan. Problems of overweight and obesity were found occurring in seventy-six percent of the surveyed population. A summary of factors adversely affecting the health status of this sample of migrant farmworkers indicated these additional nutritional problems: high prevalence of dental problems, lack of knowledge of nutritional needs, lack of knowledge of normal growth and development of children, lack of knowledge regarding safe food handling and sanitation and lack of knowledge of wise use of limited food money.

Observation at the Mason Migrant Clinic (Zeigler, 1978) confirmed that the migrant population was an overweight population with little knowledge of nutritional needs. Zeigler (1978) stated that limitations in cooking, eating and storage facilities were observed to have a negative effect on migrant nutritional status but did not specify what these effects were.

In a needs assessment prepared by Michigan Economics for Human Development (MEHD), Potashnik (1979) stated that obesity, diabetes and hypertension were frequently seen in the adult migrant population in Michigan. This statement was based on observations of patients attending migrant clinics.

Participation of Michigan Migrants in Food and Nutrition Programs

The Food Stamp Program was the only program of the Department of Social Services significantly utilized by migrants (Cavenaugh and Lynch, 1977). Officials of the State of Michigan Department of Social Services had prepared a food stamp certification manual dealing specifically with procedures for certifying migrants and seasonal farmworkers (United States Department of Agriculture (USDA), 1976). Eligibility for the Food Stamp Program was based on income, household status, work registration and number of dependents. Established residence was not required (NMIC, 1974). A major problem for migrants potentially eligible and actually participating in the Food Stamp Program was determining household net income for food stamp certification (USDA, 1976).

Section 103(a)(6) of Title 1, The Elementary and Secondary Education Act, provided federal funds for establishing or improving education programs for children of migrant workers. These programs included a food service component. In the summer, 1974, twenty-eight summer migrant programs were in operation around the state (House Committee on Public Health (HCPH), 1975).

Smith Elementary School in Stockbridge, Michigan was one of the schools in Ingham County with a Title I migrant education program. Children attending this program during June and July received breakfast and lunch at the school (NMIC, 1974).

Migrant mothers, infants and children found it difficult to receive benefits from the special supplemental feeding program for women, infants and children (WIC) for a number of reasons. The major reasons were the mobility of the migrant population and limitations on local WIC outreach efforts (HCPH, 1975). Migrants who qualified for WIC sometimes were not accommodated due to limited program size (Cavenaugh and Lynch, 1977).

In June - August, 1979 WIC served 50 to 60 migrants in Ingham County which had a total clientele of 2,100 (Fauquher, 1979). In order to reach more migrants, WIC needs to increase their outreach services and facilitate transference of eligibility between states (USDA, 1976; Fauquher, 1979).

Food Stamps, Title 1 and WIC are all food programs which service migrants in Michigan. All of these programs must

take the special needs of the migrant population into account in order to adequately service these workers and their families.

Paulo Freire

Philosophy

Paulo Freire (Freire, 1970a) is a Brazilian educator who developed an educational philosophy after observing the misery and oppression of the poor in his native Recife, Pernambuco, Brazil. He saw these people as victims of an economic, social and political domination which had left them ignorant and ill-equipped to handle their own reality. Freire then asked how these oppressed peoples could participate in a development that would lead to their own liberation. In answering this basic question, Freire designed an educational methodology to be an instrument of "conscientization" (see definitions, page 5) of oppressed persons such that they would perceive their own personal and social reality and become equipped to handle it critically.

Freire Methodology

The Freire methodology must first be examined in terms of two educational systems identified by Freire as the banking system of education and problem-posing education (Freire, 1970a, 1970b, 1973, 1978). The banking concept of education is a system whereby a teacher deposits knowledge into students which they must receive, file and store. Banking education minimizes student creativity and serves to further the ideas and interests of the oppressors. The teacher is

the subject of such a learning process and the students are receptive objects. In problem-posing education the teacher and the students become critical co-investigators. Problem-posing education is based on creativity, serving to stimulate true reflection and action upon reality. In problem-posing education, men and women develop the power to critically perceive and cope with the reality in which they exist.

Freire's educational method was developed as a means of literacy training for peasants in northeastern Brazil. Implementation of this method is divided into four distinct phases.

The first phase is thematic investigation of the participants' universe. A research team with participant volunteers frequents the target area as sympathetic observers. All aspects of the life of the participant population are observed and interpreted by the research team in group discussions.

The second phase results from the thematic investigation and automatically leads into coding, phase three. This phase is the identification of generative concepts which are ideas, values, concepts and hopes of a specific group of people at a given point in time, as well as obstacles which impede the attainment of them.

Phase three is the codification of the generated concepts. Situations familiar to the target population are coded into visual representations, such as photographs and sketches. Codification must be neither overly explicit nor

overly enigmatic. The organization of the codification should be such that one concept naturally leads to the next concept.

Decoding is the final stage. During this phase the researchers return to the field to initiate decoding dialogues with the participants in order to describe and discuss the coded elements such that the participants enter into the situation, thus achieving an understanding and a perception of their reality.

CHAPTER III

METHODS AND PROCEDURES

This study contained two components. The methods used in the first component of this study were participant observation, an interview and a twenty-four hour dietary recall of homemakers. The second component of this study involved coding and decoding of generative nutrition concepts for the purposes of nutrition education with homemakers.

Specific factors studied were demographic, health status and dietary patterns of Mexican-American migrant homemakers at Basore Migrant Camp and the feasibility of the Paulo Freire method as a means of nutrition education among this sample population.

The research was conducted by a graduate student in human nutrition, hereafter called the researcher, with an assistant, a migrant youth, hereafter called the research assistant.

Sample

The total population for this study was defined as those families residing at the Basore Migrant Camp during July and August, 1979. Nineteen families were then identified as residing at the camp during this period. The research sample was defined as the primary female (homemaker) in each

family. The sampling goal was to include 100 percent of the defined sample.

Interview Schedule

Development

An original fifty-five question interview schedule was developed before entering the field. The interview schedule was translated into Spanish by the researcher and a graduate student in Spanish literature. The questions were developed after a review of literature on Mexican-American nutritional status and the Paulo Freire method and discussion with university professionals. The researcher also discussed implementation of the Freire method with Paulo Freire (Freire, 1979) in July, 1979. The interview schedule combined open-ended and forced-choice questions.

The demographic questions were designed to yield a profile of the migrant homemaker. Health-related questions were to determine frequency of selected conditions and frequency of contact with medical professionals. Dietary questions sought to identify concepts and patterns related to eating habits. Many of these questions were based on the Food Behavior Form (Appendix 1), a tool used by Cooperative Extension Services' Expanded Nutrition and Food Program (ENFP) aides working with individual homemakers. The questions selected were chosen after discussion with Ingham County ENFP aides identified those needs of their homemakers included in this form. The twenty-four hour dietary recall (Christakis, 1977) was selected as an additional tool administered

to obtain dietary information.

The interview schedule was approved by the Michigan State University Committee for Research Involving Human Subjects. The Interview Schedule, Food Behavior Form and twenty-four hour dietary recall form appear in Appendices 1 and 2.

Pretesting

The pretesting of the interview schedule was conducted in Ingham County. A Mexican-American ENFP aide from Ingham County selected Spanish-speaking homemakers of Mexican descent to be interviewed, arranged the appointments and accompanied the researcher for purposes of introduction. All pretesting interviews were conducted in Spanish. Necessary minor revisions were made after pretesting including the rewording of selected questions for clarity.

Administration

The interview schedule was administered to each homemaker individually by the researcher. All homemakers were interviewed in their own house. The interview schedule was anticipated to take one hour to administer and the twenty-four hour dietary recall approximately one half hour. Quantities for the twenty-four hour recall were estimated by the use of hand and finger motions. These two tools were administered separately or together depending on the discretion of the researcher based on circumstances encountered in the field.

Participant Observation and Key Informants

Participant observation was employed in this project (Spradley and McCurdy, 1972). One family became key informants, members of the community with whom a rapport is established and from whom information can be obtained. The family consisted of parents and seven children ranging in age from four to nineteen years. The mother of the family was willing to openly discuss customs, values and beliefs with the researcher. The four teenagers in the house as well as the father also participated in discussions with the researcher.

At the end of each day, conversations and observations of both an objective and subjective nature were recorded by the researcher in a field notebook. During the month of August, the researcher was able to eat a midday meal with the family daily. This provided insight into family interaction, daily scheduling, food preparation and dietary habits. Conversations with other camp members also were recorded in the field notes as were observations.

Research Assistant

Paulo Freire advocates a research team doing preliminary participant observation in the field before the implementation of any education (Freire, 1970a). For this team, Freire has advocated the inclusion of members of the community. Although the use of a team was not explored for this project, the researcher employed a teenage field worker as a research assistant. This opportunity was made possible by Michigan

Economics for Human Development (MEHD) with a Youth Grant to pay teenage migrant workers for career development jobs designed by other agencies. Four young women were interviewed by the researcher and a Mexican-American ENFP aide. Carmen Martinez, a seventeen-year-old migrant worker from Donna, Texas, was then hired as the research assistant for this project. Carmen was selected because of the poise, self-confidence and interest in the project that she demonstrated during the initial interview.

Training of Research Assistant

Training of the research assistant was done by the researcher during evening and weekend meetings. Three specific training sessions were held in her home. The first session served to explain the project and the role which she would play during the research period. Ms. Martinez was given the research proposal to read and introduced to the three forms that would be administered: an initial consent form, the interview schedule and the twenty-four hour dietary recall.

A second session was held to review and discuss the interview schedule as it would be implemented. Ms. Martinez was asked each question, gave her own personal answer and discussed the intent of the question with the researcher.

A third training session was held to develop skills in administering the twenty-four hour dietary recall. This was done by the researcher and research assistant doing recalls on each other, taping those sessions and then comparing and

critiquing them. Ms. Martinez also practiced taking twenty-four hour dietary recalls on her family. These recalls were later reviewed and critiqued by the researcher.

Role of Research Assistant

Ms. Martinez worked in the fields and lived in the camp with the homemakers to be interviewed. She introduced the project to these women by discussing it with them during work. She also visited the women in their homes, explained the project to them in greater detail and obtained signatures on the consent forms. She provided the researcher with feedback from the women and information about cultural beliefs and values.

The research assistant had a time commitment to the project of twenty hours per week. These hours were worked in the evenings and on weekends at times when there was no work being done in the fields.

Freire Method

The Paulo Freire method of education is divided into four distinct phases: a period of participant observation; the selection of the generative concepts to be coded; the codification of the generative concepts into situations representative of the lifestyle of the target population; and the decoding of these situations by the researcher and camp members at group meetings (Freire, 1978).

The initial phase of implementation of the Paulo Freire method, participant observation, was initiated in mid-June,

1979 and continued through July, 1979. This involved weekly or bi-weekly visits by the researcher to the camp. During this phase the researcher familiarized herself with the camp environment, met camp families, trained the research assistant, identified and had discussions with key informants. Observations were recorded in the field notebook and discussed with the research assistant.

A second facet was contact with agencies and personnel involved with migrant workers in the Stockbridge area. Agencies and personnel contacted were Mr. David Basore, Cooperative Extension Service, Migrant Summer Education Program, Michigan Economics for Human Development, Mason Migrant Clinic and Department of Social Services. All observations from these contacts were recorded in the field notebook.

Generative Concepts

An original list of generative concepts (Appendix 3) related to nutrition and the Mexican-American migrant was developed after a review of available literature and before contact with the research population.

After the period of participant observation, the researcher assembled a second list of generative concepts. Lists were formulated from discussions with the research population. The concepts represent both those generated by the participants as well as those subjectively observed by the researcher to be important. The list was reduced to seven concepts and reworded in question form in language that would be relevant to the research population.

A third list of generative concepts was developed after the first camp meeting. This list was based on the response obtained from the interview schedule (Appendix 2).

Coding for the First Camp Meeting

The concept coded was - "What types of foods do our children need to grow well and be healthy?" This concept was selected because 1) Children were observed to have irregular eating habits, frequently eating when and what they selected. This resulted in a diet consisting of many high calorie snack foods and hardly any fruits and vegetables; 2) In discussions with the researcher, parents indicated little or no knowledge regarding which foods were important for child growth and development or why these foods were necessary; 3) A value among these families that was observed by the researcher and reported in the literature was high esteem for their children and for family life (Colon, 1978); and 4) Although the problem of overweight was the most frequently discussed concept, it was of a personal nature and did not lend itself to group discussion.

Discussion with Paulo Freire (Freire, 1979) led to a decision to use color slides as the method of codification (see definitions, page 5). The researcher discussed with Freire the use of black and white or color slides. Freire stated that he had never found a significant difference between the two types of slides, but that since the migrant life was so full of color, color slides seemed appropriate. The slides used were taken by the researcher of the research population

themselves. The photography was done throughout July and August. The photographs were taken around the camps during the day and in the evening. Photographing children was very easy compared to the adults, who were more inhibited and shied from the camera after requesting not to be photographed. Pictures were not taken in the fields so as not to interfere with the work.

Thirty color slides were selected for the first presentation (Appendix 4). These slides were taken at all three camp sites and represented most of the families. All slides were of children in daily activities alone, with other children and with adults. An introductory word slide started the presentation. This slide read El Tesoro Mexicano: Nuestros Ninos (The Mexican Treasure: Our Children).

The first slide presentation was designed to deal with those elements observed to be important components of raising children. The themes selected by the researcher were family, environment and activity. Family was depicted by slides of children with parents, siblings, grandparents and other relatives. Portions of the environment of these children, such as the outsides of the homes, rooms inside the units, family vehicles and the fields were shown in many of the slides. Activity was portrayed by slides of children playing with each other, with games and with toys. Each theme was presumed to be important to growth and development and indirectly related to the provision of sound nutrition for these children. The objective was to stimulate discussion about family,

environment and activity as they related to providing those foods necessary for children to grow and be healthy.

The slides were arranged to show children from infancy to late teens. The sequence of these slides depicted the growth of the children

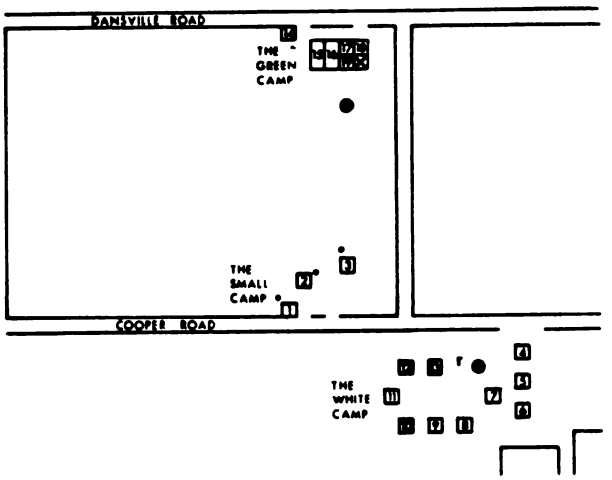
Preparation for the First Camp Meeting

Thursday, August 23, 1979 was set as the date for the first meeting. It was then learned that Cristo Rey, a Spanish-speaking community center in Lansing, was holding a dinner at the camp that night. After careful consideration and discussion with the research assistant, it was decided to continue to plan the meeting for this date. The meeting was outside at the White Camp (Figure 1) at dark following the dinner. A personal visit was made to each house to inform the household members and to invite them to participate in a meeting which would involve a slide presentation and discussion about nutrition and health-related topics.

The First Camp Meeting

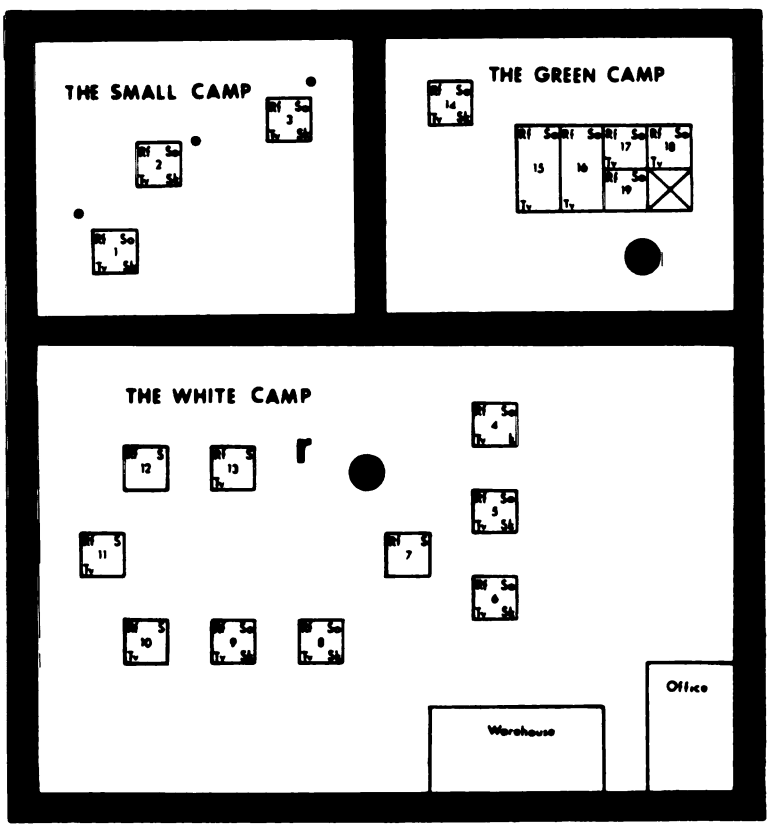
A dinner sponsored by Cristo Rey began at seven o'clock. A free dinner was provided for the people, as well as Mexican music and a pinata for the children. The evening was clear and warm. Both researcher and research assistant participated in activities with camp members. The researcher was frequently questioned as to when the slides would be shown. As it began to get dark, the slide projector was set up outside on the researcher's car. A screen provided by the researcher was set up in front of the car. Many of

Figure 1
BASORE MIGRANT CAMP



KEY

Rf - Refrigerator
S - Stove (burners only)
So - Stove w/ oven
Sk - Sink
Tv - Television
r - Water spigot
• - Outhouse
● - Toilets/Showers
□ - Individual Family Units



the children assisted in the preparation by getting extension cords, setting up the screen and getting a piece of wood to balance the projector. A great deal of enthusiasm was apparent and the presentation of the slides seemed greatly anticipated.

As soon as it was sufficiently dark, the researcher announced that she was ready to present the slides, suggesting that as we look at these slides of our children we think about and discuss those things which are important for our children to grow and be healthy.

As the slides were shown, further discussion was not prompted by the researcher. At the end of the slide presentation, the researcher asked what were those things of importance to child growth. The only response from the participants were requests for negatives of the slides. Due to this response, no further attempt at discussion was made by the researcher and the meeting was dismissed. Participants were told that the presentation was over and that there would be a second presentation the following week for which there would be further notification.

Coding for the Second Camp Meeting

The same method of coding used for the first presentation was used for the second presentation. Color slides taken by the researcher of the research population were used (Appendix 4). Thirty different color slides were selected. These slides were taken at all three camp sites and represented most of the families. Any family which was not

represented in the first presentation was represented in in the second presentation. The slides were of children involved in daily activities alone, with other children and with adults.

The same concept, "What types of foods do our children need to grow well and healthy?" was used for the second camp meeting. The concept was recoded because decoding of this concept did not occur at the first camp meeting.

The themes of family, environment and activity were again selected to develop the primary concept. Family members were portrayed in interaction with each other. Environment was further emphasized by specific slides of the camps and the units. The theme of activity was expanded to include church, work, food and rest. Slides with food were selected to provide a direct link between the themes of family, environment and activity and the provision of sound nutrition for children.

A word slide stating the concept was used to initiate and to finish the presentation. The slide question read "Cuáles cosas son necesarios para que cos niños crezcan bien?" (What things are necessary for children to grow well?)

Preparation for the Second Camp Meeting

The second camp meeting was planned one week after the first meeting was held, Thursday night, August 30, 1979. The meeting was again to be held outside of the White Camp as soon as it was dark.

During the week the researcher told all families she interviewed and with whom she had informal contact that there would be a second meeting for the purposes of a slide presentation and discussion on nutrition and health-related topics. On the evening of the presentation, the researcher visited each unit individually and invited each family to come to the White Camp at dark for a camp meeting.

The Second Camp Meeting

At dusk on Thursday, August 30, 1979 the researcher went to every unit and invited each individual family to come to the White Camp when it got dark for a camp meeting involving a slide presentation and discussion. The evening was warm and clear.

As it began to get dark, the slide projector was set up outside on the researcher's car. The screen was set up outside between two houses. The same children who had assisted with setting up for the first camp meeting assisted again. They got an extension cord, set up the screen and provided wood to balance the projector.

As soon as it was sufficiently dark, the researcher began by thanking the people for their participation in the project. They were then asked to think about and respond to the question which would be presented with the slides.

As the slides were shown, further discussion was not prompted by the researcher. At the end of the presentation, the question slide was presented for a second time and the participants were asked to respond to the question. Responses

consisted of requests for negatives and requests to see the presentation again. Due to these responses, no further attempt at discussion was made by the researcher and the meeting was dismissed. Participants were told that the meeting was over and were thanked for their participation in the research project.

Data Analysis

The demographic data were analyzed utilizing the Statistical Package for the Social Sciences (Nie, Hull, Jenkins, Steinbrenner and Brent, 1975) and the Michigan State University CDC 6500 Computer. Sub-programs utilized were Frequencies and Crosstabs.

Frequencies were run on all demographic variables. The Crosstabs program was utilized to run demographic variables of age, years of formal schooling, family size, home state, years of migration, entrance into the stream, occupation and language spoken against attendance at the two camp meetings. These demographic variables were also run against the self-reported health conditions of obesity, diabetes, hypertension and anemia. A chi square test was computed to determine differences.

The dietary data were analyzed using the Michigan State University Nutrient Data Bank (1977). The program utilized compared the data with tables of food composition and the Recommended Dietary Allowances adjusted for age, sex and weight. A mean nutrient consumption, standard deviation, mean percent

of the Recommended Dietary Allowances and a standard deviation of the mean percent were computed.

Demographic, health status and dietary data were analyzed descriptively. A Homemaker Profile was created by combining the responses from the demographic data which occurred most frequently.

The Paulo Freire method was analyzed on the basis of the percentage of camp member participation. Descriptive and interpretive analysis of the camp meetings was done.

CHAPTER IV

THE RESEARCH SITE

Site Selection

The Stockbridge area was selected as the research site because it is located in Ingham County and has a heavy concentration of Spanish-speaking migrant workers identified as a target population by the Cooperative Extension Service home economist. Discussion with several Cooperative Extension personnel familiar with the Stockbridge area led to the selection of Basore Farm because this farm had a large size camp, a cooperative grower and hard working personnel. The nature of this project led to the decision to do an intensive study in one migrant camp rather than a larger sample from many camps.

The Site

Basore Farm is located in the southeastern corner of Ingham County, seven miles north of the village of Stockbridge. This farm is owned and operated by the Basore family of Stockbridge. The major crop is lettuce. Onions and radishes are secondary crops.

Stockbridge is a rural community with a village population of 1,349 and a township population of 2,874 reported

in the 1970 census (Stowe, 1979). The Village of Stockbridge serves a large rural farm community. The major crops in this area are lettuce, onions and sod.

The Camp

The groups of houses where the workers live are called camps. The Basore Farm camps are located on Cooper and Dansville Roads, one mile off M-52. The housing units were spread out around the farm; therefore, each section was named for the purpose of identification. The identifying names were Green Camp, White Camp and Small Camp (Figure 1, p. 28). The total population of the camp was 112 persons.

The White Camp

The White Camp, the largest grouping of housing units at Basore Farm, was located beside the farm office and warehouse on Cooper Road, one and six-tenths miles off M-52.

The White Camp consisted of ten individual family units. Three units were equipped for year-round residency, i.e., contained indoor toilets and heating units. Two of these units were occupied by families who reside in Michigan and work on Basore Farm all year. The remaining units did not have indoor bathroom facilities in each unit. The families residing in these units used a common bathhouse with separate sides for males and females, consisting of two toilets and two shower stalls each. Two of these units had sinks with a water supply. In both cases the sinks were installed and the water hooked up by the workers themselves. The units

varied considerably in size, from two room units to five room units. Six of the units were two rooms, with one of the rooms being the kitchen containing the refrigerator and a cooking unit. Beds were frequently located in this room due to crowding.

The White Camp was considered to have the most desirable units by the workers themselves. Housing selection was done by the crew leader and seemed to be based on the number of years the family had been coming to Basore Farm, disregarding family size.

The Small Camp

The Small Camp consisted of three individual concrete houses each consisting of one large, central room and two smaller rooms. Each unit had a refrigerator, stove and sink with a water supply. These units had no indoor toilet facilities; therefore, an outhouse was located behind each unit. These three units were all occupied by large families (7, 9, and 13 members, respectively) and therefore all had beds in the central room. These units were further apart than the White Camp or Green Camp units, thus providing these families with more privacy.

The Green Camp

The Green Camp was a quonset style building that can be divided into individual units as necessary, eight being the maximum number of possible units. This year the Green Camp was divided into four one-room units and two two-room units.

The one-room units contained from two to five persons and the two-room units contained families of seven and eleven members each. Each unit contained a refrigerator and a burner. All units contained beds in the central room. No units in the Green Camp had an indoor water supply. All families residing at the Green Camp used a common bathhouse with separate sides for males and females, consisting of one toilet and two shower heads for each.

In the same location as the Green Camp was one individual family unit occupied by a family that resides in Michigan and works on Basore Farm all year. This house had a refrigerator, stove, indoor plumbing and heating.

The People

All the families at Basore Farm were of Mexican descent. The majority of these families were Mexican citizens who reside in the United States. They are a people proud of their Mexican heritage who refer to themselves as "Mexicanos". Those outside of the community are referred to as "Anglos" or "Americanos".

Language

Spanish was the primary language and was spoken in all homes. Most of the homemakers spoke no English. They relied on their children or husbands whenever communication in English was necessary. The husbands usually spoke sufficient English to function in a work environment. The children learned English once they were enrolled in the school system. Preschool children tended to speak only Spanish.

Families

The families were observed to be strong and cohesive. The concept of family life appeared to be a value among family members. Children were considered a valuable asset and every new addition was welcomed (Colon, 1978). Men, women and children worked together for the family. All salary checks were signed and turned over to the father, head of household. Teenagers were given allowances as the parents chose. Families discussed daily issues together in the evening. Decisions were ultimately made by the head of the household but always in consultation with other family members.

Traditional Healing

Folk diseases are prevalent among the Mexican population. Three diseases or conditions frequently referred to were "Susto", "Ojo" and "Empacho" (Rubel, 1960). These conditions occur frequently among the population and are cured by a person with healing powers, a "curandera". A female member of the Basore Farm had the ability to cure these conditions.

Susto: Susto means fright. The condition may be caused by many things such as nightmares, accidents and large animals. The symptoms are weakness in the legs, lack of appetite and constant sleepiness. Susto can be cured by "sweeping" the body with special herbs, chants to expel the evil spirit and the melting of a special stone, "piedra lumbre", which takes the form of whatever frightened the patient. These rituals

must be performed at midnight for three consecutive days.

Ojo: Ojo is the evil eye and is a condition resulting from envy. Ojo can be caused by envying or admiring a person. However, if the admirer touches the person, that person will not be afflicted. The symptoms of ojo are a severe and persistent headache and a general feeling of malaise. Ojo is cured by sweeping the head and shoulder with a raw egg in the Formation of a Cross and chants to remove the evil. The egg draws the affliction from the person. The egg is then broken into a glass of water and the degree of affliction is read.

Empacho: Empacho is an intestinal condition usually caused by food. This condition was not mentioned as frequently as susto or ojo. It is usually cured by the ingestion of herbs or herb teas.

Dietary Patterns

The common meal pattern was three meals a day. A small meal was eaten in the morning before going into the fields. The families came home at noon for the major meal of the day. In the evening, family members tended to eat after bathing, when they felt hungry, eating leftover food, sandwiches, cereal or snacks.

Beans and flour tortillas were observed to be the most common staples. These two items appeared on the table at every meal. Common meats were chicken, pork steak, ground beef and chuck steak. These were usually stewed with onions, tomatoes and chili peppers. Rice and pasta dishes called

"dry soups" were served with frequency. The only vegetable preparation observed was green beans, corn-on-the-cob and salads. Coffee, soda pop and Kool-Aid were common beverages. Dessert, as a part of the meal, was never observed. However, snack cakes, candies and cookies were found on most shelves.

Work

The work day began at 7:00 am and lasted until 5:00 or 6:00 pm with one hour off during the day for lunch. On Friday, the work day ended at 3:00 pm at which time all paychecks were distributed. Work on Saturdays and Sundays varied depending on the weather and the demands of the crops. The migrants worked at many different tasks: hoeing and weeding the fields, cutting the lettuce, carrying and loading of boxes, topping onions. Those workers involved in hoeing and weeding were paid the minimum wage on an hourly basis. Wages for the cutting of lettuce, the carrying and loading of boxes and the topping of onions were at a piece rate, and varied with each job.

Transportation

Transportation is an important aspect of the migrant lifestyle. Many families own large camper trucks or vans. These trucks and campers are frequently the families' major investment. They are purchased through loans and paid for over an extended period of time. These trucks and campers are meticulously cared for. Cleaning, washing and fixing up the camper or van is a frequent leisure time activity

among all male members of the family.

Religion

The Basore Camp was predominantly Roman Catholic. On Sunday many families attended a Spanish mass at the local Catholic church. The women and children attended mass with more frequency than did the men. Many of the children were receiving training for their first communion. Once a week, a Spanish-speaking priest came to the camp to hold mass and teach catechism. Religious symbols such as crucifixes, saints and candles were observed in many homes.

At the end of August, a large festival was sponsored by the Catholic church for the Spanish-speaking migrant population. The festival involved a mass with communion, first communion and a wedding, a dinner, music and dancing.

Program Participation

All youth of school age participated in the Stockbridge Migrant Summer School program during June and July. This program was provided through a federal grant with the purpose of providing a catch-up period for migrant children. This program included a food and nutrition component which provided the children with breakfast and lunch. An academic program was provided as well as a very active 4-H program. Through the 4-H program these children were exposed to many new activities and provided with the opportunity to show their projects at the county fair.

Michigan Economics for Human Development (MEHD) provided many programs for the migrant population. They provided emergency services whenever necessary. They mediated problems which developed with regard to housing, clothing or food. They provided jobs through a federal grant for migrant youth. MEHD also provided assistance for any family desiring to settle out of the migrant stream.

The Mason Migrant Health Clinic administered by MEHD handled most health problems, referring patients if necessary. This clinic was held one night per week during June, July and August. Services provided were immediate patient care, referrals and medication.

The Department of Social Services certified migrant families for Food Stamps based upon actual family income. Only one family was receiving Food Stamps at the time of the interview; however, many families indicated that they had received Food Stamps upon arriving in Michigan. The Department of Social Services also provided migrant families with money for the journey back home.

Summary

The research site was a migrant camp located on a lettuce, onion and radish farm in Ingham County, seven miles from the village of Stockbridge. The research population were families of migrant farmworkers who migrate to Michigan to work in the fields. The families living at this camp were of Mexican descent. Spanish was the primary language in all households.

CHAPTER V

RESULTS

Demographic, health status and dietary pattern data were obtained from the interview schedule. Additional dietary data were obtained from the twenty-four hour dietary recall. An adaptation of the Paulo Freire method as a means of nutrition education was implemented and evaluated. Criteria for evaluation were the attendance of camp members at camp meetings and the decoding of generative concepts.

Sample

The population of nineteen families consisted of 112 people (Table 1). The sample was defined as all nineteen

Table 1: Distribution of Population at Basore Farm Migrant Camp, July-August, 1979 (n=112)

Population Category	Number	Percent
Males	60	54
Females	52	46
Adult Males	23	20
Adult Females	24	21
Teenagers (13-19)	24	21
Children (12 and under)	41	37

homemakers residing at the Basore Farm migrant camp, July and August, 1979. All homemakers (100%) signed consent forms and agreed to participate in this study. Eighteen interviews and twenty-four hour dietary recalls were completed. One homemaker completed half of the interview schedule and refused to continue, stating that answering so many questions made her ill.

Demographic Data

Age

The homemakers interviewed on Basore Farm, July - August, 1979, ranged from 22 to 68 years of age (Table 2). The majority (42%) were young homemakers 20 - 29 years old. The remaining homemakers distributed as follows: 21 percent, 30 - 39 years; 16 percent, 40 - 49 years; 11 percent, 50 - 59 years; and 11 percent, 60 - 69 years.

Education

The range of years of formal schooling was from zero to ten years (Table 2). None of the homemakers interviewed were high school graduates. Only four homemakers (21%) had attended school beyond the sixth grade.

Occupation

Eight homemakers (42%) worked in the fields on a regular basis and one homemaker (5%) worked in the fields on an occasional basis (Table 2). Ten homemakers (63%) stayed home during the day. Two of these women (11%) were licensed day care workers and were paid by the State of Michigan to care for the children of the field laborers. Eight (42%) of

Table 2: Profile of Homemakers on Basore Farm, Stockbridge, MI, July-August, 1979 (n=19)

Homemaker Characteristics	Number	Percent*
Homemaker's Age (Yrs.)		
20-29	8	42
30-39	4	21
40-49	3	16
50-59	2	11
60-69	2	11
Homemaker's Formal Education (Yrs.)		
No Schooling	2	11
Elementary	11	68
Secondary	4	21
High School	2	11
Homemaker's Daily Occupation		
Field Laborer - Full Time	8	42
Homemaker	8	42
Day Care Worker	2	11
Field Laborer - Part Time	1	5
Homemaker's Years of Migration (Yrs.)		
1-5	10	53
6-10	3	16
11+	6	32

Table 2 (cont'd.)

Homemaker's Entrance Into the Migrant Stream		
As a Child	7	37
As an Adult	12	63

*Due to rounding, some totals do not equal 100%.

these women stayed home during the day to care for their own homes and prepare food for the workers.

Migration

The majority of the homemakers (53%) were recent migrants who had only been migrating from one to five years (Table 2). Three respondents (16%) had been migrating six to ten years. The remaining respondents (32%) had been migrating longer than ten years. Twelve homemakers (63%) reported that their parents were not migrants and that they had entered the migrant stream as adults. Seven homemakers (31%) were children of migrant workers and had been involved with migration as a child.

Household Size

The households ranged in size from two to thirteen members. Six of the nineteen households (32%) were small households of only two to three persons (Table 3). Seven households (37%) contained four to six persons and the remaining households were large, containing seven or more persons. The smaller households were either older couples or young families with one child. The larger families often consisted

Table 3: Profile of Households on Basore Farm, Stockbridge, MI, July-August, 1979 (n=19)

Household Characteristics	Number	Percent*
Household Size (No. of Persons)		
2-3	6	32
4-6	7	37
7+	6	32
Permanent Residence of Household Members		
Texas	12	63
Florida	3	16
Michigan	3	16
Indiana	1	5
Household Language		
English Only	0	0
Spanish Only	13	68
English and Spanish	6	32

*Due to rounding, some totals do not equal 100%.

of extensions beyond the nuclear family. The most common extensions were brothers and sisters of the homemaker or her husband and grandchildren of the same couple.

Language

None of the families were primary English speakers. All the families were native Spanish speakers. Thirteen of the families (68%) spoke only Spanish in the home (Table 3). It was noted by the researcher that among these families, the women spoke no English. Six families (32%) spoke both English and Spanish in the home. These families were families with school age children studying in English-speaking schools.

State of Residence

Twelve homemakers and their families (63%) consider Texas to be their home (Table 3). These families live in the Rio Grande valley area of Texas. The population of the Rio Grande valley is 90 percent Spanish-speaking and of Mexican descent. The towns most frequently cited were Donna, Mercedes and Brownsville, all of which are a few miles apart. Three families (16%) considered Florida their home and one family (5%) had a home in Indiana. The remaining three families (16%) reside in Michigan on the Basore Farm during the entire year. These families came to work for Basore as migrant field laborers, but settled into permanent housing when the opportunity of year-round employment was provided for the husbands. These families were included in the sample

because they were part of the defined research universe, were of Mexican-American descent and were migrants in the recent (less than five years) past.

Health Status

Illness

Homemakers from twelve households (63%) reported no current illness among household members. Seven homemakers (37%) reported at least one member of the household currently ill. Of the seven who reported current illness, five reported long standing and continual conditions such as diabetes, phlebitis, kidney problems, gallstones and ear problems. The remaining conditions were of a temporary nature such as a cold, rash and eye infection.

Medical Contact

The questions related to contact with the medical profession were asked only about the homemaker (Table 4). It is possible that other household members had contact with doctors, dentists and hospitals; however, this information was not obtained. Thirteen homemakers (68%) had had contact with a doctor within the last year. One homemaker (5%) had had contact with a dentist to have cavities filled. Two homemakers (11%) had been hospitalized, both to have children.

Frequency of Conditions

All homemakers were asked if they had had the following conditions: high blood pressure, diabetes, obesity, alcoholism, anemia, ulcers, cardiovascular disease, food allergies

Table 4: Homemaker's Self-Reported Contact with Medical Professionals Within a One-Year Period (n=19)

Contact with a Doctor	Number	Percent
Yes	13	68
No	6	32
Motive for Contact with Doctor		
High Blood Pressure	2	11
Postnatal Checkup	2	11
Birth Control	1	5
Pregnancy	1	5
Kidney/Bladder Infections	1	5
Gallstones	1	5
Bronchitis	1	5
Strep Throat	1	5
Cold	1	5
Checkup	1	5
Contact with Dentist		
Yes	1	5
No	18	95
Hospitalization		
Yes	2	11
No	17	89

or cancer. This question did not discriminate between past and present conditions. The responses only represent the homemakers and not the camp population at large. The two most frequent self-reported conditions were high blood pressure (26%) and anemia (26%) (Table 5). Four homemakers (21%) responded affirmatively to obesity. The researcher observed eleven homemakers to be overweight, ranging from moderate to grossly overweight. Two homemakers (11%) reported cardiovascular disease; both of these were heart murmurs. Diabetes

Table 5: Homemaker's Self-Reported or Researcher Observed Health Conditions (n=19)

	Self Reported	Researcher Observed	Number	Percent
Overweight		x	11	58
High Blood Pressure	x		5	26
Anemia	x		5	26
Obesity	x		4	21
Cardiovascular Disease	x		2	11
Low Blood Pressure	x		2	11
Diabetes	x		1	5
Ulcer	x		1	5
Gallstones	x		1	5
Alcoholism	x		0	0
Allergies	x		0	0
Cancer	x		0	0

and ulcers each were reported by one homemaker (5%). No homemakers reported alcoholism, food allergies or cancer. Other conditions mentioned were low blood pressure, two homemakers (11%) and gallstones, one homemaker (5%).

Special Diet

Five homemakers (26%) indicated that one member was or should be on a special diet. Two special diets were for diabetes and both cases stated that the diet was not followed. The remaining three special diets were for weight loss. These diets were followed in two cases by a restriction of intake and not followed at all in one case.

Common Illnesses and Nutrition-Related Problems

All homemakers were asked to identify those health and nutrition problems which they believed to be most common among the Mexican-American migrant population. Results from these questions appear in Table 6 and Table 7 and are further discussed in Chapter VI.

Table 6: Illnesses Homemakers Believe Most Common Among Mexican-American Migrants

	Number	Percent
Don't Know	5	26
Flu	3	16
Diabetes	3	16
Laziness	2	11
Tuberculosis	1	5
High Blood Pressure	1	5
Tonsilitis	1	5
Alcoholism	1	5
Obesity	1	5
Anemia	1	5
Mexicans don't get sick	1	5

Table 7: Nutrition-Related Problem Homemakers Believe Most Common Among Mexican-American Migrants

	Number	Percent
Don't Know	7	37
Diabetes	2	11
Obesity	2	11
Pork Meat	1	5
Lack of Iron	1	5
Lack of Vitamins	1	5
Anemia	1	5
High Cost of Food	1	5
Lack of Money	1	5
Repetition of Meals	1	5
No Problem	1	5

Dietary Patterns

The majority of the respondents ate three meals per day. Twelve homemakers (63%) reported eating three meals per day. Six homemakers (32%) reported eating only two meals per day. A common reason stated for eating only two meals was the desire to lose weight. One homemaker (5%) reported that she only ate one meal per day but had a habit of all day snacking.

Only one homemaker (5%) reported having tried any new foods in the last month.

Making a shopping list before going to the grocery store is not a common practice. Most homemakers (68%) never made a list before shopping. One homemaker (5%) made a list occasionally and five homemakers (26%) made a list every week. The homemakers who made a list did so by checking their cupboards and listing those items which were missing.

Most homemakers (78%) compared the prices of foods at the store in order to obtain the best buys. Three homemakers reported that they did not compare prices (16%).

Each homemaker was asked what she considered when purchasing meat. The choices listed were prices, fat content, general use, taste and others. Price and fat were the most important considerations with twelve homemakers (63%) reporting that they consider these categories when purchasing meat. Other homemakers (47%) reported considering the taste of the meat. Other categories reported for consideration were the quality of the meat, the weight of the meat and the

amount of bone the meat contained.

Some of the staples used in the diet were purchased in quantity. Ten homemakers (53%) reported buying flour in quantity; nine homemakers (47%) did not buy flour in quantity. Eleven homemakers (58%) reported buying both beans and lard in quantity; eight homemakers (42%) did not buy beans or lard in quantity. Sugar was bought in quantity by eight homemakers (42%); eleven homemakers (38%) did not purchase sugar in quantity. Corn tortilla mix, i.e., masa harina, was purchased in quantity by only three homemakers (16%), while sixteen (84%) reported that they did not buy masa harina in quantity. This could be an indication that flour tortillas are more commonly consumed by this population than are corn tortillas. Other foods listed as purchased in quantity were potatoes, four homemakers (21%); milk, coffee, chile and soda pop, one homemaker, each (5%).

Fourteen homemakers used enriched bread. Three homemakers (16%) did not use enriched bread. One homemaker (5%) did not know if she purchased enriched bread and one homemaker (5%) did not use bread.

Powdered milk was used infrequently. Two homemakers (11%) reported using powdered milk. Seventeen homemakers (89%) reported that they did not use powdered milk.

Meat (Table 8) was most frequently prepared by stewing with a variety of vegetables. Fifteen homemakers (79%) reported preparing meat in this fashion. The vegetables reported used in meat preparation were tomatoes, chile, onions,

squash, green beans and garbanzo beans. Eight homemakers (42%) reported a preference for browning or baking meat. Five homemakers (26%) stewed meat, and three (16%) reported that they fried meat. Single responses by individual homemakers were boiled meat, meat in soup, meat milanessa, and meat empanadas.

The most common use of milk (Table 8) was with cereal. Fourteen homemakers (74%) reported using milk with cold cereal. Four homemakers (21%) reported using milk in the preparation of hot cereals. Thirteen homemakers (68%) reported using fresh milk as a beverage. Eight homemakers (42%) used milk in coffee and six homemakers (32%) used milk in hot chocolate. Five homemakers (26%) reported using milk in bottles for small children. Milk was never reported to be used in the preparation of main dishes or desserts.

Recipes were not used by these homemakers. Only two homemakers (11%) reported that they used recipes, while seventeen (89%) stated that they never used recipes in the preparation of food. The two homemakers that used recipes stated that they measured the ingredients when using recipes.

Five commonly used vegetables were listed, tomatoes, onions, potatoes, green beans and corn, and an open-ended question was asked regarding vegetable preparation.

Tomatoes. Twelve homemakers (63%) reported using tomatoes in salad. Nine homemakers (47%) reported using tomatoes generally in the preparation of stewed foods. Eight homemakers (42%) used tomatoes in chile sauce. Other methods

of tomato preparation were whole fresh tomatoes, tomatoes in soup, tomatoes with eggs, and tomatoes with tacos and tostados.

Onions. Eleven homemakers (58%) responded that they used onions generally in the preparation of stewed foods. Other methods of using onions were onions in salad, onions with beans, onions with eggs, onions in sauce, onions in soup, onions in tacos and tostados and baked onions. Two homemakers (11%) reported that they did not use onions.

Green Beans. Six homemakers (32%) boiled green beans and served them with butter as well as used them in stewed foods. Five homemakers (26%) did not use green beans. Other methods of using green beans were green beans in salad and green beans with eggs.

Corn. Seventeen homemakers (89%) boiled corn and served it with butter. This method of preparation was used for both corn on the cob and corn off the cob. Six homemakers reported using corn off the cob stewed in food.

Potatoes. Potatoes (Table 8) were most commonly prepared by frying or browning in lard. Thirteen homemakers (68%) reported preparing potatoes in this manner. Potatoes were stewed in foods by twelve homemakers (63%) and prepared as a puree by eleven homemakers (58%). Other methods of potato preparation were baked potatoes, potato salad, boiled potatoes, potatoes in broth and potatoes with eggs.

Homemakers were asked where they stored the following items: meat, milk, eggs, canned goods, beans, fresh vegetables, fresh fruit and leftovers. The responses to this

Table 8: Foods Reported by Homemakers as Important, Good for Health, Bad for Health, Purchased with Little Money, Purchased with Additional Money, and Favorite

Food	Important		Good for Health		Bad for Health		Little Money		Extra Money		Favorite	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Meat	15	79	3	16	0	0	9	47	2	11	9	47
Beans	10	53	0	0	0	0	16	84	0	0	8	42
Eggs	8	42	5	26	0	0	7	37	0	0	1	5
Milk	8	42	5	26	0	0	5	26	0	0	0	0
Potatoes	6	32	3	16	0	0	5	26	0	0	1	5
Dry Soups[1]	6	32	0	0	0	0	0	0	0	0	4	21
Fresh Vegetables	4	21	5	26	0	0	1	5	2	11	1	5
Don't Know	0	0	2	11	7	37	0	0	0	0	0	0

[1]Dry Soups: Dry soups are rice, pasta or other starchy dishes. The quantity of liquid required has bearing on the name (Piper, 1975).

question indicated a knowledge of the proper place of storage. Nineteen homemakers (100%) reported storing milk and meat in the refrigerator or freezer, canned goods on shelves, beans on shelves and fresh vegetables in the refrigerator. Eighteen homemakers (95%) stored eggs in the refrigerator. Seventeen homemakers (89%) reported that they stored leftovers in the refrigerator or freezer. Two homemakers (11%) fed leftovers to their dogs.

Six homemakers (32%) reported that they planted a garden during their stay in Michigan. Thirteen homemakers (68%) did not plant a garden. Of those homemakers who planted a garden, six (100%) planted tomatoes and five homemakers (83%) planted chile peppers. Other crops which were planted were corn, squash, watermelon, melons, green beans and carrots.

All homemakers (100%) reported using the crops which they picked. At Basore Farms this meant that lettuce, radishes and onions were used by the families and were received free of charge.

Dietary Analysis

Twenty-four hour dietary recalls taken from eighteen homemakers were analyzed by comparing the data with food composition tables and the 1974 Recommended Dietary Allowances (RDA) adjusted for age, sex and weight. This comparison was done utilizing the Michigan State Nutrient Data Bank (1977). A mean nutrient composition, standard deviation, mean percent of the RDA's and a standard deviation of the mean percent were computed (Table 9). The number of homemakers not meeting

Table 9: Homemaker Mean Nutrient Consumption or Mean Percent Recommended Daily Allowances for Total Day for Twenty-Four Nutrients (n=18)

Nutrient	Mean	Standard Deviation	Mean % RDA	Standard Deviation of Mean %
Calories	1333	343	62	20
Total Protein (gm)	54	23	107	49
Total Carbohydrate (gm)	177	61		
Cholesterol (mg)	290	200		
Fiber (mg)	5257	4673		
Ascorbic Acid	123	201	274	447
Thiamin	<1	<1	99	39
Niacin	14	7	116	56
Riboflavin	<1	<1	80	31
Pyridoxal B_6	1008	416	50	21
Vitamin B_{12}	2	1	54	39
Folic Acid	92	84	22	21
Pantothenic (ug)	2728	1749		
Total Vitamin A	2840	2072	65	53
Vitamin D	174	122	44	31
Iron	10	3	68	23
Calcium	411	288	57	40
Phosphorus	831	310	104	39
Sodium (mg)	1432	880		
Potassium (mg)	2592	1943		
Magnesium	231	75	77	25
Iodine	77	80	80	83
Zinc	12	24	83	160
Total Sugar (gm)	85	67		

and those meeting more than 100 percent of the RDA's was calculated for selected nutrients (Table 10).

The calculations of the percent of the RDA resulted in means of less than 66 percent of the RDA's for the following nutrients: vitamin B_6, vitamin B_{12}, folic acid, total vitamin A, vitamin D and calcium. The mean percent for iron was 68 percent. The calculation of the number of homemakers not meeting the RDA's showed that greater than 50 percent of this sample met only 66 percent or less of these same nutrients, including iron. Greater than 50 percent of this sample also did not meet 66 percent of the RDA for zinc.

Freire Methodology

The First Camp Meeting

The first camp meeting was held August 23, 1979. Enthusiasm for and interest in the presentation was apparent. To begin the slide presentation, the researcher announced that she was ready to present the slides and suggested that we think about and discuss those things which are important for our children to grow and be healthy. No response was given at that time. The researcher began the slide presentation. Thirty slides were shown. Each slide stayed on the screen approximately thirty seconds. The entire slide presentation lasted fifteen minutes.

Decoding, an attempt by the researcher to discuss the generative concepts with the camp members, did not occur. The only comments generated were commentary on the slides themselves or on the people in the slides. There was also laughter.

Table 10: Number of Homemakers Not Meeting and Those Meeting More Than 100% of the Recommended Dietary Allowances for Selected Nutrients (n=18)

Nutrient	Number of Homemakers							
	Meeting 0-33% RDA	Meeting 34-66% RDA	Meeting 67-100% RDA	Meeting 101-133% RDA	Meeting 134-166% RDA	Meeting 167-200% RDA	Meeting 201-500% RDA	Meeting 500% RDA
Calories	1	12	3	2	0	0	0	0
Protein	1	2	6	4	3	1	1	0
Vitamin C	2	4	1	3	2	2	2	2
Thiamin	0	4	6	4	4	3	1	0
Niacin	3	1	6	4	4	2	2	0
Riboflavin	1	5	7	5	0	0	0	0
Vitamin B_6	5	10	3	0	0	0	0	0
Vitamin B_{12}	5	6	3	4	0	0	0	0
Folic Acid	15	2	1	0	0	0	0	0
Vitamin A	2	11	1	2	0	2	0	0
Vitamin D	9	6	2	1	0	0	0	0
Iron	1	9	6	2	0	0	0	0
Calcium	5	9	1	1	0	0	0	0
Phosphorus	0	4	6	3	2	0	0	0
Magnesium	1	7	6	4	4	1	0	0
Zinc	7	6	4	0	0	0	0	1

Forty persons attended the first camp meeting. This included homemakers, husbands and children and represented thirty-six percent of the total camp population. Seven homemakers (37%) were present. Twelve (63%) of the nineteen possible households were represented. Five of the ten White Camp families, four of the six Green Camp families and all three of the Small Camp families were represented at this meeting.

The Second Camp Meeting

The second camp meeting was held on August 30, 1979. The researcher began by thanking the people for their participation in the project. They were then asked to think about and respond to the question which would be presented with the slides. No response was given at this time and the researcher began the slide presentation. Thirty slides were shown. Each slide stayed on the screen approximately thirty seconds. This slide presentation lasted fifteen minutes. The slides were shown a second time per request of the participants, thus, the entire presentation lasted one-half hour.

As at the first camp meeting, discussion between the researcher and the camp members to answer the proposed question did not occur. The only comments generated were commentary on the slides themselves or on the people in the slides. There was laughter.

Twenty-four persons attended the second camp meeting. This included homemakers, husbands and children and represented 22% of the total camp population. Six homemakers

(32%) were present, all from the White Camp. Seven of the ten White Camp families, one family from the Green Camp and one family from the Small Camp were represented at this meeting.

There was a decrease in attendance from the first camp meeting to the second camp meeting.

CHAPTER VI

DISCUSSION

Methods and Procedure

An interview schedule and a twenty-four hour dietary recall were utilized as a means of obtaining demographic, health status and dietary pattern data. Some questions were forced-choice; others were open-ended. The open-ended questions that required conceptualization and abstract thinking frequently elicited an "I don't know" response. The homemakers appeared to exhibit discomfort with questions of this nature. Based on this observation, this researcher found that forced-choice questions were more appropriate for this population and are, thus, recommended for future research.

All interviews were conducted in Spanish. Most of the homemakers interviewed spoke very little English although their children were bilingual.

A knowledge of the Spanish language was an essential research tool for this project. The researcher's ability to converse fluently in Spanish increased her acceptability among the homemakers and enabled the homemakers to be comfortable in her presence and at ease during interviews. Researchers studying adult Mexican-American populations in the United States must have a command of the Spanish language

or have available to them personnel fluent in Spanish.

The researcher had been trained to take twenty-four hour dietary recalls. It is felt that the recalls obtained were accurate in describing the foods eaten. However, due to the low calorie levels on most recalls, it is felt that the quantities of food actually consumed were often underestimated by these homemakers. Hand gestures were used by the researcher to assist the homemakers in determining portion sizes. A method of more precise quantification is needed because accurate quantities are necessary to validate a twenty-four hour recall. The use of food models or measuring cups and spoons is recommended to help subjects indicate quantities more accurately (Christakis, 1973).

Height and weight were self-reported by the homemakers. Most homemakers had no knowledge of their height or weight; others guessed. The researcher feels that a scale and a tape measure could have been used to obtain these anthropometric data. These tools are inexpensive, easy to transport and simple to use. Women often expressed a curiosity to know their height and weight and many were interested in weight reduction. These homemakers were concerned with their weight and their tendency toward overweight. The researcher was frequently questioned about weight reduction methods. This interest in weight reduction coupled with the fact that these women viewed overweight as a problem was an indication that the topic of overweight could be coded for use with Mexican-American migrant women. The potential for successful

decoding using the Paulo Freire method of the overweight topic would be high because the homemakers viewed the topic as a problem which affected them personally.

Homemaker Profile

The homemaker profile compiled by combining the most frequent characteristics resulted in the following person: a woman in her twenties with two years of formal education; she has been migrating for five years or less and became a member of the migrant stream as an adult; she is a Spanish-speaker whose home state is Texas; she is a member of a household of four to six persons; she works as a field laborer (Table 1, p. 43 and Table 2, p. 45).

Health Status

At the time of the interview, seven homemakers (37%) reported at least one member of the household currently ill. This does not indicate the low level of migrant health reported in the literature (Reul, 1967; Shenkin, 1974; Dunbar and Kravitz, 1976; Lindborg and Ovando, 1977) or observed by the researcher. Frequent health complaints were expressed, but few of these were identified by the migrants themselves as illnesses when questioned directly. Only those conditions of gravity or acuteness were identified as illness by the migrant homemakers. This inconsistency between the self-reported conditions and the observed circumstances might indicate a high level of acceptance of health-related discomfort, an unwillingness to admit illness or an inability

to relate symptoms to a specific illness.

Questions (Appendix 2, Questions 19-22) designed to inform the researcher on the homemaker's view of health and nutrition problems and their causes most frequently yielded an "I don't know" response (Table 6, p. 53 and Table 7, p. 53). This lack of the peoples' visualization of their own health conditions made it difficult to identify health problems to be coded. Health conditions seen as problematic and potential subjects for coding by the researcher, such as diabetes, hypertension and anemia, were not viewed as problems by the participants. Circumstances seen as detrimental to the provision of sound nutrition by the researcher, such as food sanitation and storage, irregular eating habits and the lack of consumption of certain nutrients in the diet, were not interpreted as problems by the participants.

These factors impeded group identification and discussion of health and health-related problems. Freire (1970a, 1970b) viewed dialogue as the basis for education. The absence of identification of health problems by the researcher that were meaningful to the participants led to situations in which no dialogue, and therefore, no education, resulted.

A large number of homemakers (60%) had had contact with a doctor in the last year. This high level of medical contact is inconsistent with the literature (Shenkin, 1974; Dunbar and Kravitz, 1976) which stated that the level and amount of medical treatment among migrants is low. This inconsistency is related to a weekly free medical clinic.

provided by Michigan Economics for Human Development (MEHD) for migrant farmworkers from June to September. While this factor does increase medical contact, it must still be noted that these contacts most frequently result from chronic or acute situations. Medical contact for preventive purposes remains uncommon among Mexican-American migrant farmworkers.

A fear of the medical profession was identified by the researcher in conversations with camp members. This fear of the medical profession was reinforced by observations of attitudes of homemakers during clinic visits. This apparent fear of the homemakers appears inconsistent with the frequency of contact with the medical profession. Further research into the motives and types of medical contact is necessary to determine the effect of this fear on the health care of migrant workers. This inherent fear of the formalized medical system also acts as an inhibitor in the identification and discussion of health and health-related problems.

Dietary Patterns

Three meals was the most common meal pattern for these homemakers. Reducing this pattern to two meals per day was observed among women desiring to lose weight. Weight loss was associated with a reduction in food consumption through the elimination of one meal rather than consuming less food at all meals. Attempts to reduce food intake for the purpose of weight loss again show overweight as a problem which these homemakers are interested in resolving. This further reinforces the potential use of this topic as a coded concept

that could lead to successful decoding.

The homemakers studied compared price and brands when shopping to make the best purchase for their specific family needs. Buying foods in quantities depended upon the household size. Beans, lard and flour were the staples most commonly purchased in quantity.

Stewing is the most common method of food preparation for meat and vegetables. Consumption of vegetables as a separate dish is uncommon, although vegetable consumption is higher than apparent due to the frequency of meat-vegetable combination dishes.

Homemaker responses indicate a general knowledge of where to store foods. The researcher did, however, observe some problems in how to store food. While leftovers did eventually end up in the refrigerator at the end of the day, prepared dishes often sat on the stove during the entire day. It was also observed that once packages were opened, whether refrigerator goods or shelf goods, they were not properly covered for storage. Storage is an example of a situation that the researcher viewed as a health hazard but which the homemakers did not view as a problem.

Only six homemakers gardened, but others seemed receptive to the idea. All homemakers were in Michigan long enough (May to September) to plant a small garden and harvest the produce. Seed distribution and gardening information could be sufficient incentive for more homemakers to plant a garden. The most common vegetables planted were tomatoes

and child peppers. These are vegetables which make a significant contribution to the vitamin C content of the Mexican-American diet.

Dietary Analysis

The analysis of the dietary data showed a low mean of calorie consumption. The mean was 62 percent of Recommended Dietary Allowances (RDA). It must be remembered that the RDA's were adjusted for age, sex and weight. Some of these women were overweight and, therefore, had a higher calorie requirement. This low mean is also believed to be due to an inaccurate reporting of quantities of foods consumed. A twenty percent incremental adjustment of quantities would bring the majority of these women close to meeting their caloric recommendations.

The consumption of eight nutrients was found to be low among these homemakers (Table 10, p. 62). If these eight nutrients were given the same twenty percent adjustment for correcting calorie consumption, vitamin A and iron would no longer be deficient in greater than 50 percent of the sample. Vitamin B_6, vitamin B_{12}, folic acid, vitamin D, calcium and zinc would still be deficient below the level of 66 percent for 50 percent or more of the sample. These deficiencies, with the exception of zinc, are consistent with those reported in the literature as deficiencies frequently found among Mexican-American populations (Bradfield and Brun, 1970; Cardenas et al., 1976; Chase et al., 1971; Jacob et al., 1976).

The homemaker's diet reflected foods available in the home but could only be considered a partial reflection of the children's diet. The researcher observed that children were rarely made to eat any food which they did not wish to eat. Children tended to prepare snacks and small meals for themselves, including in their diet foods not eaten by the homemakers. Examples of these foods would be ready-to-eat cereals, cakes, cookies and soft drinks. Children rarely consumed any fruits or vegetables which would support the evidence of vitamin A and ascorbic acid deficiencies among Mexican-American children (Lanz and Wood, 1958; Chase et al., 1971; and Larson et al., 1974). Dietary recalls of the children themselves would have to be taken in order to determine their actual dietary patterns and problems.

Nutrient values and the effect of their deficiencies could be effectively incorporated into an educational program dealing with overweight, a topic identified by the homemakers as both important and problematic. Although nutrient deficiencies are not interpreted as problematic by the homemakers themselves, they are a health problem which places these women at nutritional risk. Nutrition education programs dealing with the Mexican-American adult female population should include information explaining the nutrient deficiencies and their effects.

Culturally appropriate means of including these nutrients in the diet must be sought. The use of powdered milk in homemade tortillas would increase calcium consumption. Most women

were unaware of the meaning of "enriched" and if they purchased enriched products it seemed accidental. Products frequently seen in the home which can be purchased "enriched" were flour, rice and pasta products. Instruction can be given on how to look for and purchase enriched bread and cereal products.

Nutrient deficiencies among these women were evident. Nutrition programs directed at this population must deal with this concept even though these women did not view their present dietary pattern as a problem. The success of such a nutrition program using the Freire methodology would depend on relating this concept to another concept which the women viewed as problematic and wished to resolve, such as overweight.

Freire Methodology

The Freire methodology of coding generative concepts to be decoded by the target population in cooperation with the researcher has been proven successful as a means of literacy training in Brazil, Chile and Guinea Bissau (Freire, 1970a, 1973, 1978). Drummond (1975) did an exploratory study in northeast Brazil to test if this method could be used effectively for nutrition education. She found that villagers would attend meetings on nutrition and that these same people would become involved in discussions on nutrition topics. Application of the Freire method, adapted for the circumstances and time limitations, was attempted as a means of nutrition education among Mexican-American families on a Michigan farm in July-August, 1979.

A Research Team

This study was conducted by a single researcher and a paid research assistant from the target population. The lack of a research team to jointly observe and analyze the population and their socio-cultural environment was a disadvantage in this study. Participant-observation done by the researcher provided one-sided observations that lacked the dimension and depth that could have been provided by team interaction. The research assistant, however, played an important role in this project. Ms. Martinez' sensitive perception, her ability to analyze situations and her in-depth understanding of her own culture were willingly and openly shared with the researcher in such a way as to greatly facilitate the project. Ms. Martinez also provided a means of entry into the homes and facilitated the homemakers' acceptance of the researcher.

Coding

The chosen method for coding was slides of the actual research population. Freire (1970b) stated that coding must be relevant to the population lifestyle. The visuals used for presentation must relate to the daily activities of the population. They must present situations which the participants can identify. The situations coded must hold personal meaning to the participants in order for meaningful decoding to occur. Another important consideration of coding according to Freire was that codification must not be overly explicit nor overly enigmatic. These slides of

the people at the camp accurately represented the daily activities of the children and the children represented a meaningful value of family life among this population.

It is the researcher's opinion that these slides may be categorized as overly explicit due to their personal nature. Freire (1970a) further stated that the codifications must be representative of real life situations. These slides, however, were the real life situations. Many of the people saw themselves or their children projected on the screen for the very first time. Although very familiar with television and movies, they were totally unfamiliar with the use of the media in such a personal manner. Hence, an evening of entertainment and the provision of a unique and recreational situation was such that it did not lend itself to discussion of health topics.

These same slides may be categorized as overly enigmatic in terms of the problem selected. Children are valued among Mexican-American migrants and are a representation of an important value, family life; however, their growth and development is not viewed as a problem. Most children are seen as healthy and well developed. The circumstances identified as problems by the researcher, such as sanitation, irregularity of meals and possible nutrient deficiencies, were not identified by the participants. An enigmatic situation resulted in which there was no visible problem for the participants to identify.

Attendance

Attendance at the first camp meeting was 36 percent of the total camp population. Attendance at the second camp meeting was 22 percent. It is difficult to evaluate attendance in terms of the Freire method because he does not specify attendance quota as measures of success. Drummond (1975) stated that a large portion of the homes were represented at village meetings but does not indicate a percentage of the population.

Reasons for attendance or non-attendance of camp members are not clear. Both meetings were held at the White Camp, one mile from the Green Camp and six-tenths of a mile from the Small Camp. Attendance by members of the White Camp was higher. A raw chi square showed local residence to be a significant indicator of attendance at the second camp meeting ($\chi^2 = 11.26$, $p < .05$). Distance could, therefore, have been a factor affecting attendance.

Both meetings were held on weekday evenings after a full day's work. Tiredness of the workers could have been a factor affecting attendance. Sunday afternoons were suggested by camp members as a better time to have meetings because they usually did not work on Sunday.

Reasons for the decreased attendance from the first camp meeting to the second camp meeting cannot be positively identified. It is possible that the dinner presented by Cristo Rey on the night of the first camp meeting accounted for the larger number of camp members present at that meeting.

Camp Meeting

Two camp meetings were scheduled. These meetings were held one week apart. Two meetings were insufficient to effectively implement or evaluate the Freire method as a means of nutrition education. The two camp meetings would have best served as an introductory period for both camp members and researcher. At least two meetings of entertainment and recreation were necessary for the novelty effect of the slides to wear off. Also, it was after these two meetings that the researcher felt qualified to effectively code the nutrition-related generative concepts.

Specific interest groups were identified from discussion with the homemakers and administration of the interview schedule and the twenty-four hour dietary recall. It is the opinion of the researcher that coding of problems identified as important to these smaller groups could have resulted in discussion. Subsequent meetings directed at these specific interest groups could have led to decoding that would have identified problems and sought solutions to these problems.

Decoding

Decoding did not occur at either camp meeting. The slide shows were both enjoyed and appreciated. Requests were made that the slides be shown again. Negatives of the slides were requested to have pictures made. The remarks generated were about the slides themselves or about the people in the slides. There was laughter and commenting among themselves. The researcher found it difficult to interrupt this laughter

and commenting with directed discussion. The slides seemed to be an excellent form of entertainment. Entertainment, however, dominated and obscurred the potential educational value of identifying problems related to child growth and development and seeking solutions. The fact that the participants did not visualize problems related to child growth and development reinforced the entertainment aspect of these slides.

A second problem appears to be the idea of discussion in a large group. Men and women seldom participate in the same discussion (Colon, 1978). At social gatherings, women tend to stay together in one group and men stay together in a separate area. It was observed during the administration of the interview schedule that when the male head of household was present he frequently took over answering questions and the female became quiet and inhibited. Women, in particular, exhibited a fear of responding to questions in front of others, seemingly borne out of a fear of giving wrong answers and thereby being subjected to ridicule. This observation was made by both the researcher and the research assistant and discussed between them. This further emphasizes the potential of dealing with specific interest groups rather than the total camp population.

The Freire method (Freire, 1970a, 1970b, 1978) was developed for literacy training, an education topic of broad appeal. Nutritional interests and the development of these interests is a more personal matter. Nutrition education

with the Freire method would thus be most successful among those people who share a common nutritional interest or problem.

Adult education is not a concept readily accepted by the target population. Additionally, migrants have not been educationally oriented and don't view educational programs as relevant to their needs (Mikrut, 1970). Among Mexican-Americans, adult education is seen by many as a waste of time (Colon, 1978). Husbands are afraid that their wives may learn things which they should not. The idea of the woman's place being in the home is still strongly supported in the Mexican-American population. It was also found, however, that women expressed interest in classes about weight control, physical fitness, canning and food preparation, food selection and home improvement. It is the researcher's opinion that these topics could be used to form special interest groups among the Mexican-American migrant homemaker population. These topics could be coded in ways relevant to their culture such that discussion between the coordinator and participants would occur.

CHAPTER VII

SUMMARY

The objective of this study was to identify if Mexican-American migrant families could be involved in meetings about health and nutrition in such a way that they become aware of health and nutrition problems and want to do something to correct them. Secondly, this research sought to establish if the objective could be accomplished by the use of an adaptation of the Paulo Freire method using visual aids as coded situations which, in the uncoding, lead to group identification and understanding of their nutritional problems. Drummond (1975) researched the Freire method of education in northeast Brazil and found that the people were interested and responsive participants in the uncoding of coded situations such that it led to a beginning of a group understanding of their nutritional situation.

The Mexican-American families researched in this study exhibited no response to the Freire method as implemented in this project. Attendance at two camp meetings was 36 percent and 22 percent, respectively. Decoding did not occur. The personal nature of the slides utilized and the novelty effect of the presentation created an entertaining situation which obscured the educational potential of the method.

Demographic, health status and dietary pattern data were collected on the Mexican-American homemakers residing at Basore Farm migrant camp, July-August, 1979. A profile of the homemaker was created by adding together the most frequent responses to demographic questions. High blood pressure, anemia and obesity were found to be the most prevalent health conditions among these homemakers. Dietary patterns were found to be consistent with Mexican-American dietary patterns reported in the literature. Methods to obtain more precise quantities for food recalls were suggested.

Indications from this study were that Mexican-American families did not respond to this adaptation of the Paulo Freire method in such a way that problem-solving sessions about health and nutrition problems resulted. Using slides of the research population itself as coded situations did not lead to an uncoding that identified nutritional problems. Further research on methodology utilizing alternate methods of coding the generative concepts is indicated.

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APPENDICES

APPENDIX 1

FOOD BEHAVIOR FORM AND TWENTY-FOUR HOUR DIETARY RECALL FORM

UNITED STATES DEPARTMENT OF AGRICULTURE
EXTENSION SERVICE

ES-72 (9/76)

FOOD BEHAVIOR CHECK LIST

HOMEMAKER NAME	NUMBER	AIDE	DATE

FOR EACH QUESTION PUT A CHECK(✓) IN THE BLOCK INDICATING THE HOMEMAKER'S BEHAVIOR: NA = NOT APPLICABLE DK = DON'T KNOW
YES = HOMEMAKER DOES THIS NO = HOMEMAKER DOESN'T DO THIS

COUNT THE NUMBER OF CHECKS (✓) UNDER EACH SCORE CATEGORY (NA, DK, YES, NO) AND ENTER THESE TOTALS IN THE BLOCK AT THE BOTTOM LEFT CORNER OF THE CHECK LIST. ADD THE " YES " AND " NO " SCORES.

REFER TO THE *SCORING TABLE FOR FOOD BEHAVIOR CHECK LIST* AND ENTER THE HOMEMAKER'S *FOOD BEHAVIOR SCORE*. ENTER THE *FOOD BEHAVIOR SCORE* ON THE *FOOD AND NUTRITION PROGRESSION RECORD* AT THE APPROPRIATE MONTHS IN PROGRAM TIME.

FOOD PURCHASE	NA	DK	YES	NO
Plans grocery needs before shopping.				
Compares foods on price, quality, and amount.				
Selects quality or form of food for intended use.				
Considers economy of advertised specials.				
Avoids "impulse" buying.				
Buys food staples in quantity when economical and practical.				
Buys meat considering the amount of lean, fat, and bone.				
Buys perishable foods in usable amounts.				
Selects enriched or whole grain breads.				
Selects enriched or whole grain flour.				
Compares food brands for "best buys."				
Buys "convenience foods" when a "good buy."				
Uses Food Stamps when eligible.				

FOOD THROUGH NON-PURCHASE	NA	DK	YES	NO
Plants a vegetable garden, if possible.				
Plants a variety of vegetables.				
Sees that the garden is worked.				
Uses the garden products.				
Gathers available free or low cost foods (fruits, nuts, vegetables, etc.).				
Uses fish or game when available.				

FOOD STORAGE	NA	DK	YES	NO
Stores fresh milk and other dairy products, meat, eggs, and perishable vegetables in the refrigerator.				
Stores opened non-fresh milk (mixed dry milk or canned milk) in the refrigerator.				
Keeps root vegetables (potatoes, onions, beets, etc.) cool and dry.				
Stores frozen foods in the freezer.				
Keeps flour, dried beans and peas, etc., tightly covered.				
Covers and stores perishable leftovers in the refrigerator immediately.				
Covers non-perishable leftovers immediately.				

SANITATION	NA	DK	YES	NO
Keeps kitchen clean.				
Washes hands with soap and clean hot water before handling food.				
Uses clean hot water and soap to wash eating and cooking utensils.				
Scrubs cutting board or surface with soap and clean hot water after cutting fresh meats and poultry.				
Puts eating and cooking utensils away when not in use.				
Washes fresh fruits and vegetables before serving or cooking.				
Recognizes spoiled food.				
Disposes of spoiled food properly.				
Disposes of empty cans and food cartons and other garbage promptly.				

FOOD AND MEAL PLANNING	NA	DK	YES	NO
Uses the Daily Food Guide				
Plans food use around main dishes (for variety, contrast, etc.)				
Plans prompt use of perishable foods.				
Sometimes uses eggs, cheese, dried beans, etc., as protein foods.				
Uses milk in food preparation to increase milk intake.				
Serves other dairy products to non-milk drinkers.				
Uses dry milk for at least part of the milk requirement.				
Uses dark green vegetables.				
Uses deep yellow vegetables.				
Takes family food likes and dislikes into account.				
Tries out new foods.				
Provides breakfast for the family.				
Provides nutritious snacks.				
Plans use of leftovers.				

FOOD PREPARATION	NA	DK	YES	NO
Cooks vegetables to retain nutrient values.				
Cooks tender meat by baking, broiling, or pan frying.				
Cooks less tender meat with water or other liquid over low heat.				
Cooks eggs at low temperature.				
Prepares foods in a variety of ways.				
Avoids overcooking of food and fuel waste.				
Plans time for food preparation.				
Considers different cooking times needed for different foods.				
Measures ingredients when quantities are important.				
Makes good use of kitchen work space.				

SERVING AND DISTRIBUTING FOOD	NA	DK	YES	NO
Serves meals according to family activities.				
Serves a variety of foods at one time.				
Considers attractiveness and appeal of food in serving.				
Serves hot foods hot, cold foods cold.				
Attends to special food needs of family members.				
Considers age, sex, health condition, and activities of family members in distributing food.				
Considers own food needs in distributing food.				

FOOD PRESERVATION	NA	DK	YES	NO
Cans or freezes garden products or economically available foods.				
Washes containers for use in food preservation.				
Wraps meat properly for freezing.				
Blanches vegetables before freezing.				

TOTAL NA: _____ DK: _____ YES: _____ NO: _____

ADD "YES" AND "NO". _____ FOOD BEHAVIOR SCORE

1/1977

FOOD RECALL (Temporary)

1. NAME 2. DATE

3. What did you eat and drink in the last 24 hours?

a) Give amounts eaten.
Example: Ham sandwich (2 slices bread & 1 slice ham)

b) Give main items in mixed dishes.
Example: Tuna Casserole (1 cup) (noodles, peas, tuna and cream of mushroom soup).

	Milk	Meat	Veg./ Fruit	Bread Cereal
Morning				
Midmorning				
Noon				
Afternoon				
Evening				
Before Bed				
Total Number of Servings				

Ingham County Cooperative Extension Service
Expanded Nutrition Program
M.S. - 4/78

APPENDIX 2

INTERVIEW SCHEDULES (ENGLISH AND SPANISH)

Introductory narrative:

I would like to ask you some questions about you and your family. Some of the questions will be of a general nature, others will deal with health, others with food and nutrition. You do not need to answer any questions with which you feel uncomfortable. All your answers will be kept confidential.

1. Name _____

2. Age_____ 3. Height _____ 4. Weight_____

5. How many years did you attend school? _____years

6. How many people are currently living in this unit? _____people

	Name	Sex	Age	Relationship to Respondent
a.				
b.				
c.				
d.				
e.				
f.				
g.				
h.				
i.				
j.				
k.				
l.				
m.				
n.				
o.				
p.				
q.				

(Additional names may be added to the back of this form, if necessary)

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7. How many of the above listed people work in the fields? _____people

8. What do those who do not work in the fields do during the day?

_____

_____

9. Is there a place that you consider your home base? ____yes ____no

If yes, where? _____

10. What language is usually spoken in this household?

_____English _____Mexican _____Both _____Other (specify)

11. How long have you/ your family been migrating? _____years

12. Were your parents also migrants? _____yes _____no

Now I would like to ask you some questions about the general health of you and your family.

13. Are any members of this household currently ill? _____yes _____no

If yes, whom? with what? _____

_____

_____

14. Have you seen a doctor during the last year? _____yes _____no

If yes, for what reason? _____

_____

15. Have you seen a dentist in the last year? _____yes _____no

If yes, for what reason? _____

_____

16. Have you been hospitalized in the last year? _____yes _____no

If yes, what was the cause _____

_____

17. Have you had any of the following illnesses? (Check indicates a positive answer)

___high blood pressure	___anemia	___cancer
___diabetes	___ulcers	___other (specify)
___obesity	___heart trouble	_____
___alcoholism	___food allergies	_____

18. Do any of your family have special dietary needs? _____yes _____no
If yes, whom? what? _____

Person	Dietary Needs	Meeting Needs

19. What do you believe is the most common illness among Mexican migrants?

_____

_____

20. What do you think is the cause of this illness? _____

_____

21. What do you believe is the most common food related problem among Mexican migrants? _____

22. What do you think is the cause of this problem? _____

_____

We are going to change subjects again. The rest of the questions that I will be asking you to answer will be related to food and nutrition.

23. Why do you eat? _____

_____

24. Is it necessary to eat? _____yes _____no
If yes, why? _____

_____

25. What do you consider the most important foods in your diet? _____

_____

26. What are your three favorite foods? 1) _____

2) _____ 3) _____

*27. How many meals do you eat daily? _____meals

*28. What new foods have you tried in the last month? 1) _____

2) _____ 3) _____

29. Do you believe that your diet is one that helps you maintain a healthy body? _____yes _____no

30. Do you think that there are foods that are particularly good for your health? _____yes _____no

Which ones? _____

_____

31. Do you think that there are foods that are particularly bad for your health? _____yes _____no

Which ones? _____

32. What are typical Mexican Foods? _____

_____

_____

33. Do you think that typical Mexican food is a healthy diet? ____yes ____no

34. What are typical American Foods? _____

_____

_____

35. Do you think that typical American Food is a healthy diet? ____yes ____no

36. How much money do you spend on food each week? $____.____

37. Are you currently receiving food stamps? _____yes _____no

38. If you had very little money to spend on food this week, what are the most important foods to purchase? _____

_____

39. If you have additional money to spend on food for a given week, how would you spend it? _____

_____

*40. Do you make a list before you go to the grocery store? _____yes _____no

If yes, how _____

_____

*41. At the store, do you compare food prices? _____yes _____no

*42. Do you compare food brands for "best buys"? _____yes _____no

*43. Do you buy advertised specials? _____yes _____no

44. Which of the following do you consider when buying meat:

____cost

____fat content

____planned use

____personal taste

____other (specify) _____

*45. Do you purchase any of the following items in large quantities:

Flour____yes____no
Sugar____yes____no
Beans____yes____no
Masa Harina____yes____no
Lard_____yes____no
Other _____

*46. Do you use enriched bread? _____yes _____no _____don't know
dry milk? _____yes _____no _____don't know

*47. How do you like to prepare meat? _____

_____

*48. What are the ways in which you use milk? _____

_____

*49. How do you use the following:

Tomatoes_____
Chilis _____
Onions _____
Green beans _____
Corn _____
Potatoes _____
Other (specify) _____
_____

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*50. Do you use recipes? _____yes _____no

*51. Do you measure ingredients for recipes? _____yes _____no

*52. How do you store the following:

Meat_____
Milk_____
Eggs_____
Canned Goods_____
Beans_____
Vegetables_____
Fruits_____
Leftovers_____

*53. Do you plant a vegetable garden? _____yes_____no

If yes, do you plant tomatoes? _____yes_____no
green beans_____yes_____no
carrots_____yes_____no
corn_____yes_____no
zucchini_____yes_____no
onions_____yes_____no
watermelon_____yes_____no
Other(specify)_____
_____

*54. Do you use food from the crops you are picking?_____yes_____no
_____don't pick food crops

55. While you have been here in Michigan, has anyone spoken to you about food and nutrition at your house _____yes_____no
at the health clinic_____yes_____no
at the school_____yes_____no
at a community meeting_____yes_____no
other_____

If yes, what do you think about these activities? _____
_____

Closing: Thank you for your cooperation with these questions. Later on in the summer, I hope that we will be able to get together with other members of the camp to discuss some of these subjects.

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Clave_____ HORARIO DE ENTREVISTA EN EL CAMPAMENTO DE BASORE Pagina 1

Me gustaria hacerle algunas preguntas acerca de Ud. y su familia. Algunas de las preguntas serán de caracter general, otras se relacionarán con la salud, con alimentos y nutrición. No necesita contestar ninguna pregunta que no considere conveniente. Todas las respuestas seran estrictamente confidenciales.

1. Nombre _____

2. Edad _____ 3. Altura _____ 4. Peso _____

5. Cuantos anos assistio a la escuela? _____anos

6. Cuantas personas viven en esta casa actualmente? _____personas

	Nombre	Sexo	Edad	Relacion familiar con Ud.
a.				
b.				
c.				
d.				
e.				
f.				
g.				
h.				
i.				
j.				
k.				
l.				
m.				
n.				
o.				
p.				
q.				

(Nombres adicionales pueden ser anadidos en la parte de atras de este formulario si es necesario.)

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7. Cuántas de las personas mencionadas anteriormente trabajan en la labor? ____personas
8. Qué hacen durante el día, los que no trabajan en la labor?

_____

_____

9. Hay un lugar que usted considere como su hogar? ____si ____no
   Si contesta afirmativamente, donde? _____
10. Qué lengua se habla usualmente en su hogar?

    _____ingles _____Mexicano _____Ambos _____otro(espicifique)
11. Cuánto tiempo hace que su familia emigra? _____anos
12. Eran sus padres también migrantes? ____si ____No

Ahora me gustaria preguntarle acerca de su salud y la salud de su familia.

13. Esta actualmente enfermo algún miembro de su familia? ____si ____no
    Si contesta afirmativamente, quien? que tiene? _____

    _____

    _____
14. Ha visto a un doctor durante el último año? ____si ____no
    Si contesta afirmativamente, por que motivo? _____

    _____
15. Ha visto a un dentista durante el último ano? ____si ____no
    Si contesta afirmativamente, por que motivo? _____

    _____
16. Ha estado hospitalizado durante el último ano? ____si ____no
    Si contesta afirmativamente, por que motivo? _____

    _____
17. Ha tenido alguna de la seguientes condiciones? (check indica una respuesta afirmativa)

___presión alta	___anemia	___cancer
___diabetis	___ulcera	___Otro(especifique)
___obesidad	___enfermedad del coraçón	_____
___alcoholismo	___alergias a algunos alimentos	_____

18. Necesita algun miembro de su familia una dieta especial? ___si ___no
Se contesta afirmativamente, quien? que? _____

Persona	Dieta especial	Necessidades

19. Cual cree Ud. que es la enfemedad más comun entre los migrantes Mexicanos? _____

20. Cual cree Ud. que es la causa de este problema? _____

21. Cual cree Ud. que es el problema de alimentación mas común entre los migrantes Mexicanos? _____

22. Cual cree Ud. que es la causa de este problema? _____

Vamos a cambiar ahora de asunto. El resto de las preguntas que le hare estaran relacionados con la alimentacion.

23. Por que come? _____

24. Es necessario comer? ____si ____no
Si contesta afirmativamente, por que? _____

25. Cuáles comidas considera más importantes? _____

26. Cuáles son sus tres alimentos favoritos? 1) _____
2) _____ 3) _____

*27. Cuántas comidas come diariamente? _____comidas

*28. Qué nuevas comidas ha probado en el último mes? 1) _____
2) _____ 3) _____

29. Cree que su alimentacion le ayuda a mantener un cuerpo saludable? ____si ____no

30. Cree qué hay comidas que son particularmente buenas para su salud? ____si ____no

Cuales? _____

_____

31. Cree qué hay comidas que son particularmente malas para su salud? ____si ____no

Cuales? _____

32. Cuáles son los comidas típicas mexicanas? _____

_____

_____

33. Cree qué las comidas Mexicanas tipicas son comidas saludable? ____si ____no

34. Cuales son las comidas tipicas Americanas? _____

_____

_____

35. Cree qué las comidas americanas tipica son comidas saludable? ____si ____no

36. Cuánto dinero gasta en comida cada semana? $____.____

37. Recibe actualmente las estampillas? ____si ____no

38. Si tiene poco dinero para gastar en comida esta semana, cuales son las comidas más importantes para comprar? _____

_____

39. Si tuviera dinero adicional para gastarlo en comida en una semana determinda, como lo gastaria? _____

_____

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*40. Hace una lista antes de hacer los mandados? ____si ____no

Si hace una lista antes de hacer los mandados, como la hace.

_____

*41. En la tienda compara los precios de las comidas? ____si ____no

*42. En la tienda, compara las marcas para escojer las mejores ____si ____no

*43. Compra comidas en "special"? ____si ____no

*44. Cuál de los seguientes considera al comprar la carne?

____precio
____manteca
____uso general
____sabor
____otros (espesifique) _____

*45. Compra alguno de los siguientes articulos en grandes cantidades?

harina ____si ____no
azucar ____si ____no
frijoles ____si ____no
Masa harina ____si ____no
manteca ____si ____no
Otro _____

*46. Uśa pan "enriquecido" ____si ____no ____no se
leche en polvo ____si ____no ____no se

*47. Como le gusta preparar la carne? _____

_____

*48. En que forma usa la leche? _____

_____

*49. Como usas los seguentes?

tomates_____
cebollas_____
ejotes_____
maiz_____
papas_____
otros (espicifique)_____

_____

BP *50. Usa recetas para cocinar? ____si ____no
MSU-FSHN
7/79 *51. Mide las ingredientes para las recetas? ____si ____no

*52. Como alza las siguientes:

carne_____
leche_____
huevos_____
comidas enlatados_____
frijoles_____
vegetales_____
frutas_____
comida sobrante_____

*53. Tiene un huerto? ____si ____no

Si tienes, planta tomates? ____si ____no
ejotes ____si ____no
zanahoria____si ____no
maiz ____si ____no
calabasa ____si ____no
cebolla ____si ____no
sandia ____si ____no
otro(espicifique)_____
_____

*54. Usa alimentos de la labor? ____si ____no
____no recojo alimentos

55. Mientras ha estado aqui en Michigan, alguien le ha hablado de la alimentacion en su casa ____si ____no
en la clinica ____si ____no
en la escuela ____si ____no
en una reunion ____si ____no
otro_____

Si contestas afirmativamente, que piensa de estas actividades?

_____

Gracias por su cooperacion al contestarme estas preguntas. Mas tarde durante el verano, espero que poderemos reunirmos con otros miembros del campamento para discutir algunas de estes asuntos.

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APPENDIX 3

GENERATIVE CONCEPTS - LIST 1, LIST 2, LIST 3

Appendix 3

Generative Concepts* - List one

1. Knowledge of food as a nutrient source
2. Receiving and use of food stamps
3. Distribution of limited money allotted for food
4. A source of clean, potable water
5. Relationship of food and obesity
6. Relationship of diet to dental problems
7. Relationship of diabetes and diet
8. Knowledge of the role of nutrition in normal growth and development of children
9. Balancing food to obtain all the nutrients required by the body
10. Sanitation of areas involved with food
11. Nutritional requirements of pregnant and lactating mothers
12. Relationship of maternal nutrition to the successful outcome of pregnancy
13. The effects of high fat in the diet
14. Dietary requirements of children with diarrhea
15. Fruits and vegetables contain vitamin A
16. Fruits and vegetables contain vitamin C
17. Food storage as important means of preserving nutrients

*This list of generative concepts has been ranked by the researcher. It is the Pre-experience list of generative concepts. The problems identified are based on the review of literature. However, the ranking has been done by the researcher based on her readings and personal experience with the target population.

Generative Concepts - List two

1. Why are so many of us fat?
2. What types of foods do our children need to grow well and be healthy?
3. How is what I eat important to my body?
4. What are the effects of using a lot of lard for cooking?
5. Why is it important to eat fruits and vegetables?
6. Why is it important to store food immediately or to cover it in the refrigerator?
7. How do I give my family all the things you say they need with so little money to spend on food?

Generative Concepts - List three

1. Why are so many of us fat?
2. How does what I eat affect my blood pressure?
3. Why is iron important and how do I get it in my diet?
4. How do I give my family all the things you say they need with so little money to spend for food?
5. How are food and diet related to diabetes?
6. What are the effects of eating a diet with a lot of fat?
7. Why is it important to eat fruits and vegetables?

APPENDIX 4

PHOTOGRAPHS FOR NUTRITION EDUCATION PRESENTATION

1

4

5

6

7

8

9

10

11

12

13

14

15

PANCHA Y Ruben SALINAS 8-79

4

Melissa Gonzalez

5

6

Melinda GRIMALDO 8-79

7

Jessica

8

Jessica y NORMA 8/79

9

10

VERONICA CASTAÑON - 8-79

11

12

13

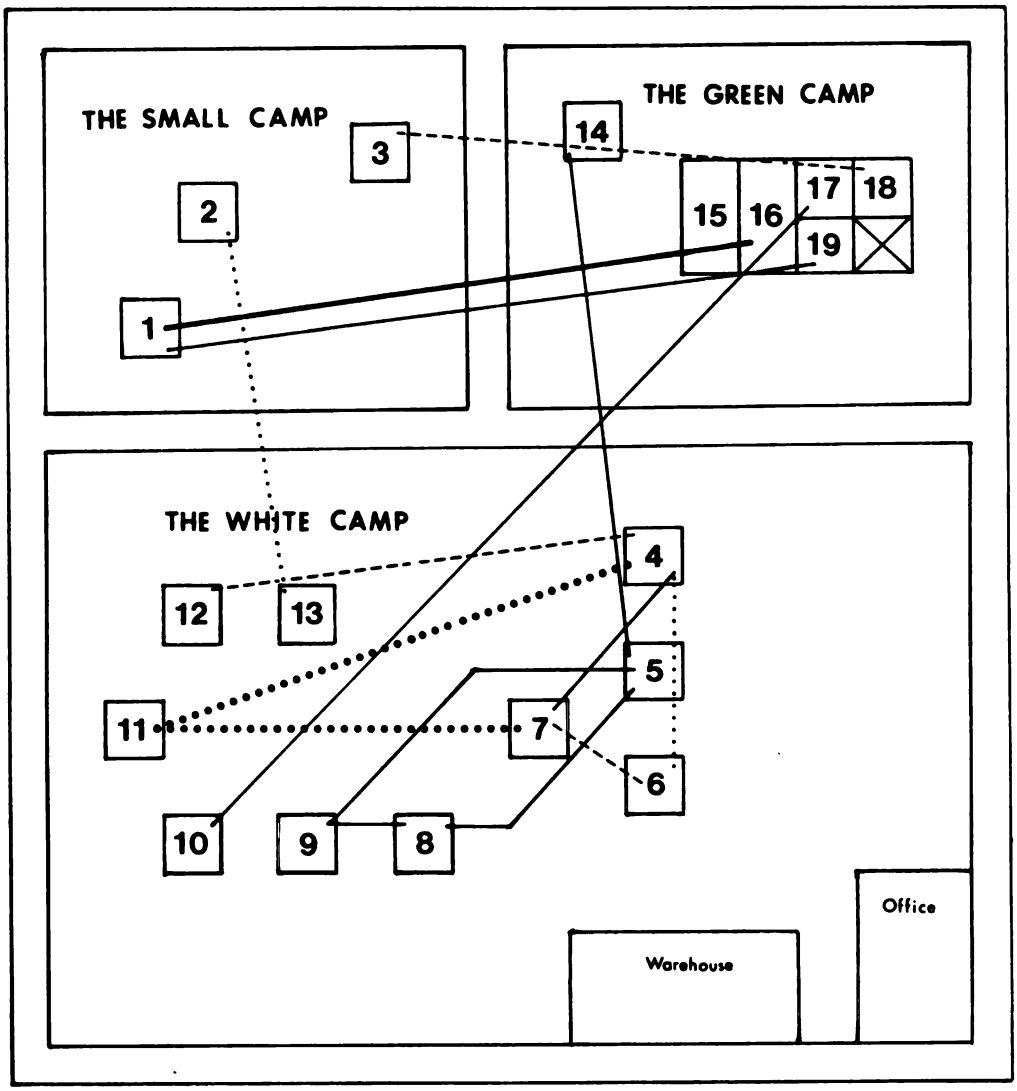
14

15

APPENDIX 5

KINSHIP MAP OF FAMILIES AT THE BASORE FARM MIGRANT CAMP, JULY-AUGUST, 1979

Kinship map of families at the Basore Farm Migrant Camp, July-August, 1979



KEY

Parent-Child ------
Siblings ———
Aunt-Uncle/Niece-Nephew .....
Cousins ••••••
God-parents ———

Detailed Key of Kinship Map

H = Homemaker
M = Husband

1) H is sister to H-19
   Compadres to 16 *

2) Aunt-Uncle to H-13

3) Parents to M-18

4) H is sister to H-7
   H is cousin to M-11
   Parents to M-12

5) H is sister to H-8
   H is sister to H-9
   M is brother to H-14

6) M is son of H-7
   M is nephew of H-14

7) Mother to M-7
   Sister to H-4
   Cousin to M-11

8) H is sister to H-5
   H is sister to H-9

9) H is sister to H-5
   H is sister to H-8

10) M is brother to M-17

11) M is cousin to H-4
    M is cousin to H-7

12) M is son of 4

13) H is niece of 2

14) H is sister of M-5

15) No relationships

16) Compadres to 16

17) M is brother to M-10

18) M is son of 3

19) H is sister to H-1