

To the Graduate Council:

I am submitting herewith a thesis written by Linda Brown Williams entitled "The Food Stamp Program: Study of Nutritional Benefits." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science in Social Work.

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THE FOOD STAMP PROGRAM: STUDY
OF NUTRITIONAL BENEFITS

A Thesis
Presented for the
Master of Science in Social Work
Degree
The University of Tennessee, Knoxville

Linda Brown Williams

June 1980

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ABSTRACT

This was a quantitative descriptive study comparing the nutritional status of participants in the Food Stamp Program to nonparticipants in the program. A systematic random sampling procedure was used in selecting the Food Stamp Participant Group of 25 respondents from the Department of Human Service, Shelby County Computer roles. A random, though not systematic, procedure was used in selecting the 25 respondents in the Food Stamp Nonparticipant Group. All respondents were Black and remained anonymous.

The researcher administered a questionnaire through personal interviews with the respondents from September through November, 1979. The data collected was coded for computer analysis on the (SPSS) Statistical Package for Social Science and the Vanderbilt University Statistical Package of Computer Programs.

The major findings revealed that no difference existed between the two groups of respondents in terms of their nutritional status. However, there did exist a relationship between the nutritional knowledge possessed by the respondent and food consumption. No relationship existed between sociodemographic variables (such as age, sex of household head, income, etc.) and the nutritional status of respondents.

Conclusions suggested that Food Stamp nonparticipants in Shelby County, Tennessee, were just as aware of basic nutrition facts as participants in the program. Food Stamp nonparticipants consumed meals equivalent nutritionally to those using food coupons and perceive themselves to be just as healthy as Food Stamp participants. The nutritional information possessed by both groups of families appeared to have a tendency to filter into the types of foods that the respondents consumed.

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INTRODUCTION

Many who question the continued existence of the Food Stamp Program have been provoked by claims of ineffectiveness of the program in meeting objectives and goals as set forth by policy makers. The proposed benefits were stated in the Food Stamp Act of 1964 and amended in 1971, 1973, 1974 and 1978. These are:

(1) To safeguard the health and well-being of the Nation's population and raise levels of nutrition among low income households.

(2) Promote the distribution in a beneficial manner of our agricultural abundance that will strengthen our agricultural economy.¹

The Food Stamp Program can be evaluated in terms of its success by a close look at the impact the program has had toward the achievement of the objectives as stated above. This particular research study was most concerned with objective number one (1).

Whether or not the program is effective in view of the nutritional benefits received by participants, is a controversy and the limited data already collected have conflicting conclusions. Therefore, research involving the nutritional benefits of the program was designed to secure descriptive

¹Senate Committee on Agriculture and Forestry, Food Stamp Program, by Food and Nutrition Service, 94th Congress, 1st Session, 1975, p. 33.

data regarding the following research question: Does participation in the Food Stamp Program enhance the nutritional status of families?

CHAPTER I

HISTORICAL BACKGROUND OF THE

FOOD STAMP PROGRAM

The Federal Government distributed surplus food, prior to 1939, to those who were considered indigent and suffering from poor nutrition and health. This was done after the public became concerned about food given to other countries while Americans were hungry, as well as the vast accumulation of surplus food. However, due to a great disenchantment with this program and the poor use of the surplus items (a lot of the food items were thrown away by the families who participated because the items did not exist in their normal diets), the Food Stamp Program was developed.¹

The original design of the program was to increase food expenditures among participants through the use of general and specific food stamps. It was also designed to supplement farm income, which is an aspect often overlooked by the general public.

The multiple objectives of the 1939 Food Stamp Plan were given in official program descriptions:

¹Kenneth W. Clarkson, Food Stamp and Nutrition (Washington, D.C.: American Enterprise for Public Policy Research, 1975), pp. 9-10.

It broadens the market for food products, thus helping the farmers.

It provides more adequate diets for needy families, thus helping the consumer and building up our national health defenses.

It moves all surplus commodities through the regular channels of trade, thus helping business.²

The program was abolished in 1943 due to problems incurred with the initial program, coupled with diminishing surpluses and unemployment.

"In 1961, Congress revived the program on a pilot basis in a few cities under section 32 of public law 74-30."³ "The pilot program certified families to exchange the average amount of food expenditures for food coupons of a higher monetary value."⁴

The results of the 1961 Food Stamp Project "revealed increased food purchases and improved diets for participating families, which resulted in the passage of the Food Stamp Act of 1964."⁵ The provisions of that act were that any food product except alcoholic beverages, tobacco, imported packaged foods and imported meat or meat products could be exchanged for Food Stamps. Each state had to set their maximum standards of income, which had to be consistent with the state's welfare program. State agencies were given the responsibility of determining households to be eligible,

²Clarkson, p. 10.

³Clarkson, p. 11.

⁴Clarkson, p. 11.

⁵Clarkson, p. 12.

with the use of criminal penalties being placed on those who acquired stamps in an unauthorized manner. The program was placed under the auspices of the Department of Agriculture with the Federal Government bearing the cost of the bonus stamps and the states sharing the expenses of determining eligibility and issuance.⁶

The conditions of the pilot project, though considered successful, were not fully duplicated. The educational efforts to help participants use their added food purchasing power to provide more nutritious diets was not carried over to the 1964 Act.⁷

While nutrition was one of the original goals, the component involving nutrition education was eliminated, with future policies and amendments not lending themselves to address the issue. This study has as its concern to shed more light on the area of nutritional benefits provided to those who participate in the Food Stamp Program.

The following additional amendments to the Food Stamp Act of 1964 will be discussed: (1) 1971, (2) 1973, (3) 1974, and (4) 1978.

The 1971 amendment (Public Law 91-671) made important administrative changes and generally increased the benefits for participating households. Uniform income and resource

⁶Clarkson, p. 17.

⁷Clarkson, p. 11.

eligibility standards were imposed, work registration requirements for able-bodied adults were instituted, and households that moved to a new political jurisdiction could maintain eligibility for sixty (60) days following their move. Participating jurisdictions were required to advertise and to engage in outreach to increase participation.⁸

The 1973 amendment (Public Law 93-86) required a nationwide expansion of the Food Stamp Program by July 1974, unless it could be proven by that state that the program would be impractical in that area. The reevaluation of coupon allotments every six months was required, so that the coupon allotment could reflect changes in food prices (compensation for inflation). Drug addicts or alcoholics were allowed to use the food stamps to buy meals from authorized nonprofit organizations.⁹

The 1974 amendment (Public Law 93-347) increased subsidies for cost incurred by states and localities in administering the program. States were authorized to receive 50 percent of all operating costs incurred in carrying out the program.¹⁰

The most recent 1978 amendment, allows the Food Stamp participants to receive the bonus coupons without the

⁸Clarkson, p. 16.

⁹Clarkson, p. 16.

¹⁰Clarkson, p. 10.

transfer of cash. This was initiated because so many people did not have the money necessary to purchase the stamps, thereby eliminating some individuals from participating in the program who really were in need of bonus coupons. This amendment, though passed in 1978, was not implemented in the State of Tennessee until January of 1979.

In reviewing the above described amendments, it can be seen that the primary focus is the basic administration of the program, in terms of eligibility and the moral attitude of society relating to the protestant work ethics. Even though the policies executed do address an outreach of the program to those who are in need of food assistance, none deal with aiding the consumer in benefiting nutritionally from participation in the program.

CHAPTER II

STATEMENT OF THE PROBLEM

Definition of the Problem

This study was designed to gain more insight on the general research question: Does participation in the Food Stamp Program provide an increased nutritional status when compared to nonparticipating families? Descriptive data were collected to determine what variables impacted on groups in terms of their basic nutritional status.

Significance of the Study

Accountability and effectiveness trends were brought about in 1973 when Congress placed a ceiling on federal expenditures of social service, changing the open-ended grant (terms and grant amounts are flexible) to a closed-end grant (terms and grant amounts are definitive).¹ This change in direction of administrative policy in respect to service programs indicated that accountability would be stressed in years to come.

Today, emphasis is being placed on program effectiveness measured by outcome/results of implementation in relation to

¹George Hoshino, "Social Services: The Problems of Accountability," Social Administration, ed. Simon Slavin (New York: The Haworth Press and Council on Social Work Education, 1978), p. 300.

cost. For example, a program at one time could exist based primarily on the fact that a need existed. However, due to monetary cuts at all levels of funding, programs have been forced to compete in terms of providing service that can be substantiated in relationship to their cost.

Public sentiment as well as congressional decisions toward continuing programs that are accountable (in their use of funds and program effectiveness) has led social welfare administrators, funding sources and consumer groups toward the need for more empirical data. It is believed that the data are needed to justify continued program existence as well as making decisions about alternative solutions to problems addressed by existing programs.

There are numerous programs to consider in terms of effectiveness, but the Federal Food Stamp Program was selected using the following criteria: (1) a large portion of low-income families participate in this program, (2) the cost of administering the program appears to be rising, and (3) the lack of empirical data evaluating the program. Even though the Food Stamp Program is not under the auspices of the Department of Health, Education and Welfare (it is under the Department of Agriculture), it is still considered to be a social program subject to the same scrutiny as other programs (e.g., Aid to Families with Dependent Children, Medicaid, etc.). Presently, Senate Bill #HR-3434, which covers

social service funding for 1980, is still pending in Congress and it appears that funding will be severely cut as opposed to increased funding for program expansions. For the above reason, this research study as well as any others dealing with program evaluation would be considered timely and worth pursuing.

Rationale for Social Work Practice and Education

Evaluation of the Food Stamp Program in relationship to its goals and objectives is of extreme importance to the social work planner, policy formulators, funding sources and consumer groups, in order to make rational decisions regarding program modifications or eradications. The social work planner and policy formulator should:

1. Determine effective measures of the programs effectiveness or ineffectiveness.
2. Look at alternate solutions or modifications of the program to enhance the productivity.
3. Determine the impact of each alternative not only from the political/administrative perspective but also the perspective of those served by the program.
4. Implement those alternatives that have been well thought out and rationally chosen.
5. The total process should be cyclical, with the professional always searching for ways to improve the program, regardless of what exists.

This research should be depicted as a pilot study to assist the social work planner, policy formulator in developing measures of program effectiveness as well as gathering data in order to make sound rational decisions regarding the continuation or modification of the Food Stamp Program. This study focused on one of the program goals, that of enhancing the nutritional status of participating households. Even though this study only dealt with a small sample and only one ethnic group, the basic research format can be used by researchers in other areas of the country.

As the researcher pursues a career in the administration and planning of social welfare organizations/programs, she will be requested to design and implement programs. It is also helpful not only to be able to design and implement programs but also to be capable of making the connection between objectives/goals and impact/outcome. To be an effective social work planner/administrator/policy formulator one must be equipped with those tools that are needed to evaluate programs in terms of effectiveness. The use of scientific research method is necessary for the social work planner to develop systems of measurement that will allow empirical data to be drawn for rational consideration.

Results of this study can be used to provide insight and empirical data as to how well the Food Stamps Program meets one of its goals (nutrition) in terms of effectiveness.

Considering that a great deal of social welfare manpower, time and funds are consumed in this area, a close evaluation of the program is appropriate and needed.

CHAPTER III

REVIEW OF THE LITERATURE

The controversial literature reflects the limited data that has been collected regarding the Food Stamp Program's effectiveness in terms of nutritional indicators. In this chapter the evaluative research that has been done to measure the impact of Food Stamp Programs on the nutritional status of those who participate will be reviewed.

The first to conduct research on the Food Stamp Program were Reese and Adelson of the United States Department of Agriculture. They analyzed the impact of the 1961 pilot Food Stamp Program in Detroit, Michigan, and Fayette County, Pennsylvania. The study was designed primarily to determine the effect of food stamps on the purchasing practices and the dietary adequacy of the participating households.

Two surveys were conducted in the Reese/Adelson study of households. One before the initiation of the program and the second several months after. Quality of diets were evaluated in two ways: (1) the percentage of each group of families whose diets met recommended dietary allowances of the National Research Council for each of the eight important nutrients, and (2) the percentage of families in each community who met all of the eight nutrient levels.

Comparisons of households in the two surveys, shifts in food consumption and dietary levels were analyzed. Before the initiation of the program, 29 percent of the households in Detroit and 26 percent of the Fayette County sample reported diets meeting all nutrient allowance levels. About six months later the percentage of sampled households in the program which met this criterion had increased to 48 percent in Detroit and 38 percent in Fayette County.¹

In 1969, a sample of preschool age children in a predominately Black community in Memphis, Tennessee, showed a high frequency of stunted growth and anemia. These deficiencies were attributed to an inadequate diet due to their low family incomes. A follow-up nutritional survey was conducted in 1972, after the studied population had participated in a supplementary food program sponsored by the United States Department of Agriculture for three years. The population had also received additional benefits from food stamps, day care centers, and an infant feeding program. The children received complete pediatric examinations.

¹U.S. Department of Agriculture, Economic Research Service and Agricultural Research Service, Food Consumption and Dietary Levels Under the Pilot Food Stamp Program: Detroit, Michigan and Fayette County, Pennsylvania by Robert B. Reese and Sadye F. Adelson, Agricultural Economic Report No. 9 (Washington, D.C.: Government Printing Office, 1962), p. 1.

The findings in this research demonstrated considerable improvements in height, weight and significant decreases in the frequency of anemia in addition to the number of children with low plasma "A" levels. It was concluded by the researcher that the federal food assistance programs were primarily responsible for the observed nutritional improvements.²

In Kern County, California (1972), Sylvia Lane assessed the food intake and purchases of low income households in efforts to determine if food programs encouraged an increase in food consumption and nutritional achievement levels. A determination was also made as to which of the programs were more effective - food stamps or food commodities.

Lane initiated her research in mid-1972 with a survey of 599 households. This was before a change-over from food commodities to food stamps occurred. Five months later, 329 units were interviewed (with 204 units in this group being involved in the first phase of the study). Individual nutritional achievement ratios for nine nutrients were used to compare food intake adequacy of recipients and nonrecipients. "Sample means of nutritional achievement ratios were above 100 percent for all nine nutrients studied for food distribution and food stamp program participant and

²A. G. Kafaros and P. Zee, Nutritional Benefits from Federal Food Assistance. American Journal of Diseases in Children, 1977, Volume 131, pp. 265-269.

nonparticipant households, except for the 96 percent ratio for vitamin A for food stamp program participants in the continuing sample."³

Lane found that some changes did occur in the nutrient intakes because of program participation. It also demonstrated that the programs affected groups differently. This was particularly noticeable with the influence of ethnicity on dietary adequacy.

Similar findings were obtained in 1977 in a research survey in two rural Missouri counties by Joyanne Block. Participants and nonparticipants in the food commodities program (program where specific food items are distributed among eligible households) and food stamp program (program where participants are given bonus stamps to redeem in the grocery store for foods of their choice) were compared. Data from the use of the 24-Hour Dietary Recall instrument were collected over a one-year period, during which time these food programs were in operation.

After Block's analysis of the information it was concluded that participant households experienced very few improvements in their nutritional levels. Also, in the

³Sylvia Lane, "Food Distribution and Food Stamp Program Effects on Food Consumption and Nutritional Achievement of Low Income Persons in Kern County, California," American Journal of Agriculture Economics, 1978, 60:1, pp. 108-116.

comparison of the nutritional adequacy achievements of food stamps households, the results did not indicate that one program provided advantages to households over the other.⁴

One of the more recent studies involving nutritional benefits of the Food Stamps Program was conducted by Donald A. West. The purpose of the study was to determine the effect of the Food Stamp Program on food expenditures of participating households. Socioeconomic characteristics were identified and compared for three groups of households: food stamp participants, all nonparticipants and a group identified as eligible but not participating in the Food Stamp Program. Data were secured from a national data set of 1973-74 dairy portion of the Bureau of Labor Statistics (BLS) Consumer Expenditure Survey (CES).

West found that the amount of food-at-home expenditures among food items by participants indicated that they purchased about the same mix as all households with low incomes. Compared to spending by all nonparticipants, the food stamp participants purchased proportionately more pork, poultry, fresh whole milk and processed vegetables. They spent proportionately less on beef, cheese, fresh fruit and snacks. The percentage allocation of food-at-home expenditures made

⁴Joyanne Block, "Impact of Supplemental Food Programs on Nutritional Status of Low-Income Rural Missouri Households: A Longitudinal Study." Unpublished Doctoral Dissertation, University of Missouri-Columbia, 1977, p. 248.

by eligible nonparticipants among the various food items was similar to that made by participants. However, the total expenditures for food at home made by participants averaged more than those for the eligible nonparticipants. It was also noted in the analysis that the Food Stamp Program made a significant positive contribution to the food purchasing ability of participants.⁵

Some of the studies conducted were not done to show benefits of the Food Stamp Program, but the program happened to be an intervening variable that emerged in the collection of data, or used as a variable to show possible relationships. For example, in a study pursuing the etiology of growth failure in a clinic population (Washtenaw County Well Child Clinic, Michigan) the research goals were to compare the characteristics of a group of children with apparent growth failure with children who demonstrated a higher level of achievement in stature and weight. In the results, the group with inadequate growth bought more food stamps.⁶

Yet, in another piece of research, the major objectives were to relate caloric and nutrient intakes and anthropometric

⁵ Donald A. West, "Effects of the Food Stamp Program on Food Expenditures," (Final Report — Food and Nutrition Service, USDA, Washington, D.C., 1978), p. 22.

⁶ F. A. Larkin, K. P. Perri, J. H. Bursick and J. R. Robson, "Etiology of Growth Failure in a Clinic Population." Journal of American Dietetic Association, 1976, 69:5, pp. 506-510.

measurements of four- and five-year-old Black children in two counties in the State of Mississippi to the education of the homemaker, family income, and to participation in the food stamp or commodities program. The results of the research showed no statistical difference between nutrient intake of children and the use of food stamps or commodities programs.⁷

⁷M. F. Futrell, K. T. Kilgore and F. Windham, "Nutritional Status of Black Preschool Children in Mississippi," Journal of American Dietetic Association, 1975, 66:1, pp. 22-27.

CHAPTER IV

METHODOLOGY

Theoretical Framework of This Study

The review of the literature indicates that there exists conflicting findings as to the actual nutritional benefits of the Food Stamp Program. Some of the first researchers, Reese and Adelson, found that participation in the program increases the families' ability to meet recommended dietary nutrient levels.¹ However, it must be recognized that this research involved the pilot program in 1961 which also had a nutrition education component not replicated in the program as it exists today.

As families moved from the Commodities Program to the Food Stamp Program, Lane found that some changes did occur in the nutrient intakes because of program participation. This particular researcher also noticed that the program affected groups differently, which was noticeable with the influence of ethnicity on dietary adequacy and food eating patterns.²

Further, Block's study of families who moved from the Commodities Program to the Food Stamp Program showed that

¹Reese and Adelson, p. 1.

²Lane, p. 115.

there were no significant changes noted in the dietary levels of participants. The Twenty-Four-Hour Dietary Recall was used in determining food consumption and analyzed in terms of the four basic food groups.³

Both the studies of Lane and Block were used as a basis in developing hypotheses and research questions to be answered in the study of the nutritional benefits of the Food Stamp Program.

Conceptual Framework of This Study

Previous research dealt primarily with the transition from one food assistance program to another. To the researcher's knowledge there are no studies that evaluate the Food Stamp Program nutritionally in terms of those who participate as compared to those who do not participate in the program, without consideration of other programs.

Donald West, one of the most recent researchers involved in the nutritional benefits of the Food Stamp Program, was concerned with the effects of the program on food expenditures of participating households as opposed to the effects of the program on food consumption. In his study, comparisons were made between three groups: food stamp participants, all nonparticipants, and a group identified as eligible but not participating in the Food Stamp Program.

³Block, p. 247.

In the overall analysis made in the West study, it was concluded that the Food Stamp Program made a significant positive contribution to the food purchasing ability of participants.⁴ However, in correspondence received by this researcher from West, he emphasized the fact that food expenditures are quite different from food consumption, and that if the same three groups were compared on the consumption factor that different results would probably be found.

The research of Block and Lane had implications for this study. Block set out to determine if participation in the Food Stamp Program or Food Commodities Program increased the nutrient levels of those families. Her conclusions were that few improvements occurred as a result of program participation.⁵

Lane compared the nutritional achievement ratio of recipients and nonrecipients of the food commodities and food stamp programs. She found that changes did occur in the nutrient intakes because of program participation. But one of the phenomena noticed was that ethnicity had an influence on dietary adequacy of individuals.⁶

It was therefore postulated that in order to make a comparison of the nutritional status of groups, the ethnic

⁴West, p. 60.

⁵Block, p. 247.

⁶Lane, p. 115.

factor should be a controlled variable. The researcher further reasoned that individuals who participated in the Food Stamp Program may or may not have a higher nutritional status than those who do not participate in the program.

The conceptual framework of this study was generated from the previous research of Lane, Block and West. Also, during previous experiences as a worker in the Food Stamp Program and as a social service counselor for the State Welfare Department, this researcher formulated ideas regarding the effectiveness of the Food Stamp Program to its consumer population. From the above informational sources, this researcher was guided to pose the following research question: Does participation in the Food Stamp Program enhance the nutritional status of families?

Problem Statement

This study was undertaken to determine the nutritional benefits of the Food Stamp Program, and was designed in such a way as to compare participants in the program with a group of nonparticipants, within similar economic and cultural parameters, who have elected not to participate. Comparisons were made between the two groups in terms of the following indicators: sociodemographic factors, nutritional awareness, dietary consumption, and physical well-being as individually perceived.

Hypotheses

Three hypotheses were used to obtain information as to the nutritional awareness, nutritional dietary levels and perceived physical well-being of Group I (food stamp participants) and Group II (food stamp nonparticipants).

These hypotheses were:

1. Participants in the Food Stamp Program are nutritionally more aware than food stamp nonparticipants.
2. Food Stamp Program participants' food consumption is more balanced nutritionally than food stamp nonparticipants.
3. Food Stamp Program participants are healthier than food stamp nonparticipants.

Operational definitions. The definition for the variables of this study included:

1. Food stamp participation is defined as individuals eligible and actively utilizing food stamp bonus coupons for at least one year prior to the time of initial contact made by the researcher.
2. Food stamp nonparticipation is defined as individuals who are not active in the Food Stamp Program, who may be eligible, but have chosen not to receive the bonus coupons for one reason or another.
3. Sociodemographic factors are defined in terms of the following descriptive population indicators: (a) age,

(b) marital status, (c) sex of household head, (3) number of children in the home, (3) number of household members, (f) educational achievement, (g) employment status, (h) income, (i) type of occupancy, (j) length of occupancy, (k) household member responsible for food purchases and preparation, and (l) nutritional training received by respondents.

4. Nutritional status consists of the following components as defined:

a. Nutritional awareness is defined in terms of the awareness or knowledge of the respondent of basic nutritional facts (measured by the Nutritional Awareness Matrix).

b. Dietary consumption is defined in terms of foods consumed by the respondent twenty-four hours prior to contact with researcher (measured by the Twenty-Four-Hour Dietary Recall).

c. Physical well-being as individually perceived is defined in terms of the respondent's conscious awareness of the degree of intensity of certain bodily symptoms (measured by the Self-Report Symptoms Inventory/Somatization/SCL-90).

Study Design

This study can be classified as quantitative descriptive, with hypotheses testing. According to Tripodi, a quantitative descriptive study is not experimental, includes variables

amenable to measurement, data are systematically collected, and hypotheses are tested that are suggested by the literature.⁷

This study provided sociodemographic information about food stamp participants and food stamp nonparticipants. The variables under inspection were food stamp participation and the nutritional status of those families. Nutritional status can be considered the dependent variable since, regardless of whether or not a family participates in the program, they will have a level of nutritional status (whether it is positive or negative, high or low). The independent variable will be participation in the Federal Food Stamp Program in the State of Tennessee, Shelby County. Food stamp participation was considered independent because the program is not mandatory and all families have not chosen to become involved, even though they may be eligible. The data were systematically collected and documented by this researcher.

The three hypotheses tested within the research were derived primarily from the researcher's own assumptions, ideas and thought based on the previous research of Lane, Block and West. The main focus of the study was to evaluate the Food Stamp Program in reference to one of the program

⁷Tony Tripodi, Phillip Fellin and Henry J. Meyer, The Assessment of Social Research (Ithaca, Illinois: F. E. Peacock Publishers, Incorporated, 1969), p. 34.

goals, that of providing low income families more adequate diets.⁸

Area Selection

There were three criteria used in the selection of the geographic area for the study: (1) population, (2) area type, and (3) convenience for researcher.

Shelby County, Tennessee, was selected since it has a population of approximately 722,111, according to the United States Department of Commerce 1970 Census Tract.⁹ Even though these figures may not be accurate, they give some idea of the population density.

In terms of area type or classification, Shelby County is considered a metropolitan area. Due to its size and the fact that it is considered a metropolitan area, this researcher assumed that the area was more indicative of the total food stamp population from which certain inferences could be made.

The last criterion of convenience, though in some ways insignificant, played a pertinent part in the selection of Shelby County. Since funding was not available, the majority

⁸Clarkson, p. 10.

⁹United States Department of Commerce, Bureau of Census, The 1970 United States Census of Memphis, Tennessee (United States Government Printing Office: Washington, D.C., 1972).

of the cost of this study was borne by the researcher. Therefore, travel was a consideration to be kept to a minimum.

Sample Group

Fifty black households were sampled for interviews in this study. The individuals interviewed were 19 years of age and older, and responsible for the majority of the meal preparations in their homes. Twenty-five of the households sampled were Food Stamp Program participants and twenty-five were Food Stamp Program nonparticipants. All households sampled had annual incomes of \$10,000 or less.

Sampling Procedure

A systematic random sampling was used to select the twenty-five food stamp participant households for this study.¹⁰ This choice of sampling was made because it allowed a more comprehensive coverage of the entire county and due to the availability of a listing of all active participants in the Food Stamp Program to this researcher

The second group of twenty-five Food Stamp Program nonparticipants was not selected in a systematic, though random fashion, due to the fact that no agency existed that

¹⁰ Donald Ary, Lucy Jacobs, Asghar Rasavieh, Introduction to Research in Education (New York: Holt, Rinehart and Winston, Incorporated, 1972), p. 160.

kept tract of individuals who would fall into this category. However, the researcher was able to randomly select twenty-five households known to the Department of Human Services, who fell within the criteria of this category.

Description of sampling procedure. In April of 1979, Mr. Hilton Bolton, then County Director of the Department of Human Services, Shelby County, was contacted (Appendix A) to enlist his support as well as assistance in securing the participants in this study. After the issues of confidentiality and voluntary participation were stipulated, meeting the Department of Human Services' approval, Mr. Bolton was able to secure consent from the proper authorities to allow this researcher access to the Department of Human Services' records that would permit the sample to be drawn.

In August of 1979, a sample of 43 food stamp participant households were taken from the Shelby County computer listing of food stamp purchasing cards mailed during the month. During this particular month 43,482 households were authorized eligible recipients.¹¹ In determining the manner in which the sample was drawn, the formula $k = N/n$ was used (k = sampling interval, N = population, n = sample).¹² In this

¹¹Monthly Report of Program Participation FNS #256, August 1979 (Department of Human Services, Shelby County, Tennessee).

¹²Ary et al., p. 166.

situation $N = 43,482$ and $n = 43$. Therefore, in order to determine the sampling interval (k), 43,482 was divided by 43 ($k = 43,482/43 = 1,000$) giving a rounded sampling interval of 1,000. The first name was selected randomly from the first 1,000 names listed, and then every one thousandth name thereafter was selected. This researcher only needed twenty-five households for the food stamp participant group, but the larger number was drawn to allow for those who chose not to be interviewed or where interviews could not be arranged.

In securing the twenty-five food stamp program nonparticipant households, a memo was sent by this researcher to all service units within the Department of Human Services, Shelby County office (Appendix B). The memo requested each caseworker to examine their work loads and submit to the researcher, the names of households that were Black, eligible for the Food Stamp Program, but not actively participating. This proved to be one of the more difficult tasks of this research project since, in 1978, the Department of Agriculture removed the transfer of monies in exchange for the food stamp bonus coupons. A large percentage of families that had previously not participated in the program due to the old purchase regulations were participating, thereby decreasing the number of eligible food stamp nonparticipants. However, in spite of the difficulty, this researcher was able to

secure all fifty of the needed households to be interviewed to complete the research.

Instrument

The questionnaire interview was chosen to secure the needed data in comparing the nutritional status of food stamp participants to that of food stamp nonparticipants. The researcher used a four-part questionnaire consisting of the following components: (1) sociodemographic information (2) nutritional awareness matrix, (3) Twenty-Four-Hour Dietary Recall, and (4) Self-Report Symptoms Inventory Somatization Scale/SCL-90.

Sociodemographic information. The sociodemographic component was developed by this researcher to elicit basic information from the respondents such as length of residency, occupancy, marital status, number of children, number of household members, age, employment status, income, sex of head of household, family member responsible for meal preparation and food purchases, and educational achievement. The food stamp participant group was also asked the amount of food stamp bonus coupons they were eligible for and receiving.

Nutritional awareness matrix. The second part of the questionnaire was the Nutritional Awareness Matrix developed by the researcher after efforts to locate such an instrument

from various resources around the country proved to be fruitless. Since the Lane study noted that ethnicity influenced dietary patterns and food consumption in her findings, it was decided that groups within the Black community with a high concern and interest in the nutritional status of the community would be contacted.

A loose delphi technique was utilized in the development of the Nutritional Awareness Matrix. Individuals from the Nation of Islam and the Seventh-Day Adventist Church were contacted and both groups provided information in regard to nutritional awareness. Indicators mentioned by both groups are on the awareness matrix. Also, additional literature, relating to basic nutritional facts was reviewed and used in the development of the matrix.

Thus, the matrix consists of twenty statements about which the respondents could either agree, disagree or indicate that he/she did not know. The questions were constructed so as not to provide a pattern of responses that would allow the respondents to guess the validity of the statement. The results of this part were determined by the sum of correct and incorrect responses.

A pretest of the Nutritional Awareness Matrix was undertaken to clarify wording and the ability of the respondent to comprehend the content matter. The pretest involved 5 respondents from the Shelby County area. No

changes were made in the instrument as the result of the pretest.

Twenty-Four-Hour Dietary Recall. In the third part of the questionnaire, the assessment of the food consumption of Food Stamp Program participants and Food Stamp Program nonparticipants was made through the use of the Twenty-Four Hour Dietary Recall. The assessment of the diets was based on the food guide known as the Basic Four. The designers were nutritionists at the Agricultural Research Service of the United States Department of Agriculture, who translated the recommended allowances for the primary nutrients into a minimum number of food servings.

The Basic Four Guide was intended to be a simple way for individuals and families to understand how to obtain nutritionally sound diets compared to previously used methods. The basic premise was that through adjustments for age and activity patterns, "the 'Basic Four' . . . can meet the differing nutritional needs of nearly all individuals."¹³

The appropriate servings and food categories in the Basic Four which nutritionists indicate will enable an individual to meet their minimum daily food intake are:

¹³Ann A. Hertzler and Helen L. Anderson, "Food Guides in the United States," Journal of the American Dietetic Association, January, 1974, p. 19.

1. Milk and Milk Products Group – with two servings recommended for ages 19 and above.
2. Meat Group – including meat, fish, poultry, eggs, dried beans, peas and nuts, with two servings as the recommended daily allowance.
3. Vegetable/Fruit Group – with four servings as the daily recommended allowance.
4. Bread/Cereal Group – including any of the grain foods as long as they are made from whole, enriched or restored grain, with four recommended services as the daily recommended allowance.¹⁴

The daily adequacy dietary score was determined by summing the number of servings recommended in each group. To establish an optimal score that would not permit excessive servings to offset inadequacies in another, servings that were consumed above the defined recommended amounts were not counted. Therefore, scores on the Twenty-Four-Hour Dietary Recall would range from 0 to 12. A score of 8 or more indicates the meeting of two-thirds of dietary adequacy.

Self-Report Symptoms Inventory Somatization Scale/
SCL-90. The final component of the instrument was a Self-Report Symptoms Inventory/SCL-90, which was developed by Derogatis, Lipman and Covi. The SCL-90 has nine

¹⁴Block, p. 96.

dimensions but only one dimension, that of somatization (body symptoms), was used in this research. Somatization reflects distress derived from consciousness of bodily dysfunctions. Physical ailments focused on gastrointestinal, respiratory, cardiovascular, and other parts of the body with strong autonomic mediations are reflected in the somatization dimension.

There are twelve items on the somatization dimension which are rated on a four-point scale: 0 = not at all - individual reported no distress related with the specific symptom; 1 = a little bit - individual is conscious of some distress related with the symptom, but it is infrequent and of low intensity; 2 = moderately - individual encounters distress associated with the symptom with regularity and moderate to high intensity; 3 = quite a bit - individual is conscious of distress related to symptom with regularity and intensity; and, 4 = extremely - individual encounters extreme distress related to the symptom due to frequency, intensity, or a combination of the two. Points were given for each response as it related to the scale described above. The points were totaled and divided by twelve (total number of items). The score was then compared to the scale to determine results of the responses.

Construct validity has been exhibited for these dimensions and factorial invariance has been demonstrated

for this dimensional set.¹⁵ Continuous factor-analytic studies of psychiatrists' ratings¹⁶ and individual self-ratings¹⁷ narrowed down five major symptom dimensions underlying the scale.

The responses given to the entire questionnaire gave descriptive information regarding the two groups under inspection as well as an indication of their nutritional status at the time of the interview.

The questionnaire was administered through an interview with the respondents and this researcher in the homes of the respondents. The responses were coded by numbers and the respondents' names and addresses were not placed on the questionnaire booklet, thereby assuring anonymity. The total interviewing time per respondent in completing the questionnaire ranged from 15 to 30 minutes, depending on the literacy of the respondent.

¹⁵L. R. Derogatis, R. S. Lipman, L. Covi et al., "Dimensions of Outpatient Neurotic Pathology: Comparison of Clinical vs. Empirical Assessment," Journal of Consulting and Clinical Psychology, 1970, Volume 34, pp. 164-171.

¹⁶L. R. Derogatis, R. S. Lipman, L. Covi et al., "Neurotic Symptom Dimensions as Perceived by Psychiatrists and Patients of Various Social Classes," Archives of General Psychiatry, 1971, Volume 24, pp. 454-464.

¹⁷L. R. Derogatis, R. S. Lipman, K. Rickels, "The Hopkins Checklist (HSCL): A Measure of Primary Symptom Dimensions in Psychological Measurement," Modern Problems in Pharmacopsychiatry (P. Pichot, ed.) Karger, Basle, Switzerland, 1973, 79-110.

Administration of Instrument

The researcher interviewed fifty individuals for the study between September 24, 1979, and November 5, 1979. The individuals were interviewed on Mondays because it was felt that meals were usually planned and prepared at their best on weekends as opposed to during the week. Therefore, if the individuals were interviewed on Mondays, the data in the Twenty-Four-Hour Dietary Recall would reflect consumption on Sundays. Also, the specific day of the week for interviews was chosen to foster consistency in data collection.

Even though fifty individuals were interviewed, attempted contacts were made with an additional thirty-five people. Of the thirty-five individuals, interviews could not be arranged due to their working hours or because there was no one at home at the time of contact. No one totally rejected participating in the study but a few were skeptical. Only one respondent was totally illiterate (could not read or write) but was able to respond to the questions when read.

Also, during three of the interviews, respondents had questions regarding the need for social services. The researcher cooperated with them by giving them the names and phone numbers of agencies that could assist them.

The data from the fifty questionnaires were transferred to coding sheets and key punch cards for the purpose of analysis. The frequencies and correlations were run on the

Statistical Package for the Social Sciences (SPSS) and the Vanderbilt University Statistical Package of Computer Programs at Memphis State University's Computer Center.

Assumptions

The assumptions of this study were:

1. That all respondents gave accurate information in all four parts of the questionnaire.
2. That the responses given reflected the nutritional status of those participating in the study.

Limitations

The limitations of this study were:

1. The data collected reflected the nutritional status of a small population.
2. Inferences from this study can only relate to the 50 respondents used in the collection of data.
3. The reliability of the instruments and this study are to be confirmed by more research at a later date.
4. The data collected reflected the nutritional status of Blacks only.

CHAPTER V

DATA ANALYSIS AND DISCUSSION

Sociodemographic Characteristics of Sample

A description of the sample can be seen in terms of the following variables: age, marital status, sex of household head, number of children in the home, number of total household members, education, employment status, income, type of occupancy, length of present occupancy, household member responsible for food purchases and preparation, and what, if any, nutritional training has been received by the respondent. Each variable discussed is defined by categories. The categories are followed by the frequency and percentages of the sample which falls into the category being discussed.

Table I represents the distribution of the sample, both food stamp participants and food stamp nonparticipants by age.

Table I shows the largest percentage (24 percent) of respondents fell within the 36 to 45 age group for the food stamp participant group, and 26 to 35 (32 percent) for the food stamp nonparticipant group. The food stamp participant group contained a higher percentage of elderly respondents (categories 56-60, 61-67, and 68+) making up 24 percent of that group, while the food stamp nonparticipants only contain contained 4 percent within those categories.

TABLE I
DISTRIBUTION OF SAMPLE BY AGE AND PERCENT

Age	Participants		Nonparticipants	
	Frequency	%	Frequency	%
18-20 years	1	4	3	12
21-25 years	4	16	6	24
26-35 years	4	16	8	32
36-45 years	6	24	4	16
46-55 years	4	16	3	12
56-60 years	3	12	0	0
61-67 years	1	4	0	0
68+ years	2	8	1	4
		n = 25	n = 25	

Table II represents the distribution of the sample by marital status, for both food stamp participant and nonparticipant groups.

TABLE II
DISTRIBUTION OF SAMPLE BY MARITAL STATUS AND PERCENT

Marital Status	Participants		Nonparticipants	
	Frequency	%	Frequency	%
married	4	16	6	24
single	7	28	9	36
widowed	6	24	2	8
divorced	3	12	3	12
separated	5	20	5	20
		n = 25	n = 25	

The largest percentage in both groups were single, with the participant group having 28 percent and the nonparticipant group an even higher percentage, that of 36 percent. However, the nonparticipant group revealed a larger percentage (24 percent) of married individuals as compared to the participant group (with 16 percent of the individuals being married). The two groups were exactly the same for the divorced and separated categories while a large variation existed in the widowed category.

Table III presents the distribution of respondents according to the sexual gender of the household head.

TABLE III
DISTRIBUTION OF SAMPLE BY THE SEXUAL GENDER OF
HOUSEHOLD HEAD AND PERCENT

Sex	Participants		Nonparticipants	
	Frequency	%	Frequency	%
Male	6	24	12	48
Female	19	76	13	52
	n = 25		n = 25	

The participant group showed a high frequency and percentage of female head of households, having 19 females composing 76 percent of the group of twenty-five. The nonparticipant group were almost equal in terms of the number of males and females. This follows the common belief

that a large number of families receiving governmental assistance are without male heads of households.

Table IV presents the distribution of respondents as it relates to the number of children in their households.

TABLE IV
DISTRIBUTION OF SAMPLE BY THE NUMBER
OF CHILDREN AND PERCENT

Number of Children	Participants		Nonparticipants	
	Frequency	%	Frequency	%
1-2	10	40	8	32
3-4	4	16	5	20
5-6	3	12	0	0
7-9	1	4	0	0
10+	0	0	1	4
No Children	7	28	11	44
		n = 25	n = 25	

Both groups had higher concentrations of the number of children in the 1-2 category, with the participant group showing 40 percent and the nonparticipant group showing an even higher percentage (44 percent) of families where there were no children as compared with the percentage (28 percent) of families with no children in the participant group.

Table V reveals the distribution of the sampled households according to the total number of individuals living in the home.

TABLE V
DISTRIBUTION OF SAMPLE BY THE NUMBER IN
HOUSEHOLD AND PERCENT

Number in Household	Participants		Nonparticipants	
	Frequency	%	Frequency	%
1-4	20	80	18	72
5-8	4	16	4	16
9-12	1	4	1	4
12+	0	0	2	8
		n = 25		
			n = 25	

The 1-4 category was the model category for the distribution of both groups.

Table VI represents the distribution of the sample according to the education of the household member interviewed.

TABLE VI
DISTRIBUTION OF SAMPLE BY EDUCATION AND PERCENT

Education	Participants		Nonparticipants	
	Frequency	%	Frequency	%
Kindergarten-4th Grade	2	8	0	0
5th-8th Grade	6	24	3	12
9th-12th Grade	14	56	18	72
1-2 Years College	1	4	2	8
3-4 Years College	1	4	1	4
Graduate Study	0	0	1	4
Technical School	1	4	0	0
		n = 25		
			n = 25	

In Table VI, it is evident that both groups are similar in that they have high percentages (56 percent and 72 percent) in the category 9-12, however, the nonparticipant group appears to be more educated over all.

Table VII indicates the employment status for each sampled group.

TABLE VII

DISTRIBUTION OF SAMPLE BY EMPLOYMENT STATUS AND PERCENT

Employment Status	Participants		Nonparticipants	
	Frequency	%	Frequency	%
Respondent working	3	12	3	12
Respondent not working	22	88	22	88
	n = 25		n = 25	

As far as employment is concerned, both groups were identical in composition. The majority in both groups were not employed at the time of the interview. Even though one of the questions on the questionnaire booklet elicited the classification of employment for those individuals who were working, this particular item was omitted from discussion due to the small percentage of employed individuals in the sample groups.

Table VIII presents the income levels for the sample groups in this study.

TABLE VIII
DISTRIBUTION OF SAMPLE BY INCOME AND PERCENT

Income Levels	Participants		Nonparticipants	
	Frequency	%	Frequency	%
0-1,999	10	40	11	44
2,000-3,999	10	40	5	20
4,000-5,999	1	4	5	20
6,000-7,999	3	12	3	12
8,000-9,999	1	4	0	0
10,000	0	0	1	4
	n = 25		n = 25	

Table VIII shows that 84 percent of the participant sample group fell below the \$6,000 figure in annual income. On the other hand, the nonparticipant group showed 84 percent falling below the same figure.

Table IX shows the type and length of occupancy of the sampled groups.

In Table IX, 60 percent of the participants had lived in their present residence for six years or more and 92 percent were tenants. The nonparticipants showed a polarization with 40 percent in that group falling in both the 1-6 month category and six years or more. Also in the nonparticipant group, 76 percent were also tenants.

In Table X representation is given as to which household member is responsible for food purchases and preparation.

Table X indicates that in the participant group the mother was primarily the one responsible for both meal

TABLE IX
DISTRIBUTION OF SAMPLE BY TYPE/LENGTH
OF OCCUPANCY AND PERCENT

	<u>Participants</u>		<u>Nonparticipants</u>	
	<u>Frequency</u>	<u>%</u>	<u>Frequency</u>	<u>%</u>
<u>Type of Occupancy</u>				
Home Owner	2	8	6	24
Tenant	23	92	19	76
	n = 25		n = 25	
<u>Length of Occupancy</u>				
1-6 Months	2	8	10	40
7 Months-1 Year	6	24	2	8
2-3 Years	0	0	2	8
4-5 Years	2	8	1	4
6 Years or More	15	60	10	40
	n = 25		n = 25	

TABLE X
DISTRIBUTION OF SAMPLE BY FOOD PURCHASERS/
PREPARERS AND PERCENT

	<u>Participants</u>		<u>Nonparticipants</u>	
	<u>Frequency</u>	<u>%</u>	<u>Frequency</u>	<u>%</u>
<u>Food Preparers</u>				
Mother	17	68	14	56
Daughter	0	0	1	4
Father	0	0	0	0
Son	0	0	0	0
Male Head of Household	2	8	6	24
Female Head of Household	6	24	4	16
	n = 25		n = 25	
<u>Food Purchasers</u>				
Mother	16	64	14	56
Daughter	1	4	1	4
Father	0	0	0	0
Son	0	0	0	0
Male Head of Household	2	8	6	24
Female Head of Household	6	24	4	16
	n = 25		n = 25	

preparation and purchases. When asked this particular question, the respondents were told to indicate the individual in the home who they felt assumed the specific responsibility three-fourths of the time. None in the participant group indicated that more than one individual was responsible for the meal preparation or food purchases. In the nonparticipant group it appears that the mother in the home also was responsible for both meal preparation and food purchases. The male head of household and female head of household categories referred to homes in the study where no children lived or the individual's household number consisted of one person. In the nonparticipant group one family indicated that the husband and wife shared in the responsibility of meal preparation/purchase.

One of the most interesting responses was related to the amount of nutritional training received by individuals in the sample. This information is given in Table XI.

TABLE XI
DISTRIBUTION OF SAMPLE WITH NUTRITIONAL
TRAINING AND PERCENT

	Participants		Nonparticipants	
	Frequency	%	Frequency	%
Yes, nutritional training received by respondent	8	32	9	36
No, nutritional training not received by respondent	17	68	16	64
	n = 25		n = 25	

When the respondents were asked if any nutritional training had been received, clarity to the question was added by indicating that this would include any instructions in terms of proper food needed for the body to function normally. The respondents were also told that this did not have to include formal training (in an institution of learning) but information training as well (i.e., from parents or siblings). Both groups responded similarly with 68 percent in the participant group and 64 percent in the nonparticipant group having received no nutritional training. This question will be reviewed and discussed again when the responses to the Nutritional Awareness Matrix are discussed.

From the review of the sociodemographic information it can be concluded that both groups were quite similar, with the only outstanding difference involving the percentage of male and female heads of households.

Hypotheses Testing

Three hypotheses were tested in this study. Those hypotheses tested included:

1. Participants in the Food Stamp Program are nutritionally more aware than Food Stamp Program non-participants.
2. Food Stamp Program participants' food consumption is more balanced nutritionally than Food Stamp Program nonparticipants.

3. Food Stamp Program participants are healthier than Food Stamp Program nonparticipants.

Each hypothesis related to the nutritional status of the respondents as operationally defined previously in terms of nutritional awareness, dietary consumption and somatization.

Through the scores on the following measurements: Nutritional Awareness Matrix, Twenty-Four-Hour Dietary Recall and the Self-Report Symptoms Inventory/SCL-90 (somatization scale), the nutritional status can be analyzed. Each respondent was rated for each method of measurement and a score was obtained for group analysis.

The statistical analysis of the three hypotheses were based on the 50 completed questionnaires, with 25 in the Food Stamp Program participant group and 25 in the Food Stamp Program nonparticipant group.

Nutrition Awareness Matrix. The first hypothesis that was evaluated indicated that Food Stamp Program participants were nutritionally more aware than nonparticipants in the program. The t test statistic was used in comparing the Food Stamp Program participant group with the Food Stamp Program nonparticipant group in terms of how well they scored on the Nutritional Awareness Matrix. Table XII is a presentation of the mean, mode, and standard deviation.

TABLE XII
DISTRIBUTION OF SAMPLE BY SCORES OF THE
NUTRITIONAL AWARENESS MATRIX

	Number of Cases	Mean	Mode	Standard Deviation
Participants	25	13.760	12	3.3823
Nonparticipants	25	13.720	13	3.1953
n = 50				

The t-test was found not to be significant (calculated $df = 48$, $t = .04$, $p = .966$). Hypothesis 1 was rejected. There were no significant differences between the scores obtained by the participant group and the nonparticipant group on the Nutritional Awareness Matrix. It is interesting to note that even though the majority of the respondents indicated that they had not received any formal or informal nutritional training that over 92 percent of both groups responded to 50 percent of the statements appropriately.

Twenty-Four-Hour Dietary Recall. The second hypothesis stated that the food consumption of the participant group was more balanced than the nonparticipant group. The t statistic was used to compare the two groups as it related to their ability to meet two-thirds of the dietary adequacy. A score of 8 or more indicated that the standard had been met. The t value was used with the following calculations:

df = 48, $t = .40$, $p = .689$. Hypothesis 2 was not confirmed since there was no significant difference between groups in relation to the Twenty-Four-Hour Dietary Recall. Table XIII presents the frequency of cases falling above and below the two-thirds adequacy as it relates to the basic four food groups.

TABLE XIII
DISTRIBUTION OF SAMPLE BY 24-HOUR
DIETARY RECALL AND PERCENT

Score	Participants		Nonparticipants	
	Frequency	%	Frequency	%
2-7	16	64	13	52
8-12	9	36	12	48
Mean	6.96		7.24	
Mode	7		7	
	n = 25		n = 25	

Block, in her study, compared the nutritional adequacy of diets of food stamp participants and food stamp non-participants. She found no statistically significant difference between those groups.¹ This researcher was intrigued to find that similar results were found in this research project, even though the study was not longitudinal as was the Block study.

¹Block, p. 247.

There was no difference found between the groups as they met dietary adequacy, but there was a difference in how the entire sampled population met dietary adequacy within each individual food group. Therefore, a Student Newman Keul Procedure (follow-up Anova run on the percentage data) was performed at the .05 level of significance. The results of the procedure showed that the sample mean was much lower for the milk group and much higher for the cereal/bread group. The mean for the meat and vegetable/fruit groups were about the same.

Self-Report Symptoms Inventory/Somatization/SCL-90.

The third hypothesis stated that food stamp participants were healthier than food stamp nonparticipants. The t test statistic was used to compare the scores of both groups on the somatization scale. The t value was used and the calculations were: $df = 48$, $t = 1.29$, $p = .203$. Hypothesis 3 was not confirmed. Table XIV represents the range of scores, mean, and mode for both groups as it relates to the somatization scale.

Relating back to the somatization scale, it can be seen that both food stamp participants and food stamp nonparticipants were leaning toward the one (1) category, indicating that the individuals were conscious of some distress related with the symptoms, but it was infrequent and of low intensity.

TABLE XIV
SUMMARY OF SCORES ON SOMATIZATION SCALE

	Participants	Nonparticipants
Range of Scores	1-4.17	1-3.75
Mean	1.76664	1.49666
Mode	1.25	1.25
n = 50		

Several other statistical tests were used such as the chi square, Pearson correlation coefficient and the F ratio. They were used to see if any relationship existed between sociodemographic variables (such as age, education, marital status, etc.) and how the sample compared on the remaining three parts of the questionnaire. However, on all the test run, no significant differences were noted.

The final statistical comparisons made were between all three methods of measurement (Nutritional Awareness Matrix, Twenty-Four-Hour Dietary Recall, and the Somatization Scale). It was found that a relationship did exist between both groups in their responses on the Nutritional Awareness Matrix and the Twenty-Four-Hour Dietary Recall. Table XV presents Pearson correlation coefficients as it relates to the three types of measures compared.

In analyzing Table XV, it can be seen that as individuals scored higher on the Twenty-Four-Hour Dietary Recall, they

also tended to score higher on the Nutritional Awareness Matrix.

TABLE XV
PEARSON CORRELATION COEFFICIENTS FOR
THE THREE MEASUREMENTS

Somatization Scale		24-Hour Recall	Nutritional Matrix
Somatization Scale	1.000	.0996	-.0424
	(0)	(50)	(50)
	s=.001	s=.247	s=.385
24-Hour Recall	.0996	1.0000	.4383
	(50)	(0)	(50)
	s=.246	s=.001	s=.001
Nutritional Matrix	-.0424	.4383	1.000
	(50)	(50)	(0)
	s=.385	s=.001	s=.001

n = 50

CHAPTER VI

SUMMARY AND CONCLUSIONS

Summary

The purpose of this study was to provide information to the research question: Does participation in the Food Stamp Program enhance the nutritional status of families who participate as compared to families that do not participate? A questionnaire was administered to 50 household representatives in the Memphis, Shelby County, Tennessee area. The data from the administration of the questionnaire showed that there was no difference between the nutritional awareness of the food stamp participation and the food stamp nonparticipation groups. Both groups scored equally well in spite of the fact that the majority in both groups indicated that they had received no formal or informal nutritional training.

Although this study was not initially designed to include only Blacks in the sample, the individuals interviewed were all Black. As literature was reviewed, the variable of race submerged as one to be controlled.

There was no difference between groups in their ability to meet dietary adequacy on the day that was used in this research study. However, both groups had a high percentage

of individuals not meeting the two-thirds dietary adequacy needed for normal health and growth development.

The self-perceived health of both groups appeared to be good since both groups tended to have symptoms of low intensity or infrequency.

There did exist a relationship in the score on the Nutritional Awareness Matrix and the Twenty-Four-Hour Dietary Recall. Respondents who scored higher on the Nutritional Awareness Matrix also scored higher on the Twenty-Four-Hour Dietary Recall.

Conclusions

Several conclusions can be drawn from this study with regard to the nutritional status of food stamp participants compared to that of food stamp nonparticipants. They include:

1. Families that were involved in this study and had not participated in the Food Stamp Program were just as aware of basic nutritional facts as those who had the benefits of the program.

2. Food Stamp Program nonparticipating families involved in this study consumed meals that were equivalent nutritionally to those who received food stamp bonus coupons.

3. Families in the Memphis, Shelby County area who did not participate in the Food Stamp Program perceive themselves to be just as healthy as the perception of those who participated in the program.

4. The nutritional information possessed by families, have a tendency to filter into the types of foods consumed.

5. Absence of the nutrition education component from the existing Food Stamp Program was possibly the cause of no differences existing between the participant and nonparticipant groups' nutritional status.

Recommendations

This researcher found no studies comparing the nutritional status of food stamp participants with food stamp nonparticipants, other than those that involved transition from one food assistance program to another. More empirical research is needed in order for policy makers to make sound, rational decisions as to the continuation of the program. The research is also needed in order for any complete evaluation of the total program as it relates to the goals set out in public record. Research data collection on a regional and then national basis could greatly assist policy makers as they have to make crucial decisions. It is anticipated that data of this nature can help to improve the program (i.e., changing the program or even replacing it).

The study should be duplicated to determine its reliability in other areas and settings (such as rural areas). If this study is found to be reliable, another

study with a larger sample across the State of Tennessee would be feasible. Also a longitudinal design may provide data from which stronger inferences can be concluded.

It is further recommended that the social work profession become more involved in evaluative research of programs that have an impact on the majority of its clientele, in order to provide factual information and recommendations when appropriate. If the profession is to gain credibility, it must become responsive to the needs of continuous evaluation of not only the Food Stamp Program but all social programs and legislative concerns.

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APPENDICES

APPENDIX A

May 13, 1979

Mr. Hilton Bolton, County Director
Shelby County
Department of Human Services
170 North Main - Room 901

Dear Mr. Bolton:

As discussed in the meeting with you on April 11, 1979, I am presently in the planning stages of a research project entitled "Food Stamp Program: Study of Nutritional Benefits." In order for subjects to be obtained in a relatively scientific way, I will need to secure data from your Shelby County Food Stamp participant computer roles. Initial contact will be made by your staff for consent purposes, and only those individuals who will voluntarily complete questionnaires will be utilized in the study. Every effort will be made to maintain confidentiality and anonymity of every participant in the sampled group.

Enclosed are copies of the four-part questionnaire as well as the consent form that each participant in the study will be asked to complete. If the use of the agency's information is permitted, the data collection will begin sometime in the month of June, 1979.

If any other information is needed, please let me know and I will gladly respond.

Sincerely,

Linda L. Williams
Candidate for MSSW
The University of Tennessee
School of Social Work - Memphis

cc: Dr. Kate Mullins
Dr. Art Knighton

APPENDIX B

TO: All Service Units

FROM: Carmen Hamilton, Director of Social Services,
Shelby County - by Linda Williams

DATE: August 16, 1979

SUBJECT: Research project conducted by Linda Williams

Linda Williams is presently collecting data to be used in her Master's thesis. In order to assist her in the study, she would like each worker to identify in their case loads any Black clients who qualify for food stamps but have chosen not to participate in the program.

The names and addresses of the above identified households should be sent to Mrs. Williams in Room 403 of the State Office Building by September 14, 1979.

Your cooperation in this matter will be appreciated.

APPENDIX C

The following statement to subjects was given by the researcher in soliciting respondents for this study:

To Whom it May Concern:

Linda B. Williams, a candidate for the degree of Master of Science in Social Work at The University of Tennessee School of Social Work, is writing a thesis regarding the nutritional benefits of the Food Stamp Program that is administered by the Department of Human Services in Shelby County, Tennessee.

All information will be collected in an anonymous fashion and will remain confidential. All information will be kept by researcher during the period of study and will be destroyed after that time. You will not be identified by your name or address on the questionnaire, only by a code number as it relates to the number of participants in the study. Approximately 49 other households will be interviewed in Shelby County. Participants in the study were selected by information obtained from the Department of Human Services with the provision that you voluntarily consented to participate in this research study.

The researcher will answer any questions you may have about this project or your participation in it. You have

the right to refuse to be interviewed or to terminate the interview at any point.

Your participation in this project will be appreciated.

APPENDIX D

The following consent form was given to each respondent and signed by the respondent prior to the administration of the questionnaire:

STATEMENT OF CONSENT BY SUBJECTS

The researcher has informed me of the purpose of this study, and I understand how the information given by me will be used. I give my permission to be interviewed and the information obtained to be used in this study. This consent is being given with the understanding that I will remain anonymous and that I have the right to terminate this interview at any time.

Name

Date

APPENDIX E

Food Stamp Nutritional Study Codebook

Sample Group Data

Question: Information Collected and Code

Item Variable

1	1 2-3	Sample Group: A. Participants in the Food Stamp Program = 1 B. Nonparticipants = 2 Participant's I.D. # = 1-25
2	4	1. How long have you lived at your present address? a. 1-6 months = 1 b. 7 months-1 year = 2 c. 2-3 years = 3 d. 4-5 years = 4 e. 6 or more years = 5 f. n/a = 9
3	5	2. Type of occupant: a. owner = 1 b. tenant = 2 c. other = 3 d. n/a = 9
4	6	3. Marital status: a. married = 1 b. single = 2 c. widowed = 3 d. divorced = 4 e. separated = 5 f. n/a = 9
5	7	4. Number of children at home: a. 1-2 = 1 b. 3-4 = 2 c. 5-6 = 3 d. 7-9 = 4 e. 10 or more = 5 f. n/a = 9

Item Variable

6	8	5. Persons per household:	
		a. 1-4	= 1
		b. 5-8	= 2
		c. 9-12	= 3
		d. Over 12	= 4
		e. n/a	= 9
7	9	6. Age on last birthday:	
		a. 18-20	= 1
		b. 21-25	= 2
		c. 26-35	= 3
		d. 36-45	= 4
		e. 46-55	= 5
		f. 56-60	= 6
		g. 61-67	= 7
		h. 68+	= 8
		i. n/a	= 9
8	10	7. Head of household:	
		a. male	= 1
		b. female	= 2
9	11	8. Education completed:	
		a. K-4	= 1
		b. 5-8	= 2
		c. 9-12	= 3
		d. 1-2 years college	= 4
		e. 3-4 years college	= 5
		f. BA degree	= 6
		g. Graduate study	= 7
		h. Technical school	= 8
		i. n/a	= 9
10	12	9. Are you working at a job?	
		a. yes	= 1
		b. no	= 2
		c. n/a	= 9

Item Variable

11	13	10.	If yes, is your job:	
		a.	professional	= 1
		b.	semiprofessional	= 2
		c.	skilled	= 3
		d.	unskilled	= 4
		e.	n/a	= 9
12	14	11.	If no, have you worked in the past?	
		a.	yes	= 1
		b.	no	= 2
		c.	n/a	= 9
13	15	12.	If married, is your spouse working?	
		a.	yes	= 1
		b.	no	= 2
		c.	n/a	= 9
14	16	13.	If not, has he/she worked in the past?	
		a.	yes	= 1
		b.	no	= 2
		c.	n/a	= 9
15	17	14.	Do you receive food stamps?	
		a.	yes	= 1
		b.	no	= 2
		c.	n/a	= 9
16	18	15.	If yes, what is the value of stamps received?	
		a.	\$1.00-\$50.00	= 1
		b.	\$51.00-\$100.00	= 2
		c.	\$101.00-\$200.00	= 3
		d.	\$201.00-\$300.00	= 4
		e.	\$301.00-\$400.00	= 5
		f.	\$401.00-\$500.00	= 6
		g.	\$501.00+	= 7
		h.	n/a	= 9
17	19	16.	If no, have you ever received food stamps?	
		a.	yes	= 1
		b.	no	= 2
		c.	n/a	= 9

Item Variable

18	20	17.	If the answer is yes, how long ago did you last receive food stamps?	
		a.	1-6 months	= 1
		b.	7 months-1 year	= 2
		c.	2-3 years	= 3
		d.	4-5 years	= 4
		e.	6-7 years	= 5
		f.	8-10 years	= 6
		g.	11 years+	= 7
		h.	n/a	= 9
19	21	18.	Total income for the last year:	
		a.	\$0-\$1,999	= 1
		b.	\$2,000-\$3,999	= 2
		c.	\$4,000-\$5,999	= 3
		d.	\$6,000-\$7,999	= 4
		e.	\$8,000-\$9,999	= 5
		f.	\$10,000 or more	= 6
		g.	n/a	= 9
20	22	19.	Total income 4 years ago:	
		a.	\$0-\$1,999	= 1
		b.	\$2,000-\$3,999	= 2
		c.	\$4,000-\$5,999	= 3
		d.	\$6,000-\$7,999	= 4
		e.	\$8,000-\$9,999	= 5
		f.	\$10,000 or more	= 6
		g.	n/a	= 9
21	23	20.	Person in household primarily responsible for preparing the food:	
		a.	mother	= 1
		b.	father	= 2
		c.	daughter	= 3
		d.	son	= 4
		e.	other	= 5
		f.	n/a	= 9
22	24	21.	Person in family primarily responsible for purchasing food:	
		a.	mother	= 1
		b.	father	= 2
		c.	daughter	= 3
		d.	son	= 4
		e.	other	= 5
		f.	n/a	= 9

Item Variable

- | | | | | |
|----|----|-----|--|-----|
| 23 | 25 | 22. | Have the persons who are responsible for food preparation and food purchasing had nutrition classes or nutritional training? | |
| | | a. | yes | = 1 |
| | | b. | no | = 2 |
| | | c. | n/a | = 9 |
| 24 | 26 | 23. | If yes, from whom? | |
| | | a. | parents | = 1 |
| | | b. | other relatives | = 2 |
| | | c. | school | = 3 |
| | | d. | church | = 4 |
| | | e. | public agency | = 5 |
| | | f. | nonrelatives | = 6 |
| | | g. | n/a | = 9 |

NUTRITIONAL AWARENESS MATRIX

- | | | | | |
|----|----|----|---|-----|
| 25 | 27 | 1. | The average individual should eat three meals per day to maintain a satisfactory nutritional level. | |
| | | a. | agree | = 1 |
| | | b. | disagree | = 2 |
| | | c. | don't know | = 9 |
| 26 | 28 | 2. | Physical exercise of the body is just as important as eating foods that are good for you. | |
| | | a. | agree | = 1 |
| | | b. | disagree | = 2 |
| | | c. | don't know | = 9 |
| 27 | 29 | 3. | Reading of labels can offer <u>no</u> help in selecting foods for one's family. | |
| | | a. | agree | = 2 |
| | | b. | disagree | = 1 |
| | | c. | don't know | = 9 |
| 28 | 30 | 4. | An individual cannot eat well-balanced meals without meat. | |
| | | a. | agree | = 2 |
| | | b. | disagree | = 1 |
| | | c. | don't know | = 9 |

Item Variable

- | | | | | |
|----|----|-----|---|-----|
| 29 | 31 | 5. | Planning meals for the entire day can help assure that the family members are receiving foods with all of the nutrients needed. | |
| | | a. | agree | = 1 |
| | | b. | disagree | = 2 |
| | | c. | don't know | = 9 |
| 30 | 32 | 6. | In preparing a meal, it is more important that it is tasty and appealing rather than nutritionally good for the person eating the food. | |
| | | a. | agree | = 2 |
| | | b. | disagree | = 1 |
| | | c. | don't know | = 9 |
| 31 | 33 | 7. | A person who is fat or overweight cannot be malnourished. | |
| | | a. | agree | = 2 |
| | | b. | disagree | = 1 |
| | | c. | don't know | = 9 |
| 32 | 34 | 8. | Going to bed immediately after eating has no affect on the digestion of food. | |
| | | a. | agree | = 2 |
| | | b. | disagree | = 1 |
| | | c. | don't know | = 9 |
| 33 | 35 | 9. | Reading of labels can only help in securing the most for your money in the selection of foods. | |
| | | a. | agree | = 2 |
| | | b. | disagree | = 1 |
| | | c. | don't know | = 9 |
| 34 | 36 | 10. | Foods are grouped into the following four categories: milk, meat, vegetable/fruit and bread/cereal. | |
| | | a. | agree | = 1 |
| | | b. | disagree | = 2 |
| | | c. | don't know | = 9 |

Item Variable

35	37	11.	Foods other than milk supply calcium to the body.	
		a.	agree	= 1
		b.	disagree	= 2
		c.	don't know	= 9
36	38	12.	Meat is the major source of calcium.	
		a.	agree	= 2
		b.	disagree	= 1
		c.	don't know	= 9
37	39	13.	Citrus fruits such as oranges provide vitamin C.	
		a.	agree	= 1
		b.	disagree	= 2
		c.	don't know	= 9
38	40	14.	Bananas are a source of potassium.	
		a.	agree	= 1
		b.	disagree	= 2
		c.	don't know	= 9
39	41	15.	Beans and nuts can be substituted for meats.	
		a.	agree	= 1
		b.	disagree	= 2
		c.	don't know	= 9
40	42	16.	Cooking of vegetables until they are mushy does not decrease their nutrient value.	
		a.	agree	= 2
		b.	disagree	= 1
		c.	don't know	= 9
41	43	17.	Saccharin (a sugar substitute) has been found to cause cancer.	
		a.	agree	= 1
		b.	disagree	= 2
		c.	don't know	= 9

Item Variable

- | | | | | |
|----|----|-----|--|-----|
| 42 | 44 | 18. | Many food additives have been found to interfere with the nutritional benefits of foods. | |
| | | a. | agree | = 1 |
| | | b. | disagree | = 2 |
| | | c. | don't know | = 9 |
| 43 | 45 | 19. | As long as food product is allowed to be sold in a grocery store, it is safe to eat. | |
| | | a. | agree | = 2 |
| | | b. | disagree | = 1 |
| | | c. | don't know | = 9 |
| 44 | 46 | 20. | Water is an element needed by the body on a daily basis. | |
| | | a. | agree | = 1 |
| | | b. | disagree | = 2 |
| | | c. | don't know | = 9 |

TWENTY-FOUR-HOUR DIET RECALL

- | | | | | |
|----|----|----|------------------------------------|-----|
| 45 | 47 | 1. | Food Group I - meats: | |
| | | a. | 1 serving | = 1 |
| | | b. | 2 servings | = 2 |
| | | c. | 0 | = 0 |
| 46 | 48 | 2. | Food Group II - vegetables/fruits: | |
| | | a. | 1 serving | = 1 |
| | | b. | 2 servings | = 2 |
| | | c. | 3 servings | = 3 |
| | | d. | 4 servings or more | = 4 |
| | | e. | 0 | = 9 |
| 47 | 49 | 3. | Food Group III - milk: | |
| | | a. | 1 serving | = 1 |
| | | b. | 2 servings | = 2 |
| | | d. | 0 | = 0 |

Item Variable

48	50	4. Food Group IV - bread/cereal:	
		a. 1 serving	= 1
		b. 2 servings	= 2
		c. 3 servings	= 3
		d. 4 servings or more	= 4
		e. 0	= 0

SELF-REPORTED HEALTH INDEX/SOMATIZATION

49	51	1. Headaches:	
		a. not at all	= 1
		b. a little bit	= 2
		c. moderately	= 3
		d. quite a bit	= 4
		e. extremely	= 5
50	52	2. Faintness or dizziness:	
		a. not at all	= 1
		b. a little bit	= 2
		c. moderately	= 3
		d. quite a bit	= 4
		e. extremely	= 5
51	53	3. Pains in heart or chest:	
		a. not at all	= 1
		b. a little bit	= 2
		c. moderately	= 3
		d. quite a bit	= 4
		e. extremely	= 5
52	54	4. Pains in lower back:	
		a. not at all	= 1
		b. a little bit	= 2
		c. moderately	= 3
		d. quite a bit	= 4
		e. extremely	= 5

Item Variable

53	55	5. Trouble getting your breath:	
		a. not at all	= 1
		b. a little bit	= 2
		c. moderately	= 3
		d. quite a bit	= 4
		e. extremely	= 5
54	56	6. Nausea or upset stomach:	
		a. not at all	= 1
		b. a little bit	= 2
		c. moderately	= 3
		d. quite a bit	= 4
		e. extremely	= 5
55	57	7. Soreness of your muscles:	
		a. not at all	= 1
		b. a little bit	= 2
		c. moderately	= 3
		d. quite a bit	= 4
		e. extremely	= 5
56	58	8. Hot or cold spells:	
		a. not at all	= 1
		b. a little bit	= 2
		c. moderately	= 3
		d. quite a bit	= 4
		e. extremely	= 5
57	59	9. Numbness or tingling in parts of your body:	
		a. not at all	= 1
		b. a little bit	= 2
		c. moderately	= 3
		d. quite a bit	= 4
		e. extremely	= 5
58	60	10. A lump in your throat:	
		a. not at all	= 1
		b. a little bit	= 2
		c. moderately	= 3
		d. quite a bit	= 4
		e. extremely	= 5

Item Variable

59	61	11. Feeling weak in parts of your body:	
		a. not at all	= 1
		b. a little bit	= 2
		c. moderately	= 3
		d. quite a bit	= 4
		e. extremely	= 5
60	62	12. Heavy feelings in your arms or legs:	
		a. not at all	= 1
		b. a little bit	= 2
		c. moderately	= 3
		d. quite a bit	= 4
		e. extremely	= 5

VITA

Linda Brown Williams was born in Memphis, Tennessee, on February 10, 1950. She attended elementary and high schools in that city and graduated from Booker T. Washington High School in 1968. In September, 1968, she entered Southern Illinois University-Carbondale, and graduated in June, 1972, with a Bachelor of Science Degree in Social Welfare. She accepted her first career position as a social worker for the Department of Human Services, Shelby County, Tennessee, after completing college and has maintained employment with that agency for the past seven years.

She was able to secure an educational leave of absence from the agency in September of 1978 and entered The University of Tennessee, School of Social Work, Knoxville. In June, 1980, she received the Master of Science Degree in Social work.

She is married to Michael Howard Williams and has one daughter, Maleka, age 7.