THE OPINIONS OF DAY CARE TEACHERS TOWARD NUTRITION EDUCATION

By

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TOWARD NUTRITION EDUCATION

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INTRODUCTION

Despite the higher income and the greatest abundance of foods in the history of the United States, Adelson (1968) indicated that the adequacy of dietary levels of the general population had decreased in the past ten years. More diets were rated poor in 1965 than in 1955 in both affluent as well as poor subjects (Adelson, 1968). Preschool children were indicated as one of the groups most vulnerable to malnutrition by the panel surveying the nutritional status of American people (White House Conference on Food, Nutrition and Health, 1970).

The dietary practices established during childhood influenced lifetime eating habits. An opportune time to establish habits which lead to good nutrition was thought to be the early elementary years. The habit formation of young children was affected greatly by the school-like environment (Peterson and Kies, 1972).

During the late 1960's increased interest and a sense of urgency concerning nutritional status of people of the United States was aroused. In response to a growing national awareness of malnutrition, the White House Conference on Food, Nutrition and Health (1970) was called for the purpose of investigating and advising on the development of a national policy aimed at eliminating hunger and malnutrition. The conference members recommended that a dynamic nutrition education program beginning in early childhood and continuing through the

elementary and secondary levels be initiated (White House Conference on Food, Nutrition and Health, 1970).

The continued and expanded use of day care centers was also recommended by the White House Conference. Day care was recommended to be available, particularly for working mothers, and an estimated goal of day care facilities for 600,000 additional children each year for the next five years. By the end of 1975, there would be approximately 3,500,000 children in day care (White House Conference on Food, Nutrition and Health, 1970).

The report from the White House Conference on Food, Nutrition and Health emphasized that every American should have access to knowledge of nutrition and its relation to health along with the purchasing power to secure food meeting his nutritional requirements. Sound nutrition education needed to be made available to enable each individual to become competent in selecting at the least cost the best diet, which was culturally acceptable to him or her. In addition, every person needed to have sufficient economic resources so that these choices could be made without compromising social values, family traditions or cultural preferences.

Recommendation No. 6 from the White House Conference on Food, Nutrition and Health, concerning curriculum development in nutrition education stated:

> Every person throughout his life should be able to make decisions on his choices of foods based on an understanding of his needs as determined by:
>
> 1. His physiological state and physical activities,
> 2. His knowledge of nutrient composition of plant, animal, and formulated foods in his environment,
> 3. His ability to distinguish between truth and distortion in relation to foods, nutrition and health,

4. His ability to use his available resources whatever that may be.

> As future citizens in democracy, children must acquire knowledge and social consciousness which will enable them to participate intelligently in the adoption of public policy affecting the nutrition of the people (White House Conference on Food, Nutrition and Health, pp. 150-151).

La Chance (1971) pointed out that a major obstacle to improving the nutritional status in our country was that one million teachers who have a direct responsibility for helping teach nutrition education had little or no nutrition training, had no uniform tools and lacked effective methods to convey nutrition knowledge. Due to the widespread incidence of poor food habits and the difficulty in changing adult behavior patterns, it was important to start early with a nutrition education program which promoted good nutrition. The day care teachers across the nation were in an excellent position to combat nutrition ignorance and establish sound nutrition practices. These educators needed to continuously update and strengthen the curricula and instruction related to nutrition in order to protect the health and well-being of members of our society especially the children. Little information was available on the nutrition knowledge and attitudes of day care teachers.

Statement of Problem

The purpose of this study was to identify the opinions of day care teachers toward nutrition education in the day care program. The study also identified the nutrition education needs of the day care teachers and the status of nutrition education in the day care programs. On the basis of the findings, suggestions and recommendations

for the incorporation of nutrition education in the day care programs were formulated.

Objectives

The objectives of the study were:

1. To determine the day care teachers' opinions concerning nutrition education in the day care programs.
2. To identify the status of nutrition education in the day care programs.
3. To identify the relationship between selected variables and day care teachers' opinion toward teaching nutrition education in the day care program.
4. To determine the needs of day care teachers for nutrition information and teaching techniques.
5. To formulate suggestions and recommendations for the incorporation of nutrition education in the day care program.

Hypotheses

The hypotheses for the study were:

1. There will be no significant difference in the day care teachers' opinion toward the importance of nutrition education being taught in the day care program (Item 15, Appendix B, p. 119), and the age of day care teachers (Item 30, Appendix B, p. 121).
2. There will be no significant difference in the day care teachers' opinion toward the importance of nutrition education being taught in the day care program (Item 15, Appendix

B, p. 119) and the respondents' teaching experience at the day care level (Item 29, Appendix B, p. 121).

3. There will be no significant difference in the day care teachers' opinion toward the importance of nutrition education being taught in the day care program (Item 15, Appendix B, p. 119) and their educational background (Items 31 and 32, Appendix B, p. 121).
4. There will be no significant difference in the day care teachers' opinion toward the importance of nutrition education being taught in the day care program (Item 15, Appendix B, p. 119) and their nutrition education background (Item 26, Appendix B, p. 120).
5. There will be no significant difference in the day care teachers' opinion toward the importance of nutrition education being taught in the day care program (Item 15, Appendix B, p. 119) according to the number of children in the day care program (Table XXIII).

Limitations

The following limitations were acknowledged by the researcher.

1. The study was limited to selected teachers employed in licensed day care centers in the State of Oklahoma.
2. The study was limited to day care centers who provided care or supervision for six or more children for a part of the twenty-four hour day.

Assumptions

The assumptions for this study were:

1. Day care teachers did not have sufficient knowledge for teaching nutrition in the day care program.
2. There was a limited number of day care programs which included nutrition education.
3. Inservice education could be beneficial in assisting day care teachers to incorporate nutrition education in their program.

Definition of Terms

Because of the interdisciplinary character of nutrition education, an understanding of terminology was essential. For the purpose of the study the following terms were defined.

Child--any person who has not attained the age of eighteen (Standards For Day Care Centers, 1975).

Child care facilities--any public or private institution, child placing agency, foster family home, group home, day care centers or family day care home, providing either full-time or part-time care for children away from their own homes, and which was owned or controlled by a political subdivision, a corporation, an unincorporated organization or association, or individual (Standards For Day Care Centers, 1975).

Concept--an abstraction symbolic of many images and memories which have become blended into a meaningful whole from which unrelated ideas have been mostly eliminated (Wann, Dorn, and Liddle, 1962).

Day care--the provision of care and supervision of a child who resided in its own home or with relatives but was in the care of another person, for part of the day who was conducting a family day care home or persons conducting a day care center (Standards For Day Care Centers, 1975).

Day care centers--licensed or approved facilities which provided care and protection for six or more children for a part of the twenty-four hour day (Standards For Day Care Centers, 1975).

Good nutrition--supplied two-thirds or more of the Recommended Dietary Allowance (RDA) for all nutrients (Sebrell, 1969).

Institutions--any public or private non-profit organization where children were not maintained in permanent residence including, but not limited to day care centers, settlement houses, recreation centers, family day care programs, Head Start centers, Homestart programs, and institutions providing day care services for handicapped children (United States Codes, 1976).

Integrated nutrition education--the teaching of nutrition in combination with subject matter already planned, or with several subjects.

Nutrition--the food you eat and how the body uses it (Blossom and Pennington, 1971).

Nutrition education--education to enable each individual to become competent in selecting at the least cost the best diet which was culturally acceptable to him or her.

Procedures

Participants in the study included day care teachers with a high

school diploma or with an equivalent of education and experience accepted by the Standards For Day Care Centers. A list of day care centers was obtained from the Licensing Bureau, Department of Institutions, Social and Rehabilitative Services. A sample of 256 day care centers were selected from the list of 585 day care centers in the state of Oklahoma. The sample of 256 day care centers was chosen by a stratified random selection excluding the day care centers chosen for pretesting of the questionnaire.

A questionnaire was developed by the researcher consisting of 33 items. Three additional questions were open-ended to encourage free responses. The instrument included directions and definitions of terms. Graduate students evaluated the questionnaire items for clarity. The questionnaire was pretested with ten selected day care teachers to establish the reliability of the instrument. Suggestions made by the respondents were incorporated into the instrument.

A letter and a return post card or a participation sheet were mailed to the directors of the day care centers which explained the purpose of the study and asked for participation. The directors were asked to provide a list of teachers willing to participate in the study.

The data were collected in the spring, 1977, by mailing the questionnaire to the participating day care teachers in Oklahoma. Follow-up procedures were conducted three weeks after the first mailing to all subjects who had not responded.

The responses to the questionnaire were tabulated and analyzed. Frequencies and percentages were utilized to identify data. Chi Square was used to identify the relationship between the day care teachers'

opinion toward the importance of teaching nutrition education in the day care program to selected variables. The variables included age, teaching experience, educational background, nutritional background, and number of children in the day care program. A level of significance was established as (p = .05).

On the basis of the findings, suggestions and recommendations were made to incorporate nutrition education in day care programs. In addition, suggestions and recommendations were formulated for curriculum development in the areas of early childhood education and nutrition education. A summary of the results were mailed to the teachers who participated in the study.

CHAPTER II

REVIEW OF LITERATURE

The U. S. has been called a nation of nutritional illiterates. The problem may be directly related to the lack of the necessary educational base to permit assimilation of the information. Nutrition and health educators must be concerned with human behavior and therefore must compete with all internal and external forces that define and control how an individual develops. The fact that nutrition educators work with food, which brings to man not only sustence and survival but one of his/her greatest pleasures, has made the task difficult.

The purpose of this chapter was to develop a rationale for the study based on current literature which pertained to nutrition education. The review contained sections on: (1) nutrition surveys and conferences; (2) development of day care program; (3) current status of day care; (4) nutrition education and young children; and (5) nutrition education for teachers.

Nutrition Surveys and Conferences

A knowledge of nutritional status of the citizens of the United States was necessary for nutrition related research. Nutrition information of this type was important if one was to define nutrition problems of a segment of our population and plan for corrective nutrition

programs. This section will provide a review of pertinent information about nutrition surveys and conferences throughout the United States.

Nutrition Surveys Highlighting Children

The 1965 Food Consumption Survey was one of the most comprehensive nutritional surveys ever undertaken. Vitamin A, ascorbic acid, calcium, and iron were the nutrients found most often to be below the RDA in the diets of children and adults of all regions in the 1965 Food Consumption Survey (Kelsay, 1969). Some of the findings of the 1965 Food Consumption Survey concurred with the findings of Owen and Kram (1969). These two studies along with the Oklahoma School Lunch Survey (1970) showed that the greater the family income, the more adequate was the intake of calories, calcium, protein, and vitamin C.

The changes in diets of households from 1955-1965 were indicated in the results of the Food Consumption Survey (Adelson 1968). After analyzing the survey, Adelson reported that in the past decade in the United States, despite higher income and a great abundance of food, there had been a decrease in the number of households reporting adequate levels of food consumption. In the 1965 survey, 25 percent of the reported diets provided less than two-thirds of the allowance for one or more of the nutrients studied. This level would be considered inadequate over an extended period of time. Poor diets were found among the affluent as well as the poor. More diets were rated poor in 1965 than in 1955. The implications of the survey for nutrition education indicated that nutrition programs were needed to meet the needs of all age groups.

The Ten-State Nutrition Survey (1972) was conducted to identify the prevalence, magnitude and distribution of malnutrition and related health problems within the United States. Almost 30,000 families were identified by the sampling procedure yielding a representative sample of the low-income families but not representative of middle- and high-income population. Demographic data were obtained on 24,000 families containing over 86,000 persons with 40,000 individuals involved in the evaluation of nutritional status. The results of the Ten-State Nutrition Survey indicated that a significant proportion of the population surveyed were malnourished or were at high risk of developing nutritional problems. However, malnutrition in different segments of the population varied in severity and in regard to the specific nutrients involved. The findings showed that the characteristics of malnutrition were often unique to the local situation and to the specific subsegment of the population being surveyed. Nutritional solutions to the different types of malnutrition encountered will vary among different segments of the population having different social, cultural, and economic characteristics.

Among the various age groups surveyed, adolescents between the ages of 10 and 16 years had the highest prevalence of unsatisfactory nutritional status. Male adolescents had more evidence of malnutrition than females. Children's nutritional status under the age of 17 was related to the number of years of education of the person responsible for buying the food. Iron deficiency anemia was a widespread problem within the population surveyed (Ten-State Nutrition Survey 1968-1970, 1972).

A 24-hour dietary survey of the Massachusetts public school

children was conducted in 1969. The results of the survey which contacted 147,561 children revealed that 139,000 boys and girls came to school without breakfast on the survey day. The findings also indicated that 500,000 children ate inadequate lunch on that day (Callahan, 1973).

The Health and Nutrition Examination Survey (HANES) has been conducted by the National Center for Health Statistics since 1971 as a continuing national system to measure and then to monitor nutritional status in the United States. The survey consisted of 20,749 persons from a 30,000 person probability sample of the total population, age 1 to 74 years, including persons from 34 states and the District of Columbia. Biochemical analysis of iron levels in the blood showed that iron deficiency anemia was most marked among persons ages 1 to 17, with the greatest problem among very young children. Relative calcium intake (mean intake per 1,000 calories) was lower for blacks than for whites in each age, sex and income group examined (Health Resources Administration, 1974).

A School Lunch Division Survey (1970) of food habits revealed that of 6,184 Oklahoma children, seven percent were judged to have less than a 1/3 of the calcium required daily; 9.5 percent received less than a 1/3 of the vitamin A needed according to the Recommended Daily Allowance (RDA). Eighty-five percent of the children consumed the B vitamins in adequate amounts. Only 75 percent were judged to have enough iron. Five- and six-year old children had the least adequate diets. The Oklahoma School Lunch Survey agreed with the findings of Owen and Kram (1969) that inadequate diets were found among children from all levels of income.

Socio-Economic Factors

A number of dietary and biochemical studies in many parts of the United States have been published, within the past twenty years, for the purpose of assessing national nutritional status. According to Owen and Kram (1969) nutritional deficiencies were found in the diets of 558 preschool children from all socio-economic income levels in Mississippi. The most limited nutrients in the diets of these preschool age children were calcium, riboflavin and ascorbic acid. Biochemical assays and growth achievement research supported Owen and Kram's findings. Owen and Kram found that in general the greater the family income, the more adequate was the intake of calories, protein and vitamin C. This was also revealed in the Oklahoma School Lunch Survey, 1970. The children from the lowest income groups were found to have more low values of nutrient intake than children of the highest income groups. However, some children of families with the highest income had nutritional deficiencies. This enforced the fact that nutritional adequacy was related to dietary habits and food preparation as well as income.

Birch (1971) reported a survey about poor socio-economic level children. The author suggested that the evidence showed that some degree of malnutrition was relatively widespread among poor children. However, the effects of inadequate nutrition on growth and mental development depended to a large extent on the severity, the timing (pre- and postnatal), and the duration of the nutritional deprivation. There was a strong indication that nutritional factors at a number of different levels contributed significantly to depressed intellectual

level and learning failure. An adequate state of nutrition was necessary for good attention and for appropriate and sensitive responsiveness to the environment.

Family Environment

In a study conducted by Sims and Morris (1974), the nutritional status of 163 preschool children in Lansing, Michigan, was examined in relation to family characteristics and maternal attributes. Children of mothers who exhibited more "egalitarian" attitudes toward child-rearing and represented a higher socio-economic strata tended to have higher intakes of calcium and ascorbic acid. The second type of mother was from the lower socio-economic groups. This type of mother displayed more authoritarian attitudes toward child-rearing; her children ate food with more calories, carbohydrate, iron, and thiamin. These children also had somewhat higher hemoglobin and hematocrit values and weighed slightly more for their height than those from the other group. Family environment characteristics were indicated as to having a direct bearing on the dietary intake and the consequent nutritional status of children within particular family environments.

Food Patterns

One of the purposes of the North Central Regional Survey of Diets of Preschool Children discussed by Eppright et al. (1969) and Vivian (1974) was to reveal information helpful in planning and conducting nutrition education programs. The survey consisted of 3,444 children ranging in age from birth to six years in 2,000 households in 12 North Central states. New insights into the eating behavior of children

were provided through the study. Most of the children came from families who could afford to buy foods to provide a proper diet. The study indicated that preschool children made food selection decisions more often at breakfast and snack periods than at any other time. More children were allowed freedom in deciding upon which foods were eaten. The study suggested that about one-half of the young children who entered school had little experience in making decisions about food selection. The authors also found that by the age of three, many children had developed dislikes for certain foods, particularly vegetables, but fruits were disliked by few. The vegetables most frequently disliked were spinach, carrots, green beans, and peas. Twenty-three percent of the mothers surveyed used foods as rewards for good behavior; 10 percent used deprivation of food as punishment; and 29 percent used food as a pacifier. This study indicated that children choose a limited variety of foods from a very young age (three months to six years). In addition, lifetime eating habits may be influenced by many factors in the early feeding of children (Eppright et al., 1969).

Food habits and snacking patterns of 44 well-nourished Michigan children examined during preschool and early elementary school years were observed by Beyer and Morris (1974) to be relatively constant. The study implied that practices established with very young children provided the foundation for nutritional status later in childhood. The study also underlined the desirability of training children to eat the right foods at an early age. Hill (1963) stated that it was easier to develop good food habits in young children than it was to correct poor habits as children grew older. Beyer and Morris (1974) indicated that parents should know and practice good food habits from the time their children were born, if not before.

National Conferences on Nutrition and Health

Concern and interest in nutrition education has been demonstrated by the government of the United States with the sponsoring of national conferences in Washington, D. C., since 1941. The purpose and goals of these conferences were:

1. To appraise, current nutrition knowledge, various techniques of adding to it, and ways of disseminating it.
2. To evaluate our food supply and the nutriture of our people.
3. To study the influence of technological improvements in the production, distribution, and processing of food.
4. To measure the impact of changing sociological, economic, and political conditions upon the diets and food habits of our people.
5. To focus attention on dietary problems which are unique to particular age groups, and to find the best techniques for teaching those groups better food habits.
6. To discuss and assess the role of each specialist in his own field in relation to roles of other specialists as a means of achieving maximum cooperation toward progress in nutrition education (Eppright, Pattison, Barbour, 1963, pp. 213-219).

White House Conference on Food, Nutrition and Health

The White House Conference on Food, Nutrition and Health (1970) which was held in Washington, D. C. on December 2-4, 1969, consisted of 26 panels of experts. The goal of the conference members was to develop a national policy aimed at eliminating hunger and malnutrition

due to poverty and improving the nutritional health of all Americans. The Nutrition Education in Elementary and Secondary Schools Section of the conference which dealt primarily with nutrition education, was brought into focus for this review. This report recognized the urgency for immediate action to eliminate hunger and the need for a long-range program in nutrition education. A dynamic nutrition education program that began in early childhood and continued through the elementary and secondary schools was recommended to help children to acquire positive attitudes toward food.

The report from the White House Conference on Food, Nutrition and Health (1970) emphasized that every American should have access to knowledge of nutrition and its relation to health as well as to the purchasing power to secure food to meet his nutritional requirements. Sound nutrition education should be made available to enable each individual to become competent in selecting the best diet at the least cost, and which was culturally acceptable to him. In addition, every person should have sufficient economic resources so that these choices could be made without compromising social values, family traditions or cultural preferences.

Panel IV of the White House Conference on Food, Nutrition and Health (1970) made the following recommendations in relation to teaching nutrition and nutrition programs:

> That a comprehensive and sequential program of nutrition education be included as an integral part of the curriculum of every school in the United States and its territories.
>
> That a proposed conceptual framework be used as a resource in developing new curriculum and evaluation of existing curriculum.

> That a national interdisciplinary study group be appointed to give further study of the proposed conceptual framework, to assess the current status of nutrition education in the schools, to prepare curriculum guidelines and resource materials for use by state and educational agencies, and to suggest pilot programs to test, evaluate and revise materials (p. 151).

Another recommendation was that action needed to be taken to support nutrition education in schools. One of the goals of nutrition education was to develop an informed public capable of making wise food choices. One way to accomplish this task was the participation of food industries, textbook publishers, state and federal agencies in the development of additional nutrition curriculum materials and aids which reflected the different cultures of the people of our nation. The panel on nutrition surveillance, at the White House Conference, recommended that preschool children, primary school children, expectant mothers, and low-income persons be given priority to correct nutritional deficiencies (Mayer, 1969-1970).

Evidence has indicated that hunger and malnutrition were problems of all segments of the United States population. An increased interest and a sense of urgency to combat hunger and malnutrition in the United States has occurred because these situations created problems in health, motivation, learning, employment, mental development, human relationships, and mental health. The information reviewed provided insight into the need to attempt to raise the nutritional consciousness of the American people, as well as implement corrective nutrition programs. Because dietary practices established during childhood influence lifetime eating habits, these education programs needed to begin at an early age.

Development of Day Care Program

The society's legitimate concern for the optimal development of children of less advantageous circumstances, the need for husbandless mothers to earn their family's livelihood, the desire of increasing number of mothers in the more affluent sector of society to seek employment, and the demands of the "Women's Liberation movements" converged into a multiplicity of forces within our society to exert pressure for the establishment of publicly funded and managed child care programs. Public support of day care programs was provided to meet national needs and not primarily for the concern of the children's welfare.

The demand for day care services was increasing, but the need for quality day care programs presented an even larger challenge. Nutrition and nutrition education were recognized as vital components of a quality program (Juhas, 1973).

Need for Day Care in American Society

Day care services in the United States were funded by the Federal government during both World Wars, when women were needed for the labor force. An interest in day care was revived during the 1960's due to the ever-increasing number of women working outside the home. The primary reason for the revived interest in day care, as during the wars, was to free women to work rather than to meet the children's needs. Despite the interest in the labor aspect, day care was becoming a means of promoting the optimal development of each child.

Through the years, the view of caring for children has increasingly been brought into the focus of the public. Day care has come to be

viewed as an opportunity for the community to support and supplement the parental guidance of their children to encourage their full intellectual, social, emotional, and physical development. All children have similar developmental needs (Lazar and Rosenberg, 1971). To ensure the encompassing similar essential elements in all child care programs, steps have been taken through legislation. The Oklahoma Child Care Facilities Licensing Act (10.0 S. Supp. No. 401-140) passed in 1963 was the basic guide to improvement of day care for children. The purpose of this Act was clearly stated as

> ...to insure maintenance of minimum standards for the care and protection of children away from their own homes, to encourage and assist the child care facility toward maximum adequate services for child care.... (Standards For Day Care Centers, p. I).

Effects of Working Mothers on Day Care

According to the Day Care Survey 1970 presented to the Office of Economic Opportunity by the Westinghouse Learning Corporation, April, 1971, working mothers in the population had 3.7 million children under 14 years of age, 1.6 million of whom were under the age of six. Twenty-nine percent of the children were cared for by day care centers (U. S. Congress, Senate. Committee on Finance, 1974).

The labor force of 1971 was estimated with 40 percent women compared to only 10 percent in 1948. In addition, at least 40 percent of mothers who had children under 18 worked in 1971, in contrast to the 10 percent of such mothers in 1948 (Fitzsimmons and Rowe, 1971).

In March, 1973, there were 19,145,000 children under six years of age in the United States. About 10 million of these were ages three to five, the usual age for preschool children. There were 26,189,000

children under age 18 in March, 1973, whose mothers were in the labor force. Of these, 5,952,000 were under age six. The number of children under age six with working mothers has been growing steadily in recent years, increasing from 4.5 million in 1965. The percent of children in this age group whose mothers were in the labor force increased from 28.5 percent in 1970 to 31.1 percent in 1963. Thus nearly one out of every three children in the United States under age six had a mother in the labor force. The proportion was higher for those approaching six than for the youngest children, since the labor force participation rate for mothers with children over three was higher than for those with children under three (U. S. Congress, Senate. Committee on Finance, 1974).

There were approximately 46,300 licensed or approved day care centers in the United States in 1970. It was estimated that these facilities served only 638,000 children. Millions of young children including five million preschool children of working mothers could have benefited significantly from day care services (Lazar and Rosenberg, 1971). Data collected from the States by the National Center for Social Statistics in the Department of Health, Education and Welfare showed that an increase had occurred. In 1972, there were 81,286 licensed day care centers and family day care homes, with a capacity to care for 1,021,202 children. In 1967, 5 years earlier the States reported 34,700 licensed centers and homes with a capacity to care for 475,200 children (U. S. Congress, Senate. Committee on Finance, 1974).

The reported capacity of licensed child care centers had approximately doubled in the last few years, with both public and private

centers, including profit-making centers, showing increases. Capacity in March, 1967, was reported to be 393,300, increasing to 805,361 in 1972. From 1967 to 1972 the capacity of licensed voluntary facilities grew from 113,900 to 326,431 places for children. Independent or proprietary for-profit centers provided about 44 percent of the licensed capacity reported for all centers. In 1972, independent centers had the capacity to provide care to 354,200 children, increased from 239,300 in 1967 (U. S. Congress, Senate. Committee on Finance, 1974).

Current Status of Day Care

A day care center was defined as meaning "a facility which provides care for six or more children for six or more hours of the 24 hour day" (Standards For Day Care Centers, 1975, p. 5). Nursery schools, kindergartens or other facilities whose main purpose was primarily educational, recreational, or medical treatment were not included in the category of a day care center.

Day care facilities in the United States were operated by a number of different groups. Public Centers were those which were sponsored and funded by Federal, State and local government. Voluntary Centers were those which were sponsored and funded by a variety of groups, such as churches and charitable organizations, who operated on a non-profit basis. In the Oklahoma Child Care Facilities Licensing Act, the term voluntary referred to a facility owned or operated by a group either incorporated or unincorporated wherein any profit was turned back into the facility for use thereof (Oklahoma Statutes, 1971). Proprietary Centers were those which were privately owned and operated for a profit. In the Licensing Act the term proprietary referred to a

facility owned or operated by an individual or groups of individuals and was a profit-making facility (Oklahoma Statutes, 1971). Over 90 percent of all full-time day care centers in this country were in this last category (Lazar and Rosenberg, 1971).

Nutrition Needs of Children in Day Care

The primary objective of day care was "to meet the needs of children for experiences which will foster their development as human beings" (U. S. Department of Health, Education and Welfare, 1971, No. (O.C.D.) 72-10, p. 2). A primary concern of any program designated to foster human development must include the nutrition of the children to sustain healthy and well-nourished children. Nutrition must be considered an important aspect of each child's care.

The dietary practices established during childhood influenced life-time eating habits. The early elementary years were an opportune time to establish habits which led to good nutrition. The school has a major influence on the habit formation of young children (Peterson and Kies, 1972). The National School Lunch Act of 1946, gave national priority to the feeding of children. The purpose of this Act was clearly stated as a measure of national security to safeguard the health and well-being of the Nation's children (Gunderson, 1971).

Preschool children were indicated as one of the groups most vulnerable to malnutrition. The panel stated that highest priority be given to "assuring adequate nutrition for the fetus, infant, child, and adolescent because the consequences of unsatisfactory nutrition were likely to be greatest in the growing individual" (White House

Conference on Food, Nutrition and Health, 1970, p. 46). The elimination of inefficiencies, inequalities and inflexibilities of food programs including School Lunch and Breakfast Programs (established in 1966) and other supplemental food programs (such as Special Food Services Program, 1968, which included public and non-profit day care centers) was requested as well as the expansion of these programs where necessary.

The panel, concerned with children and adolescents, recommended:

> 1. The nutritional services provided in day care facilities will depend upon the hours children are in attendance, for example, centers open from 7 a.m. to 5 p.m. should provide 80 percent of the child's total nutritional requirements.
>
> 2. Nutrition and nutrition education programs in all day care centers should be supervised by qualified nutritionists (White House Conference on Food, Nutrition and Health, 1970, p. 47).

The continued and expanded use of day care centers was also recommended. Day care was to be available, particularly for working mothers, and an estimated goal of day care facilities for 600,000 additional children each year for the next five years was expressed. By the end of 1975, there would be approximately 3,500,000 children in day care. The opportunities for improving the nutritional status of children and teaching elements of sound nutrition to preschool children was felt by the panel to be an important aspect of day care programs and an effective means of helping to eliminate malnutrition in very young children (White House Conference on Food, Nutrition and Health, 1970).

Child Care Food Program

The National School Lunch Act has been improved to still reach out to growing numbers of preschool children whose mothers were working (Gunderson, 1971). The Child Care Food Program was amended to National School Lunch Act and the Child Nutrition Act of 1966 as of Oct., 1975 (United States Codes, 1976). Nutrition education must be included for parents as well as children to encourage optimal nutrition for children at home as well as in the day care center.

The Child Care Food Program was established in order to provide better nutrition for preschool children. Many day care centers were eligible for participation in the program. The Child Care Food Program authorized the formulation and enactment of a program to assist States to "initiate, maintain, or expand non-profit food service for children in institutions providing child care" (United States Codes, 1976, p. 3485).

The Child Care Food Program of the National School Lunch Act was available for public centers and voluntary centers. Public care institutions and non-profit non-residential child care institutions were granted funds from the program. The latter category included voluntary centers, those with community and church groups.

The requirements for participation were as follows: (1) The Center must operate a non-profit food service for all children without discrimination. (2) The Center must meet the nutritional requirements as prescribed by the United States Department of Agriculture. (3) The Center must supply free or reduced price meals to children unable to pay the full charge. Centers were reimbursed if the requirements were

met for breakfast, lunch, supper, and two daily between meal snacks were fed to the children (United States, Office of Economic Opportunity, 1971).

The centers which participated in the Child Care Food Program must follow the specific regulations established for the type and quantity of food to be served in the day care center. These specifications were reported in the U.S.D.A. Nutrition Service Bulletin (FNS-30) (Poole et al., 1972).

Centers which were eligible for participation in the Child Care Program to receive the cash reimbursement were also eligible to receive commodities. Approximately one-fourth of the food used for school lunch was bought by the United States Department of Agriculture under two basic programs. One was a surplus removal program which provided primarily meat, poultry, eggs, fruits, and vegetables when available. The other was a price support program and provided primarily flour, rice, butter, beans, cheese, dry milk, and cornmeal when available. These two groups of foods were bought in accordance with the needs of the local farmer (United States Codes, 1976).

Commodities in plentiful supply could be received by the centers in any amount without regard to a fixed guide or rate, provided only that they were used without waste or spoilage. States were not required to meet the Federal contribution of commodities (United States, Office of Economic Opportunity, 1971).

In the State of Oklahoma, the majority of voluntary centers were located in churches of various denominations. Available federal feeding programs were used by some, but some assumed that the responsibility for feeding the children in their care without the help of

these programs. The involvement with government funds because of the church and state issue has provided a sense of fear or resistance in becoming involved with a government supported program. Some evaded the program due to the paper work involved. Due to the lack of sufficient awareness of the true nature of the program, its purpose and the way it operated, others had not participated in the federal feeding programs.

Nutrition Education and Young Children

The improvement of nutrition education has been widely emphasized since the White House Conference on Food, Nutrition and Health in 1969 and the follow-up conference in 1971. The need for urgent improvement of the diets and food habits of Americans has been given attention by many people.

Importance of Nutrition Education for Young Children

Conclusive evidence indicated that malnutrition was most certainly a serious health problem to our population at all economic levels and must be recognized as such. White (1976) stated that one important concept in nutrition was that malnutrition was related to poverty, ignorance and indifference. The earlier in the child's life that nutrition education could be implemented in order to develop desirable food habits, the more likely the child would be able to realize his full potential for physical and mental growth.

Education was one of the answers to solving malnutrition caused by ignorance. The facilities of learning such as day care centers and

nursery schools have a most important role to play in the enlightment of our youngest generation, with a carry-over potential to their elders. Ignorance, rumors and misinformation could be eliminated with enlightment and facts. Schubert (1970, p. 11) wrote that "when you touch a child in matters relating to his health, growth, and development you touch the parent and, ultimately, the community. Thus a healthier stronger nation should ultimately emerge."

The objective of nutrition education was to promote optimum health through food and thus contribute to an individual's potential for achieving his/her life goals (White House Conference on Food, Nutrition and Health, 1970). White (1976) pointed out that nutrition education was involved with value setting, the procedure for evaluating goals for one's life for establishing the risk benefit relationships of life's challenges. A person could not be expected to have good and useful attitudes about nutrition if a set of attitudes about his/her lifestyle has not been developed. The good things of life included nutrition. According to White (1976), a goal of nutrition education should be to reach people before they were required to make independent judgments, preparing for the time when children become parents.

White (1976) indicated the following reasons why nutrition education is important.

1. To equip one to make judicious food choices for health and well being. Good nutrition is vital to the achievement of one's genetic potential.

2. A good knowledge of nutrition is essential for the maintenance of health, especially when food habits temporarily or permanently deteriorate as in dieting, illness, old age, and poverty and when an educational base might fail leading to "faddish" experimentation.

3. Food and nutrition education is necessary for saving money and avoiding waste. In essence nutrition education relates scientific knowledge to the total stragegy for survival.

4. Nutrition education is a base for the evaluation of food and nutrition information, both good and bad.

5. Nutrition education can be of great benefit to those in the lowest economic stratum. While not as important as financial resources, nutrition education can equip the person who finds himself economically deprived to make the most expeditious use of financial resources.

6. Nutrition education is essential to reinforce or correct family teaching about food and nutrition (p. 54).

Osman (1974) stated that children have been getting positive and negative kinds of nutrition education from birth. This may be communicated verbally or non-verbally. Children's nutrition education continued when they were permitted to snack without supervision or guidance in food selection. Osman also stated that many misconceptions about nutrition exist and one must unlearn the misinformation.

Information about the influence of children on the nutrition of their families was reported by Schottenstein (1974). The statements included:

1. The selection of foods for a meal is frequently made by children because of working mothers.

2. Family marketing choices often reflect child preferences.

3. TV commercials and promises of a toy inside the box reflect the child's insistence on this or that product.

4. Processed convenience foods save preparation time and make it easier for children to prepare their own meals via TV dinners or opening cans and packages.

5. Children can influence the quality of meals served at home if they know which foods are important for proper nutrition, and ask parents to get them (p. 52).

Bettelheim (1973, p. 60) wrote that those who instituted and administered nutrition programs had not created an emotional and psychological climate that assured success. The author felt that food had to do with self-respect. "Eating while learning helps reduce children's anxieties, and permits often even non-learners of long standing to overcome their fears so they suddenly become able to achieve."

Nutrition education for young children was considered important and was supported by the literature. The literature suggested that children who were informed about foods and nutrition could play a significant role in influencing the food habits of their families.

Suggested Nutrition Education Concepts and Objectives for Young Children

The Conceptual Framework of Nutrition was developed by the Interagency Committee on Nutrition and accepted by the White House Conference on Food, Nutrition and Health as an adequate base for nutrition education. Conceptual teaching provided a base from which to start, a center around which to organize content and learning experience. When people became adept in conceptual teaching, they gained confidence in using facts. With more confidence and more facts, individuals became more interested in their own nutrition and were motivated to behavioral change as far as their own food habits were concerned.

1. Nutrition is the process by which food and the other substances eaten become you.

2. Food is made up of certain chemical substances

that work together and interact with body chemicals to serve the needs of the body.

3. All persons throughout life, have need for about the same nutrients, but in varying amounts.

4. Food use relates to the cultural, social, and psychological domain as well as to the physiological.

5. The way a food is handled influences the amount of nutrients in the food, its safety, appearance, taste, and cost.

6. The nutrients, singly and in combinations of chemical substances simulating natural foods, are available in the market and these may vary widely in usefulness, safety of use and economy.

7. Food plays an important role in the physical and psychological health of a society or a nation just as it does for the individual and the family (White House Conference on Food, Nutrition and Health, 1970, p. 151).

In the New York state school systems, ten nutrition concepts which were considered relevant to all grade levels were as follows:

1. Nutrition is the use of food by the body.

2. Adequate nutrition is essential for physical health and for realization of growth potential.

3. The body needs nutrients rather than specific foods; there are combinations of food which can provide an adequate diet.

4. All people need the same nutrients.

5. Many factors determine what foods people eat.

6. Food is important to people because it fulfills social, psychological, and emotional needs as well as physical ones.

7. An individual's nutritional status is determined by an interaction of his nutrient intake with heredity, disease and environment.

8. Food is the most sensible source of nutrients for people under most circumstances.

9. The responsibility for nutritional health rests with the individual, the family and the community.

10. Nutritional challenges change as our society changes and as knowledge accumulates (Sinacore and Harrison, 1971, p. 2237).

A non-credit course for elementary teachers developed by the Ohio Cooperative Extension Service Program stressed concepts for grades kindergarten through third grade. The concepts included "(1) all food is good, (2) I like food, (3) some foods I have not yet learned to like" (Gray, 1973, p. 2).

According to Mackenzie (1972) the appropriate objectives for children in kindergarten through grade three should be concerned with the identification of food. A child should learn to name both familiar and unfamiliar foods and recognize them in their different forms. A child should begin to learn how food is classified. Eating was a social interaction as well as physically satisfying. This concept was one a child could learn. Other important concepts that should be emphasized were the importance of each meal and the significance of snacks in the daily diet. Mackenzie further indicated that children needed to know something about the people who supplied food and how food reached the dinner table. A consciousness of different cultures and an understanding of how food needs could be met in many ways must be conveyed to the children.

Dobbins (1973) stated three concepts that were appropriate for grades kindergarten, first and second. The concepts she suggested were: (1) food is good, (2) foods are friends, (3) eating good food is fun. The objectives for a nutrition program were:

1. Presented with a variety of foods, the student will be able to identify them and place them into the four groups.

2. The student will demonstrate an interest in the Basic 4 as a guide to choosing foods to eat.

3. Given a variety of experiences related to food choices and growing "big", the student will demonstrate an understanding that the food one eats is related to growth in children as well as in animals.

4. Provided with a background for an understanding of the food groups, the student will demonstrate a positive attitude toward all foods and display a willingness to try new ones.

5. The student will demonstrate pleasure in the social experience of eating together with friends (p. 1).

A program of teacher training in nutrition for grades kindergarten through 12 including curriculum guides was developed for the New York State Department of Education by Cornell University. At the primary level, the learning experiences were planned:

1. to help the child develop positive attitudes toward food and eating;

2. to accept a variety of foods;

3. to recognize differences in how people eat; and

4. to begin to understand the relationship of food to health and growth (Sipple, 1971, p. 20).

Several authors, Martin (1971) and Whipple, Strifel and Brennand (1970) have focused on the identification of the following concepts for the elementary school child educator in nutrition education: 1. Good foods in adequate amounts are needed throughout life; 2. Adequate amounts should be chosen from the four food groups; 3. Food habits must include a willingness to eat good food. Teachers exert a strong influence on the attitudes and habits of children, including those

pertaining to food selection and eating; 4. The food which children eat involves many people and depends on many factors.

The literature revealed that there seemed to be some agreement among the authors as to appropriate nutrition understandings expected of young children. The three major learning experiences, according to the resume of information should provide children the opportunity to 1) develop concepts about identification of food and food groups; 2) develop positive attitudes toward a wide variety of foods as well as display a willingness to try new ones; and 3) to begin to understand the need for an adequate amount of good food in relation to growth and health.

Methodologies Used for Presenting Nutrition Education Materials to Young Children

Martin (1963) contended that the more closely nutrition experiences were related to real life situations the better they serve children as steps in learnings. Martin believed active participation rather than merely observing contributed to greater learnings.

Reid (1960) indicated that objects which one could actually see, hear, feel, taste, and smell had the maximum impact on students. According to Mackenzie (1972) students needed to have the chance to see, feel, hear, taste, and smell when studying nutrition. The author felt that tasting parties work well with young children.

A Position Paper on child nutrition programs published by the American Dietetic Association indicated that "a nutrition education program should be sequential from the preschool years and integrated

into appropriate school courses, such as family living" (Position Paper on Child Nutrition Programs, 1974, p. 520). As a consequence of nutrition education a child should:

(a) Increase his ability to make wise food choices throughout his life.

(b) Understand the relationship between food and health.

(c) Gain knowledge of nutrients and their roles in the body.

(d) Develop the ability to evaluate advertising and other claims made about food and nutrition.

(e) Understand the influence of emotional and cultural factors on food choices.

(f) Become aware of the role food can play in aiding him to reach goals he sets for himself.

(g) Gain knowledge of career opportunities in the field of food and nutrition. Children, parents and staff should all be involved in nutrition education programs (pp. 520-521).

In a survey of households with preschool children, Eppright et al. (1969), indicated the need for a sound nutritional education program for parents of preschool children. They wrote that the nutritional education program should focus on the child's total development and the interaction of the physiological, psychological and sociological aspects that influenced a child's eating behavior.

Vaden (1974, p. 46) maintained that one needed to revitalize existing nutrition practices. "Effective nutrition education requires action on the part of the receiver. Educators should involve children in discovering the aesthetic pleasures to be derived from eating." Vaden contended that relevancy of nutrition has become more readily apparent to children when it is an integrated rather than an isolated subject. Teaching nutrition by integrating it with other areas

simplified the teacher's problem of finding time to teach it (Vaden, 1974).

Teachers needed to consider interests of the particular children in their class as a key to the nutrition approach. Martin (1963) wrote that children's interests in kindergarten and the lower grades center around their immediate environment such as playing house, helping mother cook, playing store, playing with pets, planting, watching things grow, and going to the store.

Amidon and Flanders (1967, p. 19) stated that "developing a curriculum by unifying concepts gave the curriculum flexibility, allowed for adjustments to fit the local situation, provided a basis for sequential learning and made the evaluation process easier." Valuable suggestions were given by Vannier (1963) for correlation and integration of nutrition education in the elementary curriculum in the areas of science, arithmetic, social studies, communicative arts, dramatic and art activities, and physical education.

Nutrition has been integrated into many subjects already being taught in the elementary school curriculum by the elementary school teachers in the Greater Cleveland, Ohio, area for 13 years. The areas first integrated were social studies, mathematics, and art (Whipple, Strifel, and Brennand, 1970).

A variety of approaches was needed by the educators to interpret nutrition information to students. The educators must also strive to motivate individuals to practice proper nutrition. Ulrich (1970) indicated that in addition to knowledge, the educator must be involved in the understanding of economics, human relationships, and communication.

The involvement of the children with nutrition education activities was recommended. According to Feitshans (1973) children and food were a natural combination. The author encouraged teachers to let children have a hand in making their own snacks and in serving juice and milk.

Nutrition education experiences should be centered around children's interests and relate to real life situations. Children needed to be active participants and not observers when studying nutrition. Nutrition education experiences which children could actually see, hear, feel, taste, and smell were beneficial in learning. Correlation and integration of nutrition within the existing curriculum was indicated favorably.

Nutrition Education Experience Presently Being Provided for Young Children

A concentrated effort was undertaken by the Children's Centers Division of the San Francisco Unified School District, to promote nutrition education. Nutrition education projects were planned within the total educational framework for children 2 years of age through elementary school age. Lessons in food preparation and cooking were discussed. These projects were not only for teaching nutrition but as vehicles for other learnings such as language development (Juhas, 1969).

During the Fall of 1970 in an Expanded Food and Nutrition Education program, nutrition ideas were taught to five-year-olds by the use of puppet shows. The shows were a regular weekly feature of the six-

community-organized volunteer-staffed kindergartens in Idaho Falls, Idaho. The 67 five-year olds provided vehicle for nutrition education. Because the children passed on what they learned from the food puppets and created interest in nutrition at home, nutrition aides were able to conduct home visits in a more receptive atmosphere (Wilson, Lawroski and Wallace, 1972).

Project Total, a federally funded program, provided health and nutrition services for four elementary schools in the model cities area of Kansas City, Kansas. The project, one of 12 projects in the United States, served 1,500 students, kindergarten through seventh grade. Valorie Brice, director, stated "When you come to school at 7 o'clock and see the steps already littered with potato chips bags and candy wrappers, you realize how early in life eating habits are formed" (Miller, 1973, p. 12A). Miller stated that many Americans were poorly nourished due to their nutrition knowledge and habit formation. The author also indicated that nutrition was correlated with achievement and good mental and physical health. The program stressed and encouraged good eating habits. Classroom teachers were assisted in integrating nutrition in daily classroom activities. Project Total introduced kindergarten students to foods they have never had before. Food tasting and teaching nutrition using simple childlike terms were emphasized.

Diehm (1973) indicated that enjoyable and interesting learning activities were an essential part of nutrition education for young children. Dairy Day began in 1972 as a field trip for third grade children. Its purpose was to teach the concept, "Through extensive processing techniques, man has available a large variety of dairy foods which are

vital to good nutrition" (p. 13). The series of Dairy Days in the Evansville, Indiana, area were attended by 4,000 students. A food walk, mystery food box, and nutrition bingo were among the many activities provided. Cheese, ice cream and churned butter were tasted. Each participating teacher was provided a kit of educational materials for use in the classroom.

In this section, the review of literature revealed no research studied concerned with teaching nutrition to children in day care centers. However, the authors of numerous articles considered nutrition education important for young children. The methodologies used to present nutrition education to young children indicated centering the focus of nutrition around their interests and relate to real life situations. Nutrition education involving children using their five senses contributed to the greatest learning. Support was given for the correlation and integration of nutrition education with other curriculum areas. Numerous nutrition education concepts that could be used with young children were suggested.

The review of literature indicated that three major types of learning experiences for nutrition education were suggested by several authors. These experiences should have enabled a child to: 1) develop concepts about identification of foods and food groups, 2) develop positive attitudes toward a wide variety of foods as well as display a willingness to try new ones, and 3) begin to understand the need for an adequate amount of good food in relation to growth and health. Although the literature disclosed that a limited amount of nutrition education is being provided for young children, the educational experiences provided for young children seemed to be effective.

Nutrition Education for Teachers

There was an increasing emphasis being made to better prepare teachers for their role in teaching nutrition in the school. Emphasis on nutrition education for teachers was being stressed at the local, state and national levels.

Promotion of Nutrition Education

Preparation for Teachers

A number of recommendations relative to preparing persons who have responsibility for nutrition education in schools, including kindergarten and elementary teachers were suggested by the White House Conference on Food, Nutrition and Health, 1969. An adequate preparation for teaching nutrition in the school requiring undergraduate education in nutrition, as well as in methods of teaching nutrition, was recommended by the panel. One of the recommendations was stated as follows:

> State Department of Education should encourage individual universities and colleges to incorporate nutrition units in existing courses for all elementary teachers, school nurses, and at the secondary levels; all teachers of health education, biology, chemistry, home economics, and physical education (White House Conference on Food, Nutrition and Health, 1970, p. 152).

A number of states developed legislation designed to aid the introduction of nutrition teaching in public school systems. Legislation of this type went into effect at the beginning of the 1970-71 school year in the state of New York. The New York State Department (1969) developed curriculum materials pertaining to nutrition education; among them were the Health, Grade K-3, Physical Health and Nutrition.

Texas was another state that has met the challenge for improving nutrition education. One of the recommendations by the Texas Governor's Committee on Food, Nutrition and Health was that, in order to improve teaching in the schools, "Sound nutrition education should be integrated into the public school experience beginning in the lowest possible grade" (Fulmer, 1969, p. 3). Through the cooperation of the Elementary Education Department and the Department of Food and Nutrition faculty at Texas Tech University, this recommendation, that elementary school teachers should have some basic nutrition knowledge, led to the development of a nutrition course for elementary education majors. Brittin (1971) reported that in the Fall, 1970, 20 elementary education majors at Texas Tech were permitted to take a basic food and nutrition course to fulfill one of the laboratory science requirements. Kopel (1970) agreed with this type of training. She wrote that "some emphasis in college food and nutrition curriculums should be focused on improving a nutrition background for elementary teachers" (p. 104).

The Home Economics Division of the Department of Vocational and Technical Education and several colleges worked with the Oklahoma School Lunch Division in making a survey of 10,000 Oklahoma school children. One of the implications and recommendations from the Oklahoma Food Habits Survey was that an intense concentrated effort should be made to encourage nutrition education as a requirement for certification of elementary school teachers (School Lunch Division, 1970).

Ebersol (1974) wrote that the New Jersey Home Economics Association was in the process of drafting a legislative proposal to improve nutrition education from pre-kindergarten through grade 12. Teachers in New Jersey would be aided in implementing an effective sequential

nutrition education program.

In a nutrition workshop for elementary teachers, Sodowsky (1972) showed ways nutrition education could be integrated into the elementary curriculum areas of health, social studies, science, the communicative arts, the dramatic art activities, and physical education studies. Upon completion of the workshop, 113 ideas were planned to be used by teachers in all areas of the curriculum. Results of the follow-up evaluation indicated that 133 ideas had actually been accomplished and integrated into the elementary curriculum.

In a survey of kindergarten teachers in Oklahoma, Schmidt (1974) reported that three-fourths of the teachers suggested that prospective kindergarten teachers should be required to take a course in nutrition education to prevent lack of preparation in the area. An understanding of basic nutrition information and innovative methods of teaching an integrated nutrition education program would have helped prepare teachers to help combat nutrition ignorance. A nutrition education program should be implemented which would provide many opportunities for children to gain information about food and nutrition and to develop positive attitudes toward desirable foods.

According to Callahan (1973), the state of Massachusetts has an outstanding nutrition education program in its schools. Nutrition education workshops for teachers were provided. Interest was stimulated through short promotional programs. The workshops were action-oriented. The author stated that, "Implementation of nutrition education programs remains a problem. Training teachers to be allied professionals in teaching nutrition seemed to be the most practical solution" (p. 223). Callahan believed that the major thrust should be to

train teachers using inservice teacher training workshops because reaching the two million educators already in teaching positions should be given the top priority. Callahan contended that requiring a nutrition course at the undergraduate level to meet elementary certification was idealistic but unrealistic.

The philosophy of a required course would be opposed for several reasons:

1. It is difficult to say that one course is applicable to all teachers.
2. A course may be desirable but not essential for all.
3. Institutions might not have the capability to implement the requirement (p. 223).

According to Sinacore and Harrison (1971) there were many problems in implementing nutrition education effectively. They indicated that few teachers were adequately trained and sometimes previous negative conceptions about nutrition on the part of the teacher must be counteracted. Another problem in implementing nutrition for teachers was that the demands on their time and energy were already heavy. Hill (1963) contended that a good nutrition program must begin with an informed, enthusiastic teacher. Motivation of teachers to participate in nutrition education could be increased when nutrition education programs are convenient and economical. According to Callahan (1973) many of today's teachers were reluctant to give up their time for any kind of meeting. When planning for nutrition education programs for teachers, these facts should be considered to obtain effective results.

Todhunter (1969) reported that more effective nutrition education was needed to help people understand what nutrition was, why nutrition was vital to their welfare, and how it could be achieved in their

culture. Nutrition education and proper dietary practices were essential for the well-being of all people, from the affluent to the disadvantaged (Hayes, 1969). Schmidt (1974) suggested that a cooperative nutrition education program be established to inform teachers as well as members of our society about the importance of good food habits.

Summary of Literature

Hunger and malnutrition were problems of all segments of the United States population. An increased interest and a sense of urgency to combat hunger and malnutrition in the United States has occurred because these situations created problems in health, motivation, learning, employment, mental development, human relationships, and mental health. The information reviewed provided insight into the need to attempt to raise the nutritional consciousness of the American people, as well as implement corrective nutrition programs. Because dietary practices established during childhood influenced lifetime eating habits, these education programs needed to begin at an early age.

Nutrition education for young children was considered important and was supported by the literature. The literature suggested that children who were informed about foods and nutrition could play a significant role in influencing the food habits of their families.

The three major learning experiences, according to the resume of information should provide children the opportunity to develop concepts about identification of food and food groups, develop positive attitudes toward a wide variety of foods as well as display a willingness to try new ones, and to begin to understand the need for an adequate amount of good food in relation to growth and health. Nutrition

education experiences should center around children's interests and related to real life situations. Children needed to be active participants and not observers when studying nutrition. Nutrition education experiences where children could actually see, hear, feel, taste, and smell were beneficial in learning. Correlation and integration of nutrition within the existing curriculum was indicated favorably.

More effective nutrition education was needed to help people understand what nutrition was, why nutrition was vital to their welfare, and how it could be achieved in their culture. An understanding of basic nutrition information and innovative methods of teaching an integrated nutrition education program would help prepare teachers to help combat nutrition ignorance. The literature revealed that although nutrition education was not being provided extensively for young children, the educational experiences that were being provided for young children seemed to be effective for teaching good food habits.

CHAPTER III

PROCEDURES

This chapter identified the procedures which were followed by the researcher in order to fulfill the objectives of the study. These were: selection of the sample; development of the data-gathering instrument; administration of questionnaire; and analysis of data.

Selection of the Sample

Participants in the study included day care teachers with a high school diploma or with an equivalent of education and experience accepted by the Standards For Day Care Centers. Only day care centers licensed by the Department of Institutions, Social and Rehabilitative Services in the state of Oklahoma which provided care and/or supervision for six or more children for a part of the twenty-four hour day were included in the population. A list of day care centers was obtained from the Licensing Bureau, Department of Institutions, Social and Rehabilitative Services. Only the day care centers who had filed with the Department of Institutions, Social and Rehabilitative Services regarding Title XX Contract as of July 1, 1976, were included in the frame. A sample of 256 day care centers were selected from the list of 585 day care centers in the state of Oklahoma.

The sample of 256 day care centers was chosen by a stratified random selection excluding the day care centers chosen for pretesting of

the questionnaire. The number of day care centers in each county was identified. The centers were categorized according to the number of children in each day care center. The day care centers were classified into three groups according to size: small - 30 children and under; medium - 31 to 99 children; and large - 100 children and over in the day care center. The number of teachers in each category was estimated by the number of children in the day care center. The day care centers within the small group were estimated to have 1 to 3 teachers. The medium group of day care centers was estimated to have 4 to 10 teachers. The day care centers within the large group were estimated to have 10 to 25 teachers. It was estimated that there were 2704 day care teachers in the state of Oklahoma. The following table indicated the data used in the selection of the sample.

TABLE I

SAMPLE DATA OF DAY CARE CENTERS IN OKLAHOMA

Size	Number	Estimated Number of Teachers	Estimated Sample Size (Teachers)	If All Teachers Respond: Number of Centers	Number of Centers to Select
Small	297	673	226	100	100
Medium	252	1521	507	33	120
Large	36	510	130	13	36
Total	585	2704	863	136	256

Random sampling was the method used to select the sample. The procedure for the selection of the small day care center stratum was to select a random number between 1 and 3 using a die roll, and then to select every third center on the list starting from the randomly chosen initial center. Since the list was ordered according to the size of centers within the stratum, this method was believed to be sufficiently representative within all centers in the stratum.

In the medium sized day care center stratum, a 50 percent selection rate was employed since it was thought that there would be a decreased likeliness of teachers in these day care centers to participate in the study. An assumption was made that approximately 2/3 of the teachers in day care centers of this size would participate. As with the small size day care center stratum, random sampling with a selection interval of 2 was used with the starting selection based on a die roll. All teachers in the 36 large day care centers were selected to participate in the study.

After the selection of sample, a comparison was made to identify the location of areas selected in relationship to the number of day care centers existing within the counties (Appendix A). The day care centers chosen were plotted on a map of Oklahoma to exhibit the sampling patterns (Appendix A).

Instrument Development

Development of Instrument

An instrument was developed by the researcher in order to: (1) ascertain opinions of the day care teachers toward nutrition education

in the day care centers; (2) determine the status of nutrition education in the day care centers; (3) determine the needs of day care teachers for nutrition information and teaching techniques; and (4) obtain background information from the day care teachers. The questionnaire consisted of 33 items which could be answered by checking the appropriate response. Three additional questions were open-ended to encourage free responses. Two of the three open-ended questions permitted the respondent to explain a reason for a previous reply. The third question requested topics that were covered in the nutrition guide used by the teachers. The instrument included directions and definitions of terms.

Graduate students in Home Economics enrolled in Spring, 1977, Evaluation in Home Economics course (HEED 5663) and Seminar in Home Economics Research course (HEED 6310) evaluated the questionnaire items for clarity. Suggested revisions were incorporated into the instrument. The revisions were minor in nature.

The questionnaire was pretested with ten selected day care teachers to establish the reliability of the instrument. The pretest sample was chosen from day care centers located in Payne County. Day care centers in Payne County were representative of day care centers throughout the state of Oklahoma based on the distribution of children in each day care center. A questionnaire and a cover letter (Appendix B) were mailed to the selected teachers after obtaining permission for pretesting via telephone communication. Suggestions made by the respondents were incorporated into the instrument (Appendix B). The revisions included only minor changes.

Administration of Questionnaire

A letter (Appendix B) and a return post card (Appendix B) or a participation sheet (Appendix B) were mailed to the directors of the day care centers explaining the purpose of the study and asking for participation. Those day care center directors who responded were asked to provide a list of teachers in their center who would be willing to participate in the study. A follow-up letter (Appendix B) and a participation sheet (Appendix B) were sent to those who had not responded.

The data were collected in the spring, 1977, by mailing the questionnaire to the participating day care teachers in Oklahoma. A cover letter (Appendix B) accompanying the questionnaire (Appendix B) explained the purpose of the research. A self-addressed stamped envelope was enclosed. The questionnaire was coded by number to allow follow-up procedures within a period of three weeks after the first mailing to all subjects who had not responded. At this time a follow-up letter (Appendix B) and another questionnaire were mailed to all non-responding participants in the study.

Analysis of Data

The responses to the questionnaire were tabulated and analyzed. Frequencies and percentages were used to identify the day care teachers' opinions toward nutrition education in the day care program: the status of nutrition education in the day care programs; and background information about the day care teachers participating in the study and the needs of day care teachers for nutrition information and teaching techniques.

To identify the relationship between the day care teachers' opinion toward the importance of nutrition education in the day care program to age, teaching experience, educational background, nutritional background, and the number of children in the day care program, the statistical procedure, Chi Square, was used. A level of significance was established as ($p = .05$). Each questionnaire item which was answered by the respondent was included in the data. This resulted in the variation of the number of respondents reported.

Results

On the basis of the findings, suggestions and recommendations were made to promote incorporation of nutrition education in day care programs. In addition, suggestions and recommendations were formulated for curriculum development in the areas of early childhood education and nutrition education. A summary of the results were mailed to the teachers who participated in the study.

CHAPTER IV

RESULTS AND DISCUSSION

Description of the Sample

Two hundred and fifty-six day care centers were chosen by random sampling. Envelopes of questionnaires were sent to each of the 107 day care centers which indicated a willingness to cooperate. From these 424 respondents indicating cooperation, 287 (65.3 percent) responded, of which 6 questionnaires were unusable. A summary of the response rate was presented in Table II. The response rate for all respondents was recorded in Appendix A (Table XXIII). Each questionnaire item which was answered by the respondent was included in the data. This resulted in the variation of the number of respondents reported.

Background information was obtained from the day care teachers regarding the position of respondents at the day care center and the classification and size of the day care center. The personal data which were obtained from the day care teachers included the number of years teaching at the day care level, age of day care teachers, highest degree held, and area of educational specialization.

In order to determine the day care teachers' opinions concerning nutrition education in the day care programs, data were obtained concerning several areas related to nutrition education. Opinions were obtained relating to children's food habits, state legislature and

TABLE II

RESULTS OF REQUEST FOR PARTICIPATION IN THE STUDY

	Number of Centers	Number of Centers Selected	Estimated Number of Teachers In Selected Centers	Number of Centers Responding	Estimated Number of Teachers In Responding Centers	Number of Respondents Willing To Participate	Returned Questionnaires
Small	297	100	226	23S	146	49	30
Medium	252	120	648	59M	502	221	148
Large	36	36	506	25L	464	154	109
Total	585	256	1380	107	1112	424	287

nutrition in the day care center, and who should teach nutrition at the day care level. If nutrition education had not been taught in the day care curriculum reasons were solicited from the day care teachers. Data were also collected regarding the teachers' self-report of competency to teach nutrition and nutrition education courses required for certification.

Data were collected by the researcher to identify the status of nutrition education in the day care program. The day care teachers were asked to respond to questions concerning whether nutrition was taught in the day care program, the extent of nutrition being taught in day care curriculum, opinions toward teaching nutrition at the day care level, and nutrition background of the day care teachers. Data dealing with the integration of nutrition education in the day care curriculum, teaching nutrition as a separate unit, and curriculum areas for teaching nutrition were sought to identify the status of nutrition education in the day care program.

The statistical procedure, Chi Square, was used to identify the relationship between the day care teachers' opinion toward the importance of nutrition in the day care program to age, teaching experience, educational background, nutritional background, and the number of children in the day care program. In order to determine the needs of day care teachers for nutrition information and teaching techniques, the day care teachers were questioned about their willingness to teach nutrition with resource materials provided and suggestions for additional teacher nutrition information. Data were collected to determine if nutrition curriculum plans were used in planning nutrition education at the day care level and if they were adequate.

Background Information

Position of Respondents at Day Care Center

The total sample consisted of 277 respondents, 51 (18.4 percent) of whom were directors. The responses of 138 day care teachers (49.8 percent), 19 director-teachers (6.9 percent), and 22 teacher-assistants (7.9 percent) were analyzed in the teacher category. This category represented 193 respondents (69.6 percent). Forty-seven respondents (17.0 percent) indicated other positions in the day care center, including cooks, secretaries and child care assistants. The majority of the total sample consisted of persons designated as day care teachers (Table III).

TABLE III

COMPOSITION OF SAMPLE ACCORDING TO POSITION AT DAY CARE CENTER

Position at Day Care Center	Teacher Data		All Respondents	
	Frequency	Percent	Frequency	Percent
Director	0	0.0	51	18.4
Director-teacher	19	9.8	19	6.9
Day care teacher	138	71.5	138	49.8
Teacher assistant	22	11.3	22	7.9
Others	14	7.4	47	17.0
Total	193	100.0	277	100.0

Classification of Day Care Centers

The classification of day care centers included public centers, voluntary centers, and proprietary centers. The majority of the day care teachers (131 or 68.6 percent) indicated that they were employed by a public center. Thirty-five teachers (18.3 percent) were employed by a proprietary center and 25 teachers (13.1 percent) by a voluntary center (Table IV).

The day care centers were categorized according to the number of children in each day care center. The centers were classified into three groups according to size: small - 30 children and under; medium - 31 to 99 children; and large - 100 children and over in the day care center. Eighteen (9.3 percent) of the day care teachers represented the small group. The medium group consisted of 96 day care teachers (49.8 percent). Seventy-nine day care teachers (40.9 percent) were representative of the large group. Nearly one-half of the teachers represented medium-sized day care centers.

The Child Care Food program is available to public centers and voluntary centers. Proprietary day care centers, or private, were not eligible for the program. One hundred forty of the 183 day care teachers (76.5 percent) indicated that their day care center participated in the Child Care Food Program. Thirty-six teachers (19.7 percent) had not participated in the program. Seven (3.8 percent) were either not sure or had not known if their day care center participated in the program. When questioned about the reasons for non-participation in the Child Food Program, the main response given by 21 day care teachers (51.2 percent) indicated lack of information about the program.

TABLE IV

COMPOSITION OF SAMPLE ACCORDING TO CLASSIFICATION AND SIZE OF DAY CARE CENTERS

Classification of Day Care Centers	Responses Frequency	Percent	Size of Day Care Center	Responses Frequency	Percent
Public Center	131	68.6	Small	18	9.3
Voluntary Center	25	13.1	Medium	96	49.8
Proprietary Center	35	18.3	Large	79	40.9
Total	191	100.0		193	100.0

Personal Data Related to the Day Care Teachers

Number of Years Teaching at Day Care Level

The data presented in Table V showed the number of years teaching experience of Oklahoma day care teachers in this sample. One hundred forty-nine day care teachers (78.0 percent) had taught less than five years. Thirty-one (16.2 percent) had 6 to 10 years of teaching experience. Six (3.2 percent) of the teachers had been teaching for 11-15 years and five (2.6 percent) had taught for 16-20 years. From these data, it was concluded that over three-fourths of the day care teachers had been teaching less than five years at the day care level.

Age of Day Care Teachers

The data concerning the age of the day care teachers (Table VI) revealed that the majority, 105 (54.7 percent) were 21-35 years of age. Forty (20.8 percent) were 36-50 years of age. There were 26 teachers (13.5 percent) who were 20 years of age and under; 19 (9.9 percent) were 51-65 years of age; and two (1.1 percent) were 65 years of age and over. Over two-thirds of the day care teachers were under age 35.

Highest Degree Held

The majority of the day care teachers (144 or 75.4 percent) had a high school diploma or beyond. There were 37 teachers (19.4 percent) who had a B.S. or B.A. degree or beyond and ten (5.2 percent) who had less than a high school diploma (Table VII).

TABLE V

COMPOSITION OF SAMPLE ACCORDING TO NUMBER OF YEARS TEACHING AT DAY CARE LEVEL

	Responses	
	Frequency	Percent
5 years or less	149	78.0
6-10 years	31	16.2
11-15 years	6	3.2
16-20 years	5	2.6
21-34 years	0	0.0
Total	191	100.0

TABLE VI

COMPOSITION OF SAMPLE ACCORDING TO AGE OF RESPONDENTS

	Responses	
	Frequency	Percent
20 and under	26	13.5
21-35	105	54.7
36-50	40	20.8
51-65	19	9.9
65 and over	2	1.1
Total	192	100.0

TABLE VII

COMPOSITION OF SAMPLE ACCORDING TO HIGHEST DEGREE ACHIEVED

	Responses	
	Frequency	Percent
Below high school diploma	10	5.2
High school diploma and above	144	75.4
B.S. or B.A. and above	37	19.4
Total	191	100.0

Area of Educational Specialization

The areas of educational specialization reported by the day care teachers in the sample indicated a variety of training (Table VIII). Eighty-five (53.4 percent) of the 159 day care teachers who responded indicated an early childhood education specialization. There were 46 teachers (28.9 percent) who reported elementary education as an area of specialization; and 14 (8.9 percent) specialized in secondary education. A specialization in home economics education was indicated by 33 day care teachers (20.9 percent) and 24 (15.0 percent) reported an area of specialization other than elementary, secondary, early childhood, or home economics education. The other areas of specialization mentioned were social sciences (including business, psychology, and sociology); education; child care; biological sciences; humanities; and physical sciences. In summary, early childhood education training was the academic background of the largest number of the day care teachers in this study.

TABLE VIII

COMPOSITION OF SAMPLE ACCORDING TO EDUCATIONAL SPECIALIZATION*

	Responses	
	Frequency	Percent
Elementary Education	46	28.9
Secondary Education	14	8.9
Early Childhood Education	85	53.4
Home Economics Education	33	20.9
Other	24	15.0

*Respondents were able to choose more than one item

Opinions of Day Care Teachers Concerning Nutrition Education in the Day Care Program

In order to determine the day care teachers' opinions concerning nutrition education in the day care programs, data were obtained concerning several areas related to nutrition education. Opinions were obtained about children's food habits, connotation of nutrition education, inclusion of nutrition education in the day care centers as method for preventing poor food habits, state legislature and nutrition in the day care center, and who should teach nutrition at the day care level. Reasons for lack of emphasis on nutrition education in the day care program were solicited from the day care teachers. Data were also received regarding the teachers' competency to teach nutrition and nutrition education courses required for certification.

The day care teachers' opinions about nutrition education in the day care program were examined. Data provided beliefs about: (a)

children's food habits and (b) whether or not the term "nutrition education" was negative in connotation. Ninety-four day care teachers (49.5 percent) disagreed or strongly disagreed that poor food habits were a problem of preschool children in their community. There were 69 teachers (36.3 percent) who agreed or strongly agreed that preschool children in their community had poor food habits. Twenty-seven (14.2 percent) were neutral in their opinion of preschool children's food habits in their community. From these data it was concluded that one-third of the teachers considered poor food habits of preschool children a problem in their community (Table IX).

Eighty-six day care teachers (44.5 percent) felt that the term "nutrition education" was positive in connotation. Fifty-eight (30.1 percent) of the teachers responded that the term "nutrition education" was negative in connotation (Table IX). There were 49 (25.4 percent) who were neutral. It was concluded that nearly one-third of the teachers believed the term "nutrition education" was positive in connotation.

In summary, the majority of day care teachers believed that preschool children in their community have not had poor food habits. Most of the teachers had not considered the term "nutrition education" to be negative in connotation.

Feeling of Competency to Teach Nutrition

Of the day care teachers in this study, 109 (56.8 percent) agreed or strongly agreed that they had sufficient nutrition knowledge to teach nutrition to their preschool children. There were 43 (22.4 percent) who

TABLE IX

OPINIONS OF DAY CARE TEACHERS CONCERNING NUTRITION EDUCATION IN THE DAY CARE PROGRAM

Questionnaire Item*	Responses: Strongly Agree Freq.	Strongly Agree Percent	Agree Freq.	Agree Percent	Neutral Freq.	Neutral Percent	Disagree Freq.	Disagree Percent	Strongly Disagree Freq.	Strongly Disagree Percent	Total Freq.
Item 1 (Poor Food Habits of Preschool Children)	14	7.4	55	28.9	27	14.2	73	38.4	21	11.1	190
Item 2 (The Term "Nutrition Education")	10	5.2	48	24.9	49	25.4	73	37.8	13	6.7	193
Item 3 (The State Legislature Mandate)	24	12.6	81	42.6	35	18.4	33	17.4	17	9.0	190
Item 4 (Licensing Act Require Nutrition Education)	49	26.3	103	55.4	13	7.0	18	9.7	3	1.6	186
Item 5 (Integrated Nutrition Education)	35	18.6	104	55.3	27	14.4	22	11.7	0	0.0	188
Item 6 (Separate Nutrition Education)	6	3.1	48	25.4	26	13.8	95	50.3	14	7.4	189
Item 7 (Inclusion of Nutrition Education In the Day Care Program)	33	17.2	98	51.0	27	14.1	29	15.1	5	2.6	192
Item 15 (The Importance of Teaching Nutrition	62	32.3	107	55.7	18	9.4	4	2.1	1	0.5	192
Item 16 (Sufficient Knowledge About Food and Nutrition)	31	16.2	78	40.6	40	20.8	39	20.3	4	2.6	192
Item 17 (Teacher's Lack of Preparation In Nutrition)	14	7.5	85	45.2	48	25.5	37	19.7	4	2.1	188
Item 18 (Required Course in Nutrition Education)	19	10.0	75	39.7	48	25.4	38	20.1	9	4.8	189

*Complete Questionnaire items in Appendix B, p. 115)

disagreed or strongly disagreed that they had sufficient nutrition knowledge to teach nutrition to their preschool children. Forty teachers (20.8 percent) were neutral. From these data over one-half of the teachers felt that they had enough nutrition knowledge to incorporate nutrition into their curriculum (Table IX).

The data (Table IX) concerning the day care teachers' opinion that lack of preparation in the area of nutrition education led to ineffective programs, revealed that 99 (52.7 percent) of the teachers agreed or strongly agreed with the statement. Forty-one (21.8 percent) disagreed or strongly disagreed that programs of nutrition education had been limited in effectiveness due to the teacher's lack of preparation in the area of nutrition. There were 48 teachers (25.5 percent) who remained neutral. It was concluded that one-half of the teachers believed that teacher's lack of preparation in the area of nutrition education limited the effectiveness of their nutrition education programs.

The responses revealed that the teachers felt that they had enough nutrition knowledge to teach nutrition, but they believed that the lack of preparation in the area of nutrition education might lead to ineffective programs. This seemed to indicate that day care teachers needed assistance in obtaining methods, techniques, and appropriate learning activities for teaching nutrition.

Nutrition Education Course
Required for Certification

Ninety-four of the day care teachers (49.7 percent) agreed or strongly agreed that the lack of teacher preparation in nutrition education would be eliminated if prospective day care teachers were

required to take an undergraduate course in teaching nutrition education. The statement was disagreed or strongly disagreed with by 47 teachers (24.9 percent). There were 48 (25.4 percent) who remained neutral (Table IX). In summary it appeared that nearly one-half of the teachers in this study agreed or strongly agreed that prospective day care teachers should be required to take an undergraduate course in teaching nutrition education; thus they would be better prepared to teach nutrition. The literature supported the belief that teachers should increase their competency in nutrition education by using a variety of convenient methods but not necessarily a required undergraduate course (Hill, 1963; Todhunter, 1969; Sodowsky, 1972).

Teaching Nutrition In Day Care Centers

The responses of the day care teachers also provided data concerning opinions about teaching nutrition in Oklahoma day care centers. One hundred thirty-one (68.2 percent) of the day care teachers agreed or strongly agreed that the inclusion of nutrition education in the day care centers was the most desirable method for preventing poor food habits (Table IX). Thirty-four teachers (17.7 percent) disagreed or strongly disagreed with the statement. There were 27 (14.1 percent) who remained neutral. These data suggested that over one-half of the teachers believed that the day care center should play a significant role in providing nutrition education to preschool children to help children learn good food habits.

An open-ended question was used to solicit reasons and comments concerning teaching nutrition by methods other than the inclusion of nutrition education in the day care curriculum. A summary of the

comments of the 155 day care teachers who suggested an educational method other than the day care center curriculum indicated: (1) the parents were the ones who needed to be educated; (2) a parent education program would be more desirable; and (3) children had little control over what was purchased or served in the home. Additional information was presented in Appendix C (Table XXIV). It appeared that the teachers answering this question believed that a parent nutrition education program would be the most desirable method for preventing poor food habits since young children relied greatly on what their parents provided for their nutrition.

The day care teachers were questioned as to whether the state legislature should mandate the teaching of nutrition at the day care level. The data revealed that 105 of the day care teachers (55.2 percent) agreed or strongly agreed, and 50 (26.4 percent) disagreed or strongly disagreed with requiring the teaching of nutrition at the day care level. Thirty-five teachers (18.4 percent) were neutral (Table IX). It was concluded that over one-half the day care teachers favored the state legislature requiring the teaching of nutrition at the day care level.

Of the day care teachers 152 (81.7 percent) agreed or strongly agreed with evaluation of a nutrition program as part of the Oklahoma Day Care Licensing Act. There were 21 teachers (11.3 percent) who disagreed or strongly disagreed; and 13 (7.0 percent) were neutral. These data (Table IX) revealed that three-fourths of the teachers were in favor of including an evaluation of a nutrition program as a part of the Oklahoma Day Care Licensing Act.

When the day care teachers were questioned as to who should teach

nutrition at the day care level, it was found that 104 of the teachers (54.4 percent) reported "day care teachers"; 39 (20.4 percent) indicated "nutrition education specialist"; and 13 (6.8 percent) of the teachers listed "public health nurse" as the individual to teach nutrition. There were 10 teachers (5.3 percent) who indicated that the "day care teachers" and "nutrition education specialist" should teach nutrition. Seven teachers (3.7 percent) favored the "day care teachers" and "public health nurse" to teach nutrition. A combination of "day care teachers," "public health nurse" and "nutrition education specialist" was reported by 8 teachers (4.2 percent). Ten day care teachers (5.2 percent) reported "others" should teach nutrition. Other people who were suggested to teach nutrition included parents, resource persons, directors of the day care centers, and paraprofessionals (Table X). It was concluded from these data that Oklahoma day care teachers indicated that the day care teacher was the one who should teach nutrition to preschool children at the day care level. The teachers also reported that the parents should also help teach nutrition to young children.

Status of Nutrition Education In Oklahoma Day Care

Data were collected by the researcher to identify the status of nutrition education in the day care programs. The day care teachers were asked to respond to questions concerning whether nutrition was taught in the day care program, the extent of nutrition being taught in the day care curriculum, opinions toward teaching nutrition at the day care level, and nutrition background of day care teachers. Data about the integration of nutrition education in the day care curriculum,

TABLE X

DESIGNATED PREFERENCE FOR PERSON TO TEACH NUTRITION AT THE DAY CARE LEVEL*

	Responses	
	Frequency	Percent
Day Care Teacher	104	54.4
Nutrition Education Specialist	39	20.4
Public Health Nurse	13	6.8
Day Care Teachers & Nutrition Education Specialists	10	5.3
Day Care Teachers & Public Health Nurse	7	3.7
Day Care Teachers, Nutrition Education Specialist, and Public Health Nurse	8	4.2
Others	10	5.2

*Respondents could choose more than one person

teaching nutrition as a separate unit, and curriculum areas for teaching nutrition were sought to identify the status of nutrition education in the day care program.

One hundred and twenty-seven of the day care teachers (66.1 percent) reported that nutrition was taught in their day care program. Nutrition was not taught by 65 (33.9 percent) of the teachers. Nearly two-thirds of the day care teachers indicated that nutrition was taught in their day care program.

In order to determine why nutrition education had not been taught in the day care program, the respondents were asked to indicate the reasons for lack of emphasis on nutrition education in the day program (Table XI). Of the day care teachers, 33 (48.5 percent) indicated

TABLE XI

REASONS FOR NUTRITION EDUCATION NOT BEING TAUGHT IN THE DAY CARE PROGRAM

	Responses	
	Frequency	Percent
Not enough resource materials appropriate for day care level	33	48.5
Insufficient knowledge about nutrition	25	36.7
Children are not interested in the subject	13	19.1
Class is too large	8	11.8
Curriculum is too full with other things	7	10.3
Do not feel comfortable teaching nutrition education	5	7.4
Do not feel it is important	5	7.4

*Respondents could choose more than one item
N = 68

that the reason for lack of emphasis on teaching nutrition was "not enough resource materials appropriate for day care level." Twenty-five teachers (36.7 percent) indicated that "insufficient knowledge about nutrition" was a reason for the omission of nutrition education in the day care curriculum. Thirteen (19.1 percent) reported that children were not interested in the subject. Eight of the day care teachers (11.8 percent) reported that the class was too large. Seven teachers (10.3 percent) indicated that the curriculum was too full with other things. Five (7.4 percent) had not felt comfortable teaching nutrition education. Five day care teachers (7.4 percent) had not felt that it was important to teach nutrition. There were 25 teachers (34.7 percent) who indicated other reasons for lack of emphasis on nutrition education from the day care curriculum. The response most often received

indicated that the day care teachers had not thought about teaching nutrition; and that the children were too young to be taught nutrition.

Extent of Nutrition Taught In Day Care Curriculum

The 127 day care teachers, who indicated that nutrition was taught in their day care curriculum, were asked to indicate to what extent nutrition was taught (Table XII). Thirty-four day care teachers (26.9 percent) reported that they taught a considerable amount of nutrition. Sixty-four (50.3 percent) of the teachers reported teaching a moderate amount of nutrition. Twenty-nine (22.8 percent) indicated that they taught little nutrition. It was concluded that three-fourths of the day care teachers of the study felt that they were teaching a moderate amount or more of nutrition in their day care curriculum.

Respondents' Opinions Toward Teaching Nutrition

Of the 192 day care teachers, 169 (88.0 percent) agreed or strongly agreed with teaching nutrition at the day care level. There were five day care teachers (2.6 percent) who disagreed or strongly disagreed that nutrition education should be taught at the day care level. There were 18 teachers (9.4 percent) who remained neutral (Table XIII). It may be generalized that the majority of the day care teachers in the study favored teaching nutrition in the day care level. The data supported O'Farrell's (1971) findings that educators support school programs of nutrition education.

TABLE XII

EXTENT OF NUTRITION BEING TAUGHT AT THE DAY CARE LEVEL

	Responses	
	Frequency	Percent
Considerable	34	26.9
Moderate	64	50.3
Little	29	22.8
Total	127	100.0

TABLE XIII

OPINIONS OF DAY CARE TEACHERS CONCERNING IMPORTANCE OF NUTRITION EDUCATION IN DAY CARE PROGRAMS

	Responses	
	Frequency	Percent
Strongly Agree	62	32.3
Agree	107	55.7
Neutral	18	9.4
Disagree	4	2.1
Strongly Disagree	1	0.5
Total	192	100.0

Integration of Nutrition Versus Nutrition As A Separate Unit

Responses were sought to determine if nutrition information should be integrated with other subjects, if it should be taught as a separate

unit, and the method which the respondents considered to be the most valuable in teaching nutrition to preschool children (Table IX). Of the 193 day care teachers, 139 (55.3 percent) agreed or strongly agreed that nutrition education was more valuable if integrated into the curriculum. Twenty-two teachers (11.7 percent) disagreed or strongly disagreed that teaching nutrition as an integrated part of the program was more favorable. Twenty-seven day care teachers (14.4 percent) chose to remain neutral (Table IX).

The data from the question that dealt with nutrition as a separate unit indicated that 109 of the teachers (57.7 percent) disagreed or strongly disagreed that nutrition information was of more value if taught as a separate unit. It was found that 54 (25.4 percent) agreed or strongly agreed with teaching nutrition information as a separate unit instead of integrating the subject into the day care curriculum. Twenty-six day care teachers (13.8 percent) remained neutral. It was concluded that the majority of teachers who responded believed that nutrition information was more valuable if taught as part of an integrated day care curriculum rather than as a separate unit. The findings of these data were in agreement with Amidon (1967), Vaden (1974), and Vannier (1963).

Curriculum Areas For Integration

Nutrition

Information was obtained concerning the areas within the day care curriculum in which nutrition education could be integrated (Table XIV). Of the day care teachers, 142 (77.6 percent) felt that nutrition could be integrated into the health area of the day care curriculum. The

TABLE XIV

COMPARISON OF AREAS OF THE DAY CARE PROGRAM IN WHICH NUTRITION EDUCATION COULD BE INTEGRATED AND AREAS WHERE RESPONDENTS FELT COMPETENT TO CARRY OUT INTEGRATION

Curriculum Area	Present Integrated[1]		Possible to Integrate[2]		Felt Competency to Integrate[3]	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Science	111	59.4	66	36.0	55	29.6
Language Arts	110	58.8	44	24.0	34	18.3
Health	125	66.8	142	77.6	154	82.8
Mathematics	88	47.1	21	11.5	20	10.8
Cooking	59	31.7	97	53.0	111	59.7
Social Science	63	33.7	26	14.2	18	9.7
Music	155	82.8	42	23.0	37	19.9
Arts and Crafts	170	90.9	73	39.9	68	36.6
Others	13	6.7	6	3.1	7	3.6

*Respondents could choose more than one area

[1]N = 187, Item 12 (Appendix B, p. 118).

[2]N = 183, Item 13 (Appendix B, p. 118).

[3]N = 186, Item 14 (Appendix B, p. 118).

second greatest number of teachers, 97 (53.0 percent) indicated that nutrition could be integrated when teaching cooking. Seventy-three (39.9 percent) reported that arts and crafts and nutrition could be integrated. Sixty-six teachers (36.0 percent) felt that science and nutrition could be integrated. Mathematics was the curriculum area which the fewest teachers, 21 (11.5 percent) believed could be integrated with nutrition. It was concluded that the teachers considered four areas of the day care curriculum as more readily adaptive to integration in the day care program. The four areas were health, cooking, arts and crafts and science.

Table XIV also included the data that showed the eight areas in which the respondents felt competent to integrate nutrition education. There were 154 of the day care teachers (82.8 percent) who felt competent to integrate nutrition education in the health area. The second greatest number of teachers, 111 (59.7 percent), reported they could integrate cooking experiences with nutrition. There were 68 (36.6 percent) who felt competent to integrate nutrition education and arts and crafts; 55 (29.6 percent) of the day care teachers indicated that they could integrate science and nutrition. It was concluded from the data received that the teachers felt more competent as well as favored teaching nutrition by coordinating and integrating it into the day care curriculum areas of health, cooking, arts and crafts, and science.

Nutrition Background

It was desirable to know the nutrition background of the day care teachers and where day care teachers secured information pertaining to nutrition. Sixty-eight of the day care teachers (37.4 percent) reported

that commercial food companies were used most frequently to obtain nutrition information. Television was the second source most frequently used by 67 (36.8 percent) of the teachers. Sixty-five teachers (35.7 percent) reported that newspapers were the third source used to obtain nutrition information. Only 59 day care teachers (33.0 percent) reported college courses as a source of their nutrition background. In-service training was reported as the source used the least often by teachers to obtain nutrition information (Table XV). In comparison to the day care teachers, the total sample reported commercial food companies and professional magazines as the sources used to obtain nutrition information to use in the curriculum planning by one-third of all the respondents (Table XV). After analyzing the data it was concluded that there were a number of sources used by the sample to obtain nutrition education information. One-third of the teachers reported that they had received information about nutrition from commercial food companies.

The day care teachers used commercial food companies such as the Dairy Council, Cereal Institute to obtain nutrition information. Sixty-two of the 192 day care teachers (32.3 percent) had obtained resource materials from the Dairy Council, Cereal Institute, or other organizations. One hundred thirty teachers (67.6 percent) had not secured materials. When questioned about the number of addresses or sources that the day care teachers were aware that offered free nutrition education resource materials for preschool children, 104 of the 191 teachers (78.0 percent) indicated that they had not had any addresses or sources for nutrition information.

TABLE XV

SOURCES OF NUTRITION INFORMATION
OF RESPONDENTS

	Teachers[1]		Total Sample[2]	
	Freq.	Percent	Freq.	Percent
Commercial Food Companies	68	37.4	109	41.3
Television	67	36.8	83	31.6
Newspapers	65	35.7	94	35.6
Non-professional Magazines	64	35.2	87	33.0
College Courses in Nutrition	59	33.0	87	33.0
Professional Magazines	48	26.4	72	27.3
Inservice Training in the Day Care Center	42	23.2	70	26.6
Nutrition Workshops	35	19.2	67	25.4
Others	46	25.8	62	23.5

Analysis of Day Care Teachers' Opinion Toward the Importance of Teaching Nutrition In the Day Care Program In Relationship To Selected Variables

In order to identify the relationship between the day care teachers' opinion of the importance of teaching nutrition in the day care program to age, teaching experience, educational background, nutritional background and the number of children in the day care program, the statistical procedure, Chi Square, was used. The level of significance was established at .05.

Age of Day Care Teachers

There was no significant relationship at .05 level between the day care teachers' opinion toward the importance of teaching nutrition at the day care level and the age of the day care teachers ($\chi^2 = 3.5950$, $p = 0.9994$). These data were presented in Appendix C, Table XXV.

Teaching Experience

There was no relationship between the day care teachers' opinion toward the importance of teaching nutrition at the day care level and the years of teaching experience ($\chi^2 = 10.2530$, $p = 0.5938$). These data were presented in Appendix C, Table XXVI.

Educational Background

When the responses from the day care teachers were analyzed, a significant relationship was found between the day care teachers' opinion toward the importance of teaching nutrition at the day care level and the education level of the day care teachers ($\chi^2 = 26.9060$, $p = 0.0007$). Although a significant Chi Square was observed, these results (Table XVI) were not valid due to the exceedingly small expected values in the Chi Square cells which contribute to the Chi Square statistic (Snedecor and Cochran, 1967). One hundred sixty-eight day care teachers agreed or strongly agreed with the importance of teaching nutrition at the day care level. There were 53 teachers who disagreed or strongly disagreed regarding the importance of teaching nutrition at the day care level. Eighteen remained neutral.

There was no significant relationship at the .05 level between

TABLE XVI

ANALYSIS OF DAY CARE TEACHERS' OPINION TOWARD THE IMPORTANCE OF TEACHING NUTRITION AT THE DAY CARE LEVEL IN RELATION TO THE EDUCATION LEVEL OF THE DAY CARE TEACHERS

	Below High School Diploma		High School Diploma And Above		B.S. or B.A. Degree And Above		
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Total
Strongly Agree	2	1.05	43	22.51	16	8.38	61
Agree	4	2.09	86	45.03	17	8.90	107
Neutral	2	1.05	12	6.28	4	2.09	18
Disagree	1	0.52	3	1.57	0	0.00	4
Strongly Disagree	1	0.52	0	0.00	0	0.00	1

Chi Square = 26.906 D.F. = 8 $\underline{p}$ = 0.0007
Significant at .05 level*
N = 191
Item 15 in relation to Item 31 (Appendix B, p. 119, p. 121).
*Results were not valid due to the exceedingly small expected values in the Chi Square cells which contributed to the Chi Square statistic.

the day care teachers' opinion toward teaching nutrition at the day care level and (1) elementary education (Appendix C, Table XXVII, $\chi^2 = 2.6470$, $p = 0.6184$); (2) secondary education (Appendix C, Table XXVIII, $\chi^2 = 3.4460$, $p = 0.4862$); and (3) home economics education $\chi^2 = 0.7080$, $p = 0.9504$) as the area of educational specialization. These data were presented in Appendix C, Table XXIX).

A significant relationship was identified between the day care teachers' opinion as to the importance of teaching nutrition and the early childhood education as the areas of specialization ($\chi^2 = 9.8830$, $p = 0.0425$). Those day care teachers who had an early childhood education specialization tended to agree that teaching nutrition at the day care level was important but not quite as strongly as those day care teachers who did not have an early childhood education specialization (Table XVII). One hundred twenty-seven day care teachers agreed or strongly agreed with the importance of teaching nutrition at the day care level. There were 4 teachers who disagreed or strongly agreed with the importance of teaching nutrition at the day care level. Seventeen remained neutral.

There was no significant relationship at the .05 level between the day care teachers' opinion toward teaching nutrition at the day care level and educational specialization in another area ($\chi^2 = 27.8830$, $p = 0.1122$). The other areas included were social science, education, child care, biological science, humanities, and physical science (Appendix C, Table XXX).

Nutrition Education

A significant relationship was found between the day care teachers'

TABLE XVII

ANALYSIS OF DAY CARE TEACHERS' OPINION TOWARD THE IMPORTANCE OF TEACHING NUTRITION AT THE DAY CARE LEVEL IN RELATION TO EARLY CHILDHOOD SPECIALIZATION

	Responses				
	Yes		No		
	Frequency	Percent	Frequency	Percent	Total
Strongly Agree	23	14.56	29	18.35	52
Agree	53	33.54	32	20.25	85
Neutral	5	3.16	12	7.59	17
Disagree	1	0.63	2	1.27	3
Strongly Disagree	0	0.00	1	0.63	1

Chi Square = 9.8830 D.F. = 4 p = 0.0425
Significant at .05 level
N = 158
Item 15 in relation to Item 26 (Appendix B, p. 119, p. 120).

opinion as to the importance of teaching nutrition and college courses in nutrition as the source of nutrition background. (χ^2 = 13.9980, p = 0.0073). The data (Table XVIII) indicated that the day care teachers who have had college courses in nutrition tended to agree more strongly with teaching nutrition at the day care centers than those day care teachers who have had no college courses in nutrition. One hundred sixty-one day care teachers agreed or strongly agreed with the importance of teaching nutrition at the day care level. Five disagreed or strongly disagreed with teaching nutrition at the day care level. There were 16 who remained neutral.

There was no significant relationship at the .05 level between the day care teachers' opinion toward teaching nutrition at the day care level and (1) commercial food companies (Appendix C, Table XXXI, χ^2 = 3.6530, p = 0.4550); (2) television (Appendix C, Table XXXII, χ^2 = 1.1720, p = 0.8827); (3) newspapers (Appendix C, Table XXXIII, χ^2 = 2.1630, p = 0.7058); (4) non-professional magazines (Appendix C, Table XXXIV, χ^2 = 1.1850, p = 0.8805); (5) inservice training (Appendix C, Table XXXV, χ^2 = 4.9520, p = 0.2923); and (6) nutrition workshops (χ^2 = 5.8050, p = 0.2142) as a source of nutrition background. These data were presented in Appendix C, Table XXXVI.

A significant relationship was identified between the day care teachers opinion toward teaching nutrition at the day care level and professional magazines as a source of nutrition background (χ^2 = 0.3840, p = 0.0344). These data were presented in Table XIX. Those day care teachers who use professional magazines as a source of nutrition information tended to agree more strongly with teaching nutrition at the day care level while those who did not use professional magazines

TABLE XVIII

ANALYSIS OF DAY CARE TEACHERS' OPINION TOWARD THE IMPORTANCE OF TEACHING NUTRITION AT THE DAY CARE LEVEL IN RELATION TO COLLEGE COURSES IN NUTRITION AS A SOURCE OF NUTRITION INFORMATION

	Responses				
	Yes		No		
	Frequency	Percent	Frequency	Percent	Total
Strongly Agree	30	16.48	30	16.48	60
Agree	26	14.29	75	41.21	101
Neutral	2	1.10	14	7.69	16
Disagree	1	0.55	3	1.65	4
Strongly Disagree	0	0.00	1	0.55	1

Chi Square = 13.998 D.F. = 4 p = 0.0073
Significant at .05 level
N = 182
Item 15 in relation to Item 26 (Appendix B, p. 119, p. 120).

as a source of nutrition information tended to agree more strongly with teaching nutrition at the day care level while those who did not use professional magazines tended to be neutral or disagree. One hundred sixty-one of the day care teachers agreed or strongly agreed with the importance of teaching nutrition at the day care level. There were five teachers who disagreed or strongly disagreed with teaching nutrition at the day care level. Sixteen remained neutral toward the statement.

Size

There was no significant relationship at the .05 level between the day care teachers' opinion toward teaching nutrition at the day care level and the size of the day care center ($\chi^2 = 17.1440$, $p = 0.1442$). These data were presented in Appendix C (Table XXXVII).

Analysis of Day Care Teachers Teaching Nutrition at the Day Care Level In Relation to the Day Care Teachers' Opinions Toward Teaching Nutrition At the Day Care Level

A significant relationship was identified between those day care teachers teaching nutrition and their opinions as to the importance of teaching nutrition ($\chi^2 = 20.8150$, $p = 0.0003$). It was observed that those day care teachers teaching nutrition tended to think it was more important to teach nutrition at the day care level than those teachers who do not teach nutrition (Table XX). However, overall, 88.48 percent of the day care teachers agreed or strongly agreed that teaching

TABLE XIX

ANALYSIS OF DAY CARE TEACHERS' OPINION TOWARD THE IMPORTANCE OF TEACHING NUTRITION AT THE DAY CARE LEVEL IN RELATION TO PROFESSIONAL MAGAZINES AS A SOURCE OF NUTRITION INFORMATION

	Responses				
	Yes		No		
	Frequency	Percent	Frequency	Percent	Total
Strongly Agree	23	12.64	36	19.78	59
Agree	24	13.19	78	42.86	102
Neutral	1	0.55	15	8.24	16
Disagree	0	0.00	4	2.20	4
Strongly Disagree	0	0.00	1	0.55	1

Chi Square = 10.384 D.F. = 4 p = 0.0344
Significant at .05 level
N = 182
Item 15 in relation to Item 26 (Appendix B, p. 119, p. 120).

TABLE XX

ANALYSIS OF DAY CARE TEACHERS TEACHING NUTRITION AT THE DAY CARE LEVEL IN RELATION TO DAY CARE TEACHERS' OPINIONS TOWARD TEACHING NUTRITION AT THE DAY CARE LEVEL

	Responses										
	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent	Freq.	Percent	Total
Yes	48	25.13	73	38.22	6	3.14	0	0.00	0	0.00	127
No	14	7.33	34	17.80	11	5.76	4	2.09	1	0.52	64

Chi Square = 20.815 D.F. = 4 p = .0003
Significant at .05 level
N = 191
Item 9 in relation to Item 15 (Appendix B, p. 117, p. 119).

nutrition is important. The data revealed that 127 day care teachers who indicated that they taught nutrition at the day care level responded by agreeing, strongly agreeing or as neutral to the importance of teaching nutrition at the day care level. Of the 64 teachers who indicated that they had not taught nutrition at the day care level, 48 agreed or strongly agreed; 11 were neutral; and 5 disagreed or strongly disagreed to the importance of teaching nutrition at the day care level.

The Needs of the Day Care Teachers For Nutrition Information and Teaching Techniques

In order to determine the needs of day care teachers for nutrition information and teaching techniques the day care teachers were questioned about their willingness to teach nutrition with resource materials provided and suggestions for additional teacher nutrition information. Data were collected to determine if nutrition curriculum plans were used in planning nutrition education at the day care level and if they were adequate.

Analysis of responses showed that of the 191 day care teachers, 175 (91.6 percent) said they would be more willing to teach nutrition if they were provided with resource materials; 16 (8.4 percent) said they would not be willing to teach. These data tended to support the belief that resource materials in the simple written form such as a guide would aid the day care teachers in teaching nutrition education.

One hundred seventy-six of the 189 day care teachers (93.1 percent) reported that they would like to receive nutrition resource materials appropriate for the day care level. Nutrition education resources were

desired by over three-fourths, and the teachers reported that they would teach more nutrition education if resource materials were available.

Suggestions For Additional Nutrition Information For Teachers

Suggestions concerning methods of additional information in nutrition education were solicited from the day care teachers. The teachers were to rate the methods for receiving information according to their first through seventh choices. However, there were 46 day care teachers who marked only their first choice and failed to rank the other methods for additional information. Only 108 teachers responded to all seven of the choices for additional information.

A mean score was calculated for each method for receiving information. A value was given to each ranking such as 1st choice - 7, 2nd choice, 6, etc. The mean scores were the basis for ranking the methods to the most common choices for receiving additional information. Ninety-one of the day care teachers reported that their most common first choice of receiving additional nutrition information was to have nutrition education materials mailed to them. Their second choice was to have all day workshops in their area. An inservice workshop once a month during the school year was their third choice. A nutrition education program taught in your community was their fourth choice. Their fifth choice was an all day nutrition workshop at a college campus. A summer 2-week short-course at a college campus was the day care teachers' sixth choice. A summer 4-week short-course at a college campus was their seventh choice. A complete tabulation of the data is

shown in Table XXI. These data supported Hill's (1963) statement that teachers wanted nutrition education programs that were convenient and economical for them to participate in.

It was found that curriculum plans were used to help teach nutrition by only 36 of the 183 day care teachers (19.7 percent). Twenty-five different guides were listed as providing some help in curriculum planning for nutrition. The five resources mentioned most often by the day care teachers were their own curriculum plans; four food groups; National Dairy Council; Church Week Day Early Education Teachers Guide; and the day care center's own prescribed curriculum plan. The topics in the guides which were mentioned as being used to teach nutrition the most often by the day care teachers were as follows: basic food groups and nutrition as related to good health; eat the 1-2-3-4 way; and food, cleanliness, rest, and exercise. It may be concluded that approximately one-fifth of the teachers had used a curriculum plan or guide to help them in teaching nutrition. The day care teachers felt that the curriculum plans used did not contain adequate resource materials and information related directly to food habits and nutrition.

When questioned about the adequacy of the curriculum plans used by the respondents, 20 of the 52 day care teachers (38.5 percent) reported that nutrition information in the curriculum plans was not adequate. Thirty-two (61.5 percent) of the teachers reported that the information was adequate (Table XXII). In summary, over one-third of the teachers responding reported that the current curriculum plans were not adequate for providing proper nutrition information.

TABLE XXI

MEAN SCORE OF RESPONSES TO SUGGESTED METHODS FOR ADDITIONAL TEACHER TRAINING IN NUTRITION EDUCATION

	1st Choice		2nd Choice		3rd Choice		4th Choice		5th Choice		6th Choice		7th Choice		Mean
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Score
1) Inservice workshop once a month during the school year N = 114	31	27.2	30	26.3	11	9.6	13	11.4	17	14.9	3	2.6	9	7.9	570
2) Summer 2-week short-course at a college campus N = 91	7	7.7	12	13.2	8	8.8	7	7.7	13	14.3	39	42.9	4	4.4	310
3) Summer 4-233k short-course at a college campus N = 88	3	3.4	6	6.8	2	2.3	4	4.5	13	14.8	20	22.7	39	44.3	201
4) Nutrition education program taught in your community N = 116	19	16.4	22	19.0	29	25.0	19	16.4	15	12.9	3	2.6	8	6.9	545
5) All day nutrition workshop in your area N = 135	28	20.7	48	35.6	24	17.8	18	13.3	3	2.2	8	5.9	6	4.4	707
6) All day nutrition workshop at a college campus N = 106	7	6.6	15	14.2	30	28.3	22	20.8	17	16.0	6	5.7	9	8.5	449
7) Nutrition education resource materials mailed to you N = 169	91	53.8	32	18.9	21	12.4	9	5.3	7	4.1	4	2.4	5	3.0	1004

TABLE XXII

RESPONSES ACCORDING TO USE OF ADEQUATE NUTRITION GUIDES

	Responses	
	Frequency	Percent
Yes	32	61.5
No	20	38.5
Total	52	100.0

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary of the Findings

Two-thirds of the 277 respondents were categorized as day care teachers. Two-thirds of the teachers were employed by public day care centers. Nearly one-half were from medium-sized day care centers. Three-fourths of the teachers indicated that their day care center participated in the Child Care Food Program. The majority of the day care teachers in this study had earned a high school diploma or above, and had indicated early childhood concentration. Slightly over three-fourths of the teachers had been teaching for 5 years or less. Over two-thirds of the teachers were under age 35.

One-third of the day care teachers considered poor food habits to be a problem of preschool children in their community. The teachers felt that the term "nutrition education" was positive in connotation.

The day care teacher was the person designated by the day care teachers in the study as the one who should teach nutrition to preschool children. Nearly one-half of the teachers reported that they thought they had sufficient knowledge about nutrition to include nutrition in the day care curriculum, yet one-half of the day care teachers indicated that the lack of preparation in the area of nutrition education limited their nutrition program. Nearly one-half of the teachers suggested

prospective kindergarten teachers should be required to take a course in nutrition education to prevent this lack of preparation in the nutrition area.

The majority of the day care teachers believed that the school should play a significant role in providing nutrition education; slightly over one-half of the teachers favored the state legislature requiring the teaching of nutrition at the day care level. Three-fourths of the day care teachers indicated that the evaluation of a nutrition program should be a part of the Oklahoma Day Care Licensing Act.

In addition, the majority of the day care teachers favored providing nutrition education to preschool children. Nearly two-thirds of the teachers indicated that nutrition was taught in their day care programs. Three-fourths of the teachers felt they had already taught a moderate amount or more of nutrition information in the day care curriculum.

Integrating nutrition education with different curriculum areas instead of teaching it as a separate unit was reported as the method that should be employed at the day care level. The teachers felt more competent in integrating nutrition education in the areas of health, cooking, arts and crafts, and science than in other areas.

One-third of the day care teachers received their nutrition information from commercial food companies, television, and newspapers. In contract, commercial food companies and professional magazines were used by one-third of all respondents in this study to obtain nutrition information for curriculum planning. One-third of the teachers had obtained nutrition resource materials from private organizations and

companies. However, three-fourths of the day care teachers indicated that they did not have any addresses or sources for nutrition information.

When the responses from the day care teachers were analyzed, a significant relationship at the .05 level existed between the day care teachers' opinion toward teaching nutrition at the day care level and the education level of the day care teachers. Although a significant Chi Square was observed, these results were not valid due to the exceedingly small expected values in the Chi Square cells which contributed to the Chi Square statistic. A significant relationship was identified between the day care teachers' opinion as to the importance of teaching nutrition and their early childhood education specialization. Those day care teachers who had an early childhood education specialization tended to agree that teaching nutrition at the day care level was important but not quite as strongly as those day care teachers who did not have an early childhood education specialization.

There was a significant relationship at the .05 level between the day care teachers' opinion as to the importance of teaching nutrition and college courses in nutrition as the source of nutrition background. The data indicated that the day care teachers who have had college courses in nutrition tended to agree more strongly with teaching nutrition at the day care level than those day care teachers who had no college courses in nutrition. A significant relationship was identified between the day care teachers' opinion toward teaching nutrition at the day care level and professional magazines as a source of nutrition background. Those day care teachers who use professional magazines as a source of nutrition information tended to agree more strongly with

teaching nutrition at the day care level while those who did not use professional magazines tended to be neutral or disagree. In addition, a significant relationship existed between those day care teachers teaching nutrition and their opinions as to the importance of teaching nutrition. It was observed that the day care teachers who teach nutrition tended to think that it is more important to teach nutrition at the day care level than those teachers who did not teach nutrition.

The data revealed that the teachers believed that their nutrition background was limited. The day care teachers' first choice for additional information in the area of nutrition education was that nutrition education resource materials should be provided by mailing materials to participants.

Curriculum guides were used by one-fifth of the day care teachers, and one-tenth of the teachers reported that curriculum guides in the area of nutrition were inadequate. Over nine-tenths of the day care teachers desired to receive nutrition education resource materials and stated that they would be more willing to teach nutrition if they were provided with resource materials.

Suggestions and Recommendations

Considerations of the findings in this study and the findings of other investigators as noted in the review of literature suggested certain interpretations and implications for understanding how opinions about nutrition education could be used for instructional purposes. On the basis of the findings, the following suggestions and recommendations were proposed by the researcher to promote nutrition education. These suggestions and recommendations have implications for day care teachers,

persons interested in nutrition programs for young children and for researchers.

1. It was suggested that persons in higher education promote nutrition education for day care teachers. Since one-half of the teachers suggested that prospective day care teachers should be required to take a course in nutrition education to prevent lack of preparation in the area, it would be recommended to require a nutrition course before employment in the day care center was determined. An understanding of basic nutrition information and innovative methods of teaching an integrated nutrition education program would help prepare future day care teachers in the area of nutrition. Thus, the teachers would be in a better position to help formulate good eating habits in young children.
2. Provisions should be made for more day care teachers to attend and participate in inservice training, meetings, and conventions which offer inservice training in current nutrition resource materials. One solution would be to train day care teachers already in the profession to be allied professionals in teaching nutrition.
3. It was suggested that guides and resource materials in the area of nutrition education for preschool children be developed, since the day care teachers reported that they desired nutrition education materials and would be more willing to teach nutrition

if they had nutrition resource materials available.

4. Private commercial companies should be urged to play an even greater role in promoting nutrition education since the majority of the teachers reported that they obtained nutrition information from these sources to use in curriculum planning. These companies should be encouraged to continue to provide reliable free or inexpensive resource materials to be used with preschool children. They should also be encouraged to establish a promotion policy informing interested persons that these materials are available.

Conclusions

The results of the study led to the conclusion that the nutrition survey about nutrition education at the day care level, developed by the researcher, was one means to identify the opinions of day care teachers in regard to the status of nutrition education and the needs of teachers to provide nutrition education at the day care level. It was concluded that mailing nutrition materials to the teachers was the method preferred by the day care teachers to provide nutrition education information and help implement nutrition into the day care curriculum.

A general conclusion held by the investigator was that the Oklahoma day care teachers in this study were supportive of nutrition education and believed that the day care program should play a significant

role in providing nutrition education. The majority of day care teachers favored providing nutrition education to preschool children. This was evidenced by approximately two-thirds of the teachers who indicated that nutrition was taught in the day care program. In addition, three-fourths of the teachers felt they had already taught a moderate amount or more of nutrition information in the day care curriculum.

It was concluded that day care teachers did not teach nutrition primarily because there were not enough nutrition resource materials appropriate for the day care level. Teachers reported that insufficient knowledge about nutrition and children not being interested in the subject as additional reasons for not teaching nutrition.

The nutrition education background of the day care teachers was limited. Commercial food companies, television, and newspapers provided the basis from which the day care teachers obtained nutrition information. Teachers felt that the lack of preparation in the area of nutrition limited their nutrition program. Nearly one-half of the day care teachers suggested prospective day care teachers should be required to take a course in nutrition education. The first choice for additional information in the area of nutrition education was that nutrition education resource materials should be mailed to participants.

It was concluded that curriculum guides to plan for nutrition education were used by less than one-fifth of the day care teachers. The majority of the teachers reported that curriculum guides in the area of nutrition were not used for curriculum planning. Over nine-tenths of the day care teachers desired to receive nutrition education resource materials and stated they would be more willing to teach nutrition if

they were provided with resource materials.

Recommendations For Future Research

On the basis of the findings, suggestions and recommendations, and conclusions of the study, the following recommendations were proposed for further research nutrition education. These recommendations have implications for research persons interested in nutrition programs as well as developmental programs for young children.

It was recommended:

1. That the nutrition survey be utilized in a wider geographical area in order to obtain a more representative sample of population. Research could be continued to determine more of the day care teachers' opinions toward nutrition education and determine the true status of nutrition education in the day care program.
2. That there should be continued research concerning effective means of providing nutrition education materials to educators for use with young children.
3. That research should be undertaken to determine nutrition concepts which are appropriate for preschool children.
4. That food habits of young children should also be researched. The United States population needs to be informed about the dietary practices of this young age group if nutrition education programs are to be started early so that good food habits for

life can be established.

5. That a model program of a cooperative nutrition education program be developed to inform teachers as well as members of the society about the importance of good food habits. All available resources such as county extension service, video-taped programs, health departments, university extension service, media such as newspapers, professional journals, radio and television programs, and resource persons in the field of nutrition should be used to reach all segments of the society and help protect the health and well-being of the country.
6. That nutrition education programs for parents be developed. Research should be conducted in this area, because parents play a major role in teaching good food habits to young children.
7. That research be conducted to identify what is being taught about nutrition and how it is taught in the day care programs.

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APPENDIXES

APPENDIX A

SELECTION OF SAMPLE

TABLE XXIII

PARTICIPATION RATE OF SAMPLE

County	Number of Centers	Number of Centers Selected	Estimated Number of Teachers In Selected Centers	Number of Centers Responding 1st	2nd	3rd	Number of Centers Not Responding	Size	Estimated Number of Teachers In Responding Centers	Size	Number of Teachers Willing To Participate	Respondents 1st	2nd	3rd	NR[1]
Adair	5	2	5			1	1	1-S		1-S-NP	0	-	-	-	-
Atoka	1	1	4	1			0		4	1-M	4	2-M	2-M		0
Beckham	3	2	11	1			1	1-S	8	1-M	7	4-M	1-M	1-M	1-M
Blaine	4	2	7		1	1	0		7	1-S-NP M-NP	0	-	-	-	-
Bryan	3	2	14	1	1		0		14	2-M-NP	0	-	-	-	-
Caddo	2	2	11	2			0		10	1-S-NP 1-M	7	3-M	3-M		1-M
Canadian	3	3	16			1	2	2-M	3	1-S-NP	0	-	-	-	-
Carter	8	3	17	2			1	1-S	15	1-M 1-M-NP	7	3-M		2-M	2-M
Cherokee	12	6	26	3			3	2-S 1-M	17	3-M	4	3-M	1-M		0
Choctaw	4	2	7		1	1	0		7	1-S 1-M	5	1-S		1-M	1-M
Cimarron	2	1	8	1			0		1	1-S-NP	0	-	-	-	-
Cleveland	25	16	141	5	1	10	0		141	1-S,2-M,5-L, 1-S-NR,2-M-NR, 1-S-NR,2-L-NP, 2-M-NP	36	14-L	6-L	1-M 1-L	2-M 21-L 1-S
Coal	2	1	3	-	-	-	1	1-S	-		-	-	-	-	-
Comanche	24	8	45	6	1	1	0			2-S,4-M,1-M-NP, 1-L	35	12-M 1-L	1-S 4-M 1-L	1-S 1-M	8-S 1-M 5-L
Craig	1	1	5			1	0		5	M-NP	0	-	-	-	-
Creek	12	4	12	2	1		1	1-S	9	1-S,1-S-NP, 1-M-NP	1		1-S		0
Custer	9	5	20	2			3	1-S		1-S,1-M	5	1-M	1-M	1-S	2-M
	120	61	352	26	6	16	13	8-S 5-M	241	6-S,15-M,6-L, 6-S-NP,9-M-NP, 2-L-NP,2-M-NR, 1-L-NR,1-S-NR	111	1-S 30-M 15-L	2-S 12-M 7-L	2-S 6-M 1-L	9-S 10-M 16-L

CODE: S=Small; M=Medium; L=Large; NP=No Participant; NR[1]=No Response To Mailing
NR-Not Reached By Telephone of Letter Returned

TABLE XXIII (Continued)

County	Number of Centers	Number of Centers Selected	Estimated Number of Selected Centers	Number of Centers Responding 1st	2nd	3rd	Number of Centers Not Responding	Size	Estimated Number of Teachers In Responding Centers	Size	Number of Teachers Willing To Participate	Respondents 1st	2nd	3rd	NR[1]
Delaware	4	2	6	1			1	1-S	4	1-M	1	1-M			
Dewey	2	1	3	-	-	-	1	1-S	-		-	-	-	-	-
Ellis	2	1	3	-	-	-	1	1-S	-		-	-	-	-	-
Garfield	16	8	48	4	1	2	1	1-M	45	1-S,1-M,1-L, 1-S-NP,2-M-NP, 1-L-NP	3	1-S 1-M 1-L			0
Garvin	4	3	9	2			1	1-M	5	1-S,S-NP	1	1-S			0
Grady	3	2	11	1	1		0		11	1-S,1-M	4	1-S 1-M	1-S	1-S	0
Greer	3	1	2		1		0		2	S-NP	0	-	-	-	-
Harmon	1	1	4	1			0		4	1-M	1			1-M	0
Harper	1	1	3			1	0		3	S-NP	0	-	-	-	-
Haskell	1	1	3			1	0		3	S-NP	0	-	-	-	-
Hughes	3	2	8	1			1	1-S	3	S-NP	0	-	-	-	-
Jackson	6	4	18		1	1	2	1-S 1-M	11	S-NP,M-NR	0	-	-	-	-
Jefferson	1	1	5		1		0		5	M-NP	0	-	-	-	-
Johnston	2	1	1	1			0		1	S-NP	0	-	-	-	-
Kay	12	6	27	4			2	1-S 1-M		2-S-NP,1-M,1-L	5	3-L	1-L		1-L
Kingfisher	2	1	3			1	0		3	S-NP	0	-	-	-	-
Kiowa	2	2	6	-	-	-	2	1-S 1-M	-		-	-	-	-	-
Latimer	2	2	5		1		1	1-S	3	1-S	4	3-S	1-S		0
LeFlore	6	4	18	2			2	2-S	14	1-M,M-NP	10	3-S	4-M	1-M	2-M
Lincoln	3	2	6	2			0		6	S-NP,1-M	2	2-M			0
Logan	11	4	17	1	1	1	1	1-S	15	1-S-NR,2-M	9	1-M	1-M	1-M	6-M
Love	6	3	8		1	2	0		8	2-S-NP,1-M	1		1-M		0
McClain	2	1	3			1	0		3	S-NP	0	-	-	-	-
McCurtain	4	3	11		2	1	0		11	1-S,1-M,M-NP	8	1-S 2-M	4-S		1-M
	99	57	228	20	10	11	16	11-S 5-M	160	5-S,11-M,2-L, 15-S-NP,5-M-NP, 1-L-NP,1-S-NR, 1-M-NR	49	10-S 8-M 4-L	6-S 6-M 1-L	1-S 3-M	9-M 1-L

TABLE XXIII (Continued)

County	Number of Centers	Number of Centers Selected	Estimated Number of Teachers In Selected Centers	Number of Centers Responding 1st	2nd	3rd	Number of Centers Not Responding	Size	Estimated Number of Teachers In Responding Centers	Size	Number of Teachers Willing To Participate	Respondents 1st	2nd	3rd	NR[1]
McIntosh	3	2	7		2		0		7	S-NP,M-NP	0	-	-	-	-
Major	2	2	8	1			1	1-M	2	S-NP	0	-	-	-	-
Marshall	1	1	6	1			0		6	1-M	8			1-M	7-M
Mayes	4	2	13	1			1	1-S	10	1-L	2	1-L			1-L
Murray	2	1	2	1			0		2	1-S	2	2-S			0
Muskogee	10	5	28	1	1		3	2-S 1-M	16	1-M,1-L	15	8-L	2-M 4-L	1-M	0
Noble	1	1	3	-	-	-	1	1-S	-		-	-	-	-	-
Okfuskee	3	2	8		1		1	1-S	5	M-NP	0	-	-	-	-
Oklahoma	147	41	328	14	4	23	0		328	6-S,12-M,10-L, 1-S-NP,4-M-NP 4-M-NR,4-L-NR	144	4-S 25-M 27-L	1-S 13-M 14-L	5-M 11-L	1-S 13-M 30-L
Okmulgee	1	1	5		1		0		5	1-M	4	3-M			1-M
Osage	2	1	1		1		0		1	S-NP	0	-	-	-	-
Ottawa	3	2	4		1	1	0		4	S-NP,S-NR	0	-	-	-	-
Pittsburg	3	2	6			1	1	1-M	2	S-NP	0	-	-	-	-
Pontotoc	5	2	8	2			0		8	S-NP,1-M	1		1-M		0
Pottawatomie	8	5	27		2	1	2	1-S 1-M	22	1-M,M-NR	4	3-M			1-M
Pushmataha	2	1	2	1			0		2	1-S	2	1-S		1-S	0
Roger Mills	1	1	2	1			0		2	S-NP	0	-	-	-	-
Rogers	6	3	10	2			1	1-M	6	1-S,1-M	3	1-S 1-M	1-M		0
Seminole	3	2	6	1	1		0		6	S-NP,1-M	5	2-M	1-M		2-M
Sequoyah	9	4	8	1	2		1	1-S	6	1-S,2-S-NP	1	1-S			0
Stephens	3	3	18	1	1		1	1-S	15	M-NP,1-L	12	5-L	2-L	2-L	3-L
Texas	3	2	10		1		1	1-M	6	M-NP	0	-	-	-	-
Tillman	4	3	8		1		2	2-S	5	1-M	1	1-M			0
Tulsa	119	37	237	11	4	22	0		237	2-S,14-M,3-L, 2-S-NP,6-M-NP, 4-L-NP,1-S-NR, 5-M-NR,L-NR	57	9-M 4-L	7-M 1-L	2-M 2-L	24-M 8-L
	345	126	755	39	23	48	16	10-S 6-M	703	13-S,34-M,16-L, 13-S-NP,14-M-NP, 4-L-NP,2-S-NR, 10-M-NR,5-L-NR	261	9-S 44-M 45-L	1-S 25-M 21-L	1-S 9-M 15-L	1-S 48-M 42-L

TABLE XXIII (Continued)

County	Number of Centers	Number of Centers Selected	Estimated Number of Teachers In Selected Centers	Number of Centers Responding 1st	2nd	3rd	Number of Centers Not Responding	Size	Estimated Number of Teachers In Responding Centers	Size	Number of Teachers Willing To Participate	Respondents 1st	2nd	3rd	NR[1]
Wagoner	4	2	15			1	1	1-S				-	-	-	-
Washington	6	3	11	1			2	1-M 1-S	2	S-NP	0	-	-	-	-
Washita	8	4	11	0			4	2-M 2-S	0		0	-	-	-	-
Woods	1	1	2	1			0		2	S-NP	0	-	-	-	-
Woodward	2	2	6	1	—	—	1	1-S	4	1-M	3	2-M	—	—	1-M
	21	12	45	3	0	1	8	5-S 3-M	8	2-S-NP 1-M	3	2-M	-	-	1-M
Total	585	256	1380	88	39	76	53	34-S 19-M	1112	24-S,61-M,24-L, 36-S-NP,28-M-NP, 17-L-NP,4-S-NR, 13-M-NR,6-L-NR	424	20-S 84-M 64-L	9-S 43-M 29-L	4-S 18-M 16-L	10-S 68-M 59-L

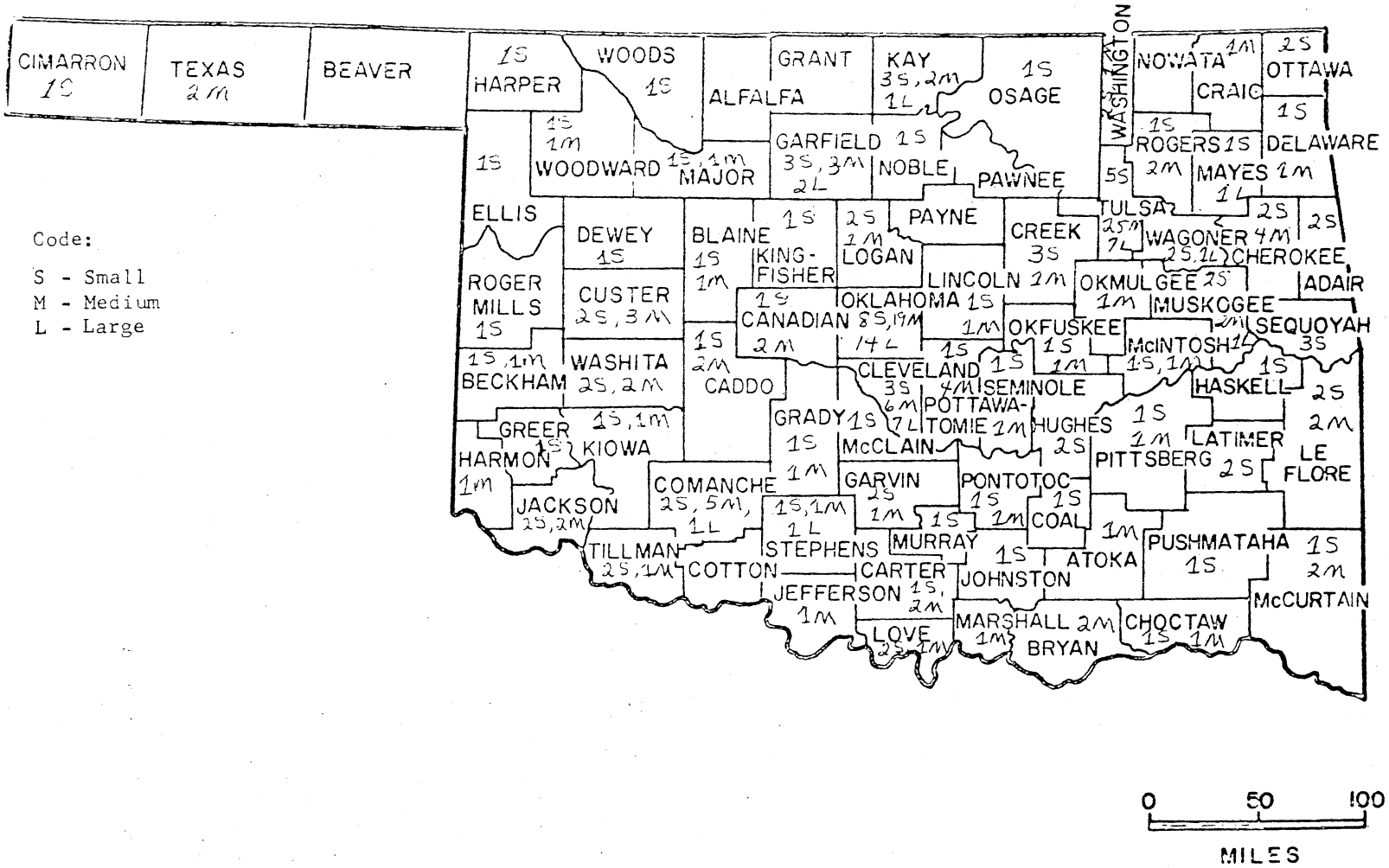

Figure 1. Distribution of Selected Day Care Centers

APPENDIX B

QUESTIONNAIRE AND CORRESPONDENCE

Oklahoma State University

Department of Food, Nutrition and Institution Administration

STILLWATER, OKLAHOMA 74074
(405) 372-6211, Exts. 6007, 6091

March 23, 1977

Dear Day Care Teachers:

A nutrition education research study is being conducted through the Foods, Nutrition and Institution Administration Department at Oklahoma State University. The major objectives of the research project are to determine: (1) the status of nutrition education; (2) the needs for nutrition information and teaching techniques; and (3) the opinions of day care teachers toward the teaching of nutrition education in the day care program. Your participation in the pretesting of the nutrition education questionnaire is greatly appreciated by the researcher.

The information that you will provide will be kept strictly confidential. No person or program will be identified except for follow-up procedures. A summary of results will be sent to all who assist with the study. The data will be used to fulfill the requirements for M.S. Degree which I am pursuing at Oklahoma State University.

A stamped, self-addressed envelope is enclosed for your convenience. Please return the completed questionnaire by April 1, 1977. Thank you for your contribution to nutrition education and day care.

Sincerely,

Lou Ann Schiltz

Lou Ann Schiltz
M.S. Degree Candidate

Bernice Kopel

Bernice Kopel, Ed.D.
Adviser

Enclosure

FINAL QUESTIONNAIRE

NUTRITION QUESTIONNAIRE

Conducted by

Lou Ann Schiltz
HEE 108
Oklahoma State University
Stillwater, Oklahoma

March 23, 1977

_____For Follow-Up
Purposes Only

NUTRITION QUESTIONNAIRE

Definition of Terms

The following terms are defined so that there will be a common interpretation by all participants answering the questionnaire.

DEFINITION OF TERMS

Nutrition:	The food you eat and how the body uses it.
Poor Food Habits:	Food intake and/or dietary practices are not adequate for normal growth which results in the impairment of personal health.
Integrated Nutrition Education:	The teaching of nutrition in combination with subject matter already planned, or with several subjects.
Nutrition Education:	Education to enable each individual to become competent in selecting the best diet at the least cost, and which is culturally acceptable to him or her.

DIRECTIONS: The majority of items on the following pages have been designed so that you may indicate the response of your choice by a check mark (✓) in the space provided. Please answer on your own the questions as best as you can. It is important to answer ALL the questions. Your identity and answers will be kept strictly confidential. Please return the completed questionnaire in the enclosed, self-addressed envelope by April 1, 1977.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Poor food habits are considered to be a problem of preschool children in your day care program.	____	____	____	____	____
2. I feel that the term "nutrition education" turns people off.	____	____	____	____	____
3. The State Legislature should mandate the teaching of nutrition education at the day care level through the Oklahoma Day Care Licensing Act.	____	____	____	____	____
4. The evaluation of a day care center's nutrition program should be included as part of the Oklahoma Day Care Licensing Act.	____	____	____	____	____
5. Nutrition information would be more valuable if integrated into a certain aspect of the day care program such as Health or Play, rather than as a separate unit.	____	____	____	____	____
6. Nutrition information would be more valuable if taught as a separate unit in the day care program rather than integrated in the program.	____	____	____	____	____
7. The inclusion of nutrition education in the day care program would be the most desirable method for preventing poor food habits of young children.	____	____	____	____	____

8. What was (were) the general reason(s) underlying your reply to item 7?

_____

_____

9. Do you teach nutrition in your day care program? ____ Yes ____ No

IF YOUR RESPONSE TO ITEM 9 WAS "NO", PLEASE COMPLETE ITEM 10.

10. If nutrition education has not been taught in your day care program, what is (are) the reason(s) for its omission? (CHECK ALL THAT APPLY).
_____Children are not interested in the subject.
_____Do not feel comfortable teaching nutrition education.
_____Not enough resource materials appropriate for day care level.
_____Class is too large.
_____Curriculum is too full with other things.
_____Do not feel it is important.
_____Insufficient knowledge about nutrition.
_____Other (PLEASE SPECIFY)_____

IF YOUR RESPONSE TO ITEM 9 WAS "YES", PLEASE COMPLETE ITEM 11.

11. To what extent is nutrition education taught in your day care program?
_____Considerable
_____Moderate
_____Little

12. Which areas are currently being taught in your day care program at your day care center?
_____Science
_____Language Arts
_____Health
_____Mathematics
_____Cooking
_____Social Science
_____Music
_____Arts and Crafts
_____Other (SPECIFY)_____

13. If nutrition education was integrated into your day care program, with which area or areas could it be integrated?
_____Science
_____Language Arts
_____Health
_____Mathematics
_____Cooking
_____Social Science
_____Music
_____Arts and Crafts
_____Other (SPECIFY)_____

14. In which area or areas would you feel comfortable integrating nutrition education?
_____Science
_____Language Arts
_____Health
_____Mathematics
_____Cooking
_____Social Science
_____Music
_____Arts and Crafts
_____Other (SPECIFY)_____

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
15. I feel that it is important to teach nutrition in the day care program.	_____	_____	_____	_____	_____
16. I feel that I have sufficient knowledge about foods and nutrition to include nutrition education in the day care program.	_____	_____	_____	_____	_____
17. I think that programs of nutrition education have been limited in effectiveness due to the teachers' lack of preparation in the area of nutrition.	_____	_____	_____	_____	_____
18. I think that the lack of teacher preparation in nutrition education would be eliminated if prospective day care teachers were required to take a course in nutrition education.	_____	_____	_____	_____	_____

19. Who should teach nutrition education at the day care level?
_____Day Care Teachers
_____Public Health Nurse
_____Nutrition Education Specialist
_____Other (PLEASE SPECIFY)_____

20. Would you be more willing to teach nutrition if nutrition resource materials were offered to you?
_____Yes
_____No

21. Would you like to know where to obtain nutrition resource materials appropriate for the day care level?
_____Yes
_____No

22. If a program for additional training in the teaching of nutrition education were to be made available for you, which of the alternatives would be more suitable for you? (RANK THE FOLLOWING BY PLACING NUMBER 1 AS YOUR 1st CHOICE, 2 SECOND, ETC.).
_____Inservice workshop once a month during the school year
_____Summer 2-week short-course at a college campus
_____Summer 4-week short-course at a college campus
_____Nutrition education program taught in your community

22. Continued
_____All day nutrition workshop in your area
_____All day nutrition workshop at a college campus
_____Nutrition education resource materials mailed to you
_____Other (PLEASE SPECIFY)_____

23. Do you use a curriculum plan to help teach nutrition?
_____Yes
_____No

IF "YES", PLEASE ANSWER ITEM 24 AND ITEM 25.

IF "NO", PLEASE PROCEED TO ITEM 26.

IF "YES", WHICH ONE?_____

24. What nutrition topics are covered in the current day care curriculum plan that you use?

_____ _____
_____ _____

25. Are there adequate guides for teaching nutrition in the day care curriculum plan which you use?
_____Yes
_____No

26. Where have you obtained your information about nutrition? (CHECK ALL THAT APPLY).
_____College courses
_____Inservice training in your day care center
_____Commercial food companies such as the National Dairy Council and Cereal Institute
_____Newspapers
_____Non-professional magazines
_____Nutrition workshops
_____Professional magazines
_____Television
_____Other (PLEASE SPECIFY)_____

27. Several private organizations such as the National Dairy Council and the Cereal Institute have produced resource materials pertaining to nutrition education. Have you received or had the opportunity to review any of these materials?
_____Yes
_____No

28. How many addresses or sources are you aware of that offer free nutrition education resource materials for preschool children?
_____ 0 to 5
_____ 6 to 10
_____11 to 15
_____16 or more

29. How many years of teaching experience have you had in day care centers?
_____ 0 to 5
_____ 6 to 10
_____ 11 to 15
_____ 16 to 20
_____ 21 to 34

30. What is your age range? (CHECK ONE).
_____ 20 and under
_____ 21-35
_____ 36-50
_____ 51-65
_____ 65 and over

31. What is your highest educational degree?
_____ High School Diploma
_____ B.S. or B.A.
_____ M.S. or M.A.
_____ Other (PLEASE SPECIFY)_____

32. What is your area of educational specialization? (CHECK ALL THAT APPLY).
_____ Elementary Education
_____ Secondary Education
_____ Early Childhood Education
_____ Home Economics Education
_____ Other (NAME FIELD)_____

33. What is your position at the day care center?
_____ Director
_____ Director-teacher
_____ Teacher
_____ Teacher assistant
_____ Other (PLEASE SPECIFY)_____

34. What is the classification of your day care center?
_____ Public center
_____ Voluntary center
_____ Proprietary center

35. Does your day care center participate in the Child Care Food Program through the Federal Government?
_____ Yes
_____ No

IF YOUR RESPONSE TO ITEM 35 WAS "NO", PLEASE COMPLETE ITEM 36.

36. What was (were) the reason(s) for non-participation in the Child Care Food Program?

_____

_____

Are there any additional comments which you wish to make?

(THANK YOU FOR YOUR COOPERATION)

Oklahoma State University

Department of Food, Nutrition and Institution Administration

STILLWATER, OKLAHOMA 74074
(405) 372-6211, Exts. 6007, 6091

March 23, 1977

Dear Directors of Day Care Programs:

A nutrition education research study is being conducted through the Food, Nutrition and Institution Administration Department at Oklahoma State University. The major objectives of the research project are to determine: (1) the status of nutrition education; (2) the needs for nutrition information and teaching techniques; and (3) the opinions of day care teachers toward the teaching of nutrition education in the day care program. I am writing to ask permission for the teachers in your program to answer a nutrition education questionnaire. Approximately 15 minutes will be needed to complete the questionnaire.

With your permission, the participation of the teachers in your day care center would enable the researcher to collect the necessary data to fulfill the objectives of the research project. Please fill out the enclosed sheet with the list of teachers who are willing to participate in this study.

The information that the participants will provide will be kept strictly confidential. No person or program will be identified except for follow-up procedures. A summary of the results will be sent to all who assist with the research project. The data will be used to fulfill requirements for M.S. Degree which I am pursuing at Oklahoma State University.

A stamped, self-addressed envelope is enclosed for your convenience. Please return the sheet indicating your response by April 1, 1977. Thank you for your cooperation.

Sincerely,

Lou Ann Schiltz

Lou Ann Schiltz
M.S. Degree Candidate

Bernice Kopel

Bernice Kopel, Ed.D.
Adviser

RETURN POST CARD

NAME _____

STREET _____

CITY _____ STATE _____ ZIP _____

NAME OF DAY CARE CENTER _____

_____ I AM WILLING TO PARTICIPATE IN THE RESEARCH PROJECT. IN ADDITION, THE FOLLOWING TEACHERS ARE WILLING TO PARTICIPATE IN THE PROJECT.

STREET OR P.O. BOX	CITY	STATE	ZIP

_____ I AM NOT WILLING TO PARTICIPATE BECAUSE _____

PLEASE RETURN BY APRIL 1, 1977. THANK YOU FOR YOUR COOPERATION.

Lou Ann Schiltz
M.S. Degree Candidate
Oklahoma State University

NAME _____

STREET _____

CITY _____ STATE _____ ZIP _____

NAME OF DAY CARE CENTER _____

_____ I AM WILLING TO PARTICIPATE IN THE RESEARCH PROJECT.

_____ IN ADDITION, THE FOLLOWING TEACHERS ARE WILLING TO PARTICIPATE IN THE RESEARCH PROJECT.

NAME	STREET OR P.O. BOX	CITY	STATE	ZIP

_____ I AM NOT WILLING TO PARTICIPATE BECAUSE _____

PLEASE RETURN THE LIST IN THE ENCLOSED, SELF-ADDRESSED, STAMPED ENVELOPE BY APRIL 1, 1977. THANK YOU FOR YOUR COOPERATION.

Lou Ann Schiltz
M.S. Degree Candidate
Oklahoma State University

Oklahoma State University

Department of Food, Nutrition and Institution Administration

STILLWATER, OKLAHOMA 74074
(405) 372-6211, Exts. 6007, 6091

April 18, 1977

Dear Directors of Day Care Programs:

On March 23, 1977, you were mailed a letter asking for your participation in a study of nutrition education in day care centers being conducted through the Food, Nutrition and Institution Administration Department at Oklahoma State University. At this time, your response has not been received. I am writing to urge you and your teachers to identify your willingness to participate in this study.

A stamped, self-addressed envelope is enclosed for your convenience. Please return the sheet indicating your response to participate or not to participate by May 1, 1977. Further contact will be initiated if necessary. Thank you for your cooperation.

Sincerely,

Lou Ann Schiltz

Lou Ann Schiltz
M.S. Degree Candidate

Bernice Kopel

Bernice Kopel, Ed.D.
Adviser

NAME _____

STREET _____

CITY _____ STATE _____ ZIP _____

NAME OF DAY CARE CENTER _____

_____ I AM WILLING TO PARTICIPATE IN THE RESEARCH PROJECT.

_____ IN ADDITION, THE FOLLOWING TEACHERS ARE WILLING TO PARTICIPATE IN THE RESEARCH PROJECT.

NAME	STREET OR P. O. BOX	CITY	STATE	ZIP

_____ I AM NOT WILLING TO PARTICIPATE BECAUSE _____

PLEASE RETURN THE LIST IN THE ENCLOSED, SELF-ADDRESSED, STAMPED ENVELOPE BY MAY 1, 1977. THANK YOU FOR YOUR COOPERATION.

Lou Ann Schiltz
M.S. Degree Candidate
Oklahoma State University

Oklahoma State University

Department of Food, Nutrition and Institution Administration

STILLWATER, OKLAHOMA 74074
(405) 372-6211, Exts. 6007, 6091

May 6, 1977

Dear Day Care Teachers:

The director of your day care program has indicated your willingness to participate in this nutrition education research project. The research project is conducted through the Food, Nutrition and Institution Administration Department of Oklahoma State University. The major objectives of the research project are to determine the status of nutrition education, the needs for nutrition information and teaching techniques, and the opinions of day care teachers toward the teaching of nutrition education in the day care program.

The information that you will provide will be kept strictly confidential. No person or program will be identified except for follow-up procedures. The data will be used to formulate suggestions and recommendations for the incorporation of nutrition education in the day care program.

A stamped, self-addressed envelope is enclosed for your convenience. Please return the completed questionnaire by May 25, 1977. Your participation is greatly appreciated. Thank you for your contribution to nutrition education and day care.

Sincerely,

Lou Ann Schiltz

Lou Ann Schiltz
M. S. Degree Candidate

Bernice Kopel

Bernice Kopel, Ed.D.
Adviser

Oklahoma State University

Department of Food, Nutrition and Institution Administration

STILLWATER, OKLAHOMA 74074
(405) 372-6211, Exts. 6007, 6091

May 31, 1977

Dear Day Care Teachers:

At this time, your response to a questionnaire mailed on May 6, 1977 has not been received. The data is necessary for a study of the nutrition education in Oklahoma day care centers being conducted through the Food, Nutrition and Institution Administration Department at Oklahoma State University.

I am writing to urge you to complete and return the questionnaire. A stamped, self-addressed envelope is enclosed for your convenience. Please return the completed questionnaire by June 14, 1977. Thank you for your cooperation.

Sincerely,

Lou Ann Schiltz

Lou Ann Schiltz
M. S. Degree Candidate

Oklahoma State University

Department of Food, Nutrition and Institution Administration

STILLWATER, OKLAHOMA 74074
(405) 372-6211, Exts. 6007, 6091

March 8, 1977

Dear Day Care Teachers:

Thank you for your participation in the nutrition education research project conducted through the Food, Nutrition and Institution Administration Department at Oklahoma State University. The questionnaire data collected and analyzed by the researcher are summarized in the enclosed report.

It is through the participation of individuals such as you that we gain greater knowledge and understanding of nutrition education. May I express my sincere gratitude to you for helping in this research project.

Sincerely,

Lou Ann Schiltz

Lou Ann Schiltz
M. S. Candidate

Enclosure

APPENDIX C

TABLE XXIV

REASONS UNDERLYING THE OPINIONS OF DAY CARE TEACHERS CONCERNING NUTRITION EDUCATION AT THE DAY CARE LEVEL

	Responses[1]	
	Frequency	Percent
1) Good food habits; good nutrition; what right things to eat.	31	20.00
2) Importance of nutrition.	13	8.387
3) A child can learn what foods are good for him through visual aids and play.	3	1.935
4) Nutrition education for parents.	18	11.613
5) No time to teach good nutrition; permissive food habits.	6	3.871
6) Children spend most of their time at the center; good place to learn good eating habits.	7	4.516
7) Parents are the prime educators.	24	15.484
8) Children learn to like nutritional food and why food is good.	6	3.871
9) Prevent poor food habits of young children.	2	1.290
10) Need for more information about nutrition.	2	1.290
11) Children eat what is prepared by parents.	4	2.581
12) Eat what they like rather than what is good for them.	5	3.226
13) Nutrition education for staff and parents.	2	1.290
14) Balanced meals are prepared and the teachers introduce the food to the child.	1	0.645
15) Unsatisfactory results with nutrition information provided to parents.	1	0.645
16) Children are not exposed to good food habits.	6	3.871
17) It would not prevent poor food habits.	4	2.581
18) The food given by the day care center to the children was unappropriate.	1	0.645
19) It should be taught at school just in case it is not taught at home.	3	1.935
20) Have a successful nutrition education program established	1	0.645
21) The children are too young to understand food habits.	1	0.645
22) Economics is another reason for poor food habits.	1	0.645
23) Children are too young to understand food habits.	3	1.935
24) Teachers could plan a more effective nutrition plan.	1	0.645
25) Different age groups.	1	0.645
26) Parents do not plan nutritious meals.	2	1.290
27) Some children will not eat certain foods.	1	0.645
28) Nutritional foods are necessary for mental and emotional development of the child.	3	1.935
29) It is a good idea.	2	1.290
Total	155	100.00

[1] N 155

TABLE XXV

ANALYSIS OF DAY CARE TEACHERS' OPINION TOWARD THE IMPORTANCE OF TEACHING NUTRITION AT THE DAY CARE LEVEL IN RELATION TO THE AGE OF DAY CARE TEACHERS

	20 and under		21-35		36-50		51-65		65 and over		
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent	Total
Strongly Agree	9	4.71	31	16.23	13	6.81	7	3.66	1	0.52	61
Agree	14	7.33	58	30.37	23	12.04	11	5.76	1	0.52	107
Neutral	2	1.05	12	6.28	3	1.57	1	0.52	0	0.00	18
Disagree	1	0.52	2	1.05	1	0.52	0	0.00	0	0.00	4
Strongly Disagree	0	0.00	1	0.52	0	0.00	0	0.00	0	0.00	1

Chi Square = 3.5950 D.F. = 16 p = 0.9994
Not significant at .05 level
N = 191
Item 15 in relation to Item 30 (Appendix B, p. 119, p. 121).

TABLE XXVI

ANALYSIS OF DAY CARE TEACHERS' OPINION TOWARD THE IMPORTANCE OF TEACHING NUTRITION AT THE DAY CARE LEVEL IN RELATION TO THE YEARS OF TEACHING EXPERIENCE

	0 to 5		6 to 10		11 to 15		16 to 20		
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent	Total
Strongly Agree	46	24.21	11	5.79	2	1.05	2	1.05	61
Agree	82	43.16	19	10.00	3	1.58	3	1.58	107
Neutral	16	8.42	1	0.53	0	0.00	0	0.00	17
Disagree	3	1.58	0	0.00	1	0.53	0	0.00	4
Strongly Disagree	1	0.53	0	0.00	0	0.00	0	0.00	1

Chi Square = 10.2530 D.F. = 12 p = 0.5938
Not significant at .05 level
N = 190
Item 15 in relation to Item 29 (Appendix B, p. 119, p. 121).

TABLE XXVII

ANALYSIS OF DAY CARE TEACHERS' OPINION TOWARD THE IMPORTANCE OF TEACHING NUTRITION AT THE DAY CARE LEVEL IN RELATION TO ELEMENTARY EDUCATION AS AN AREA OF EDUCATIONAL SPECIALIZATION

	Responses				
	Yes		No		
	Frequency	Percent	Frequency	Percent	Total
Strongly Agree	18	11.32	34	21.38	52
Agree	23	14.47	63	39.62	86
Neutral	5	3.14	12	7.55	17
Disagree	0	0.00	3	1.89	3
Strongly Disagree	0	0.00	1	0.63	1

Chi Square = 2.6470 D.F. = 4 p = 0.6184
Not significant at .05 level
N = 159
Item 15 in relation to Item 32 (Appendix B, p. 119, p. 121).

TABLE XXVIII

ANALYSIS OF DAY CARE TEACHERS' OPINION TOWARD THE IMPORTANCE OF TEACHING NUTRITION AT THE DAY CARE LEVEL IN RELATION TO SECONDARY EDUCATION AS AN AREA OF EDUCATIONAL SPECIALIZATION

	Responses				
	Yes		No		
	Frequency	Percent	Frequency	Percent	Total
Strongly Agree	7	4.43	45	28.48	52
Agree	7	4.43	78	49.37	85
Neutral	0	0.00	17	10.76	17
Disagree	0	0.00	3	1.90	3
Strongly Disagree	0	0.00	1	0.63	1

Chi Square = 3.4460 D.F. = 4 p = 0.4862
Not significant at .05 level
N = 158
Item 15 in relation to Item 32 (Appendix B, p. 119, p. 121).

TABLE XXIX

ANALYSIS OF DAY CARE TEACHERS' OPINION TOWARD THE IMPORTANCE OF TEACHING NUTRITION AT THE DAY CARE LEVEL IN RELATION TO HOME ECONOMICS EDUCATION AS AN AREA OF EDUCATIONAL SPECIALIZATION

	Responses				
	Yes		No		
	Frequency	Percent	Frequency	Percent	Total
Strongly Agree	10	6.33	42	26.58	52
Agree	18	11.39	67	42.41	85
Neutral	4	2.53	13	8.23	17
Disagree	1	0.63	2	1.27	3
Strongly Disagree	0	0.00	1	0.63	1

Chi Square = 0.7080 D.F. = 4 p = 0.9504
Not significant at .05 level
N = 158
Item 15 in relation to Item 32 (Appendix B, p. 119, p. 121).

TABLE XXX

ANALYSIS OF DAY CARE TEACHERS' OPINION TOWARD THE IMPORTANCE OF TEACHING NUTRITION AT THE DAY CARE LEVEL IN RELATION TO EDUCATIONAL SPECIALIZATION IN ANOTHER AREA

	Social Science		Education		Child Care		Biological Sciences		Humanities		Physical Sciences		
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Total
Strongly Agree	1	3.70	4	14.81	3	11.11	0	0.00	1	3.70	3	11.11	12
Agree	1	3.70	5	18.52	0	0.00	1	3.70	0	0.00	0	0.00	7
Neutral	0	0.00	1	3.70	0	0.00	0	0.00	3	11.11	2	7.41	6
Disagree	0	0.00	1	3.70	0	0.00	0	0.00	0	0.00	0	0.00	1
Strongly Disagree	1	3.70	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1

Chi Square = 27.8830 D.F. = 20 p = 0.1122
Not significant at .05 level
N = 27
Item 15 in relation to Item 32 (Appendix B, p. 119, p. 121).

TABLE XXXI

ANALYSIS OF DAY CARE TEACHERS' OPINION TOWARD THE IMPORTANCE OF TEACHING NUTRITION AT THE DAY CARE LEVEL IN RELATION TO COMMERCIAL FOOD COMPANIES AS A SOURCE OF NUTRITION BACKGROUND

	Responses				
	Yes		No		
	Frequency	Percent	Frequency	Percent	Total
Strongly Agree	24	13.19	35	19.23	59
Agree	40	21.98	62	34.07	102
Neutral	3	1.65	13	7.14	16
Disagree	1	0.55	3	1.65	4
Strongly Disagree	0	0.00	1	0.55	1

Chi Square = 3.6530 D.F. = 4 p = 0.4550
Not significant at .05 level
N = 182
Item 15 in relation to Item 26 (Appendix B, p. 119, p. 120).

TABLE XXXII

ANALYSIS OF DAY CARE TEACHERS' OPINION TOWARD THE IMPORTANCE OF TEACHING NUTRITION AT THE DAY CARE LEVEL IN RELATION TO TELEVISION AS A SOURCE OF NUTRITION BACKGROUND

	Responses				
	Yes		No		
	Frequency	Percent	Frequency	Percent	Total
Strongly Agree	22	12.09	37	20.33	59
Agree	37	20.33	65	35.71	102
Neutral	7	3.85	9	4.95	16
Disagree	1	0.55	3	1.65	4
Strongly Disagree	0	0.00	1	0.55	1

Chi Square = 1.1720 D.F. = 4 p = 0.8827
Not significant at .05 level
N = 182
Item 15 in relation to Item 26 (Appendix B, p. 119, p. 120).

TABLE XXXIII

ANALYSIS OF DAY CARE TEACHERS' OPINION TOWARD THE IMPORTANCE OF TEACHING NUTRITION AT THE DAY CARE LEVEL IN RELATION TO NEWSPAPERS AS A SOURCE OF NUTRITION BACKGROUND

	Responses				
	Yes		No		
	Frequency	Percent	Frequency	Percent	Total
Strongly Agree	18	9.89	41	22.53	59
Agree	38	20.88	64	35.16	102
Neutral	7	3.85	9	4.95	16
Disagree	2	1.10	2	1.10	4
Strongly Disagree	0	0.00	1	0.55	1

Chi Square = 2.1630 D.F. = 4 p = 0.7058
Not significant at .05 level
N = 182
Item 15 in relation to Item 26 (Appendix B, p. 119, p. 120).

TABLE XXXIV

ANALYSIS OF DAY CARE TEACHERS' OPINION TOWARD THE IMPORTANCE OF TEACHING NUTRITION AT THE DAY CARE LEVEL IN RELATION TO NON-PROFESSIONAL MAGAZINES AS A SOURCE OF NUTRITION BACKGROUND

	Responses				
	Yes		No		
	Frequency	Percent	Frequency	Percent	Total
Strongly Agree	22	12.09	37	20.33	59
Agree	35	19.23	67	36.81	102
Neutral	5	2.75	11	6.04	16
Disagree	2	1.10	2	1.10	4
Strongly Disagree	0	0.00	1	0.55	1

Chi Square = 1.1850 D.F. = 4 p = 0.8805
Not significant at .05 level
N = 182
Item 15 in relation to Item 26 (Appendix B, p. 119, p. 120).

TABLE XXXV

ANALYSIS OF DAY CARE TEACHERS' OPINION TOWARD THE IMPORTANCE OF TEACHING NUTRITION AT THE DAY CARE LEVEL IN RELATION TO INSERVICE TRAINING AS A SOURCE OF NUTRITION BACKGROUND

	Responses				
	Yes		No		
	Frequency	Percent	Frequency	Percent	Total
Strongly Agree	18	9.94	41	22.65	59
Agree	19	10.50	82	45.30	101
Neutral	5	2.76	11	6.08	16
Disagree	0	0.00	4	2.21	4
Strongly Disagree	0	0.00	1	0.55	1

Chi Square = 4.9520 D.F. = 4 p = 0.2923
Not significant at .05 level
N = 181
Item 15 in relation to Item 26 (Appendix B, p. 119, p. 120).

TABLE XXXVI

ANALYSIS OF DAY CARE TEACHERS' OPINION TOWARD THE IMPORTANCE OF TEACHING NUTRITION AT THE DAY CARE LEVEL IN RELATION TO NUTRITION WORKSHOPS AS A SOURCE OF NUTRITION BACKGROUND

	Responses				
	Yes		No		
	Frequency	Percent	Frequency	Percent	Total
Strongly Agree	17	9.34	42	23.08	59
Agree	14	7.69	88	48.35	102
Neutral	3	1.65	13	7.14	16
Disagree	1	0.55	3	1.65	4
Strongly Disagree	0	0.00	1	0.55	1

Chi Square = 5.8050 D.F. = 4 p = 0.2142
Not significant at .05 level
N = 182
Item 15 in relation to Item 26 (Appendix B, p. 119, p. 120).

TABLE XXXVII

ANALYSIS OF DAY CARE TEACHERS' OPINION TOWARD THE IMPORTANCE OF TEACHING NUTRITION AT THE DAY CARE LEVEL IN RELATION TO THE SIZE OF THE DAY CARE CENTER

	Small		Medium		Large		
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Total
Strongly Agree	4	2.08	28	14.58	30	15.63	62
Agree	13	6.77	55	28.65	39	20.31	107
Neutral	1	0.52	9	4.69	8	4.17	18
Disagree	0	0.00	4	2.08	0	0.00	4
Strongly Disagree	0	0.00	0	0.00	1	0.52	1

Chi Square = 17.1440 D.F. = 12 p = 0.1442
Not significant at .05 level
N = 192
Item 15 in relation to Size (Appendix B, p. 119, and Table XXIII, p. 108).

VITA[2]

LouAnn Marie Schiltz

Candidate for the Degree of

Master of Science

Thesis: THE OPINIONS OF DAY CARE TEACHERS TOWARD NUTRITION EDUCATION

Major Field: Food, Nutrition and Institution Administration

Biographical:

Personal Data: Born at Vance Air Force Base, Enid, Oklahoma, December 16, 1952, the daughter of Ray M. and Donna Schiltz.

Education: Received an Associate Science degree in Home Economics from Northern Oklahoma College, Tonkawa, Oklahoma, May, 1972; received the Bachelor of Science degree from Oklahoma State University in May, 1974, with a major in Food, Nutrition and Institution Administration; completed Dietetic Internship at Indiana University Medical Center, December, 1974; received R.D., June, 1975; completed requirements for the Master of Science degree at Oklahoma State University in December, 1977.

Professional Experience: Dietetic Intern, Indiana University Medical Center, Indianapolis, July, 1974, to December, 1974. Therapeutic Dietition at Baptist Memorial Medical Center, Oklahoma City, Oklahoma, February, 1975 to August, 1976. Graduate Teaching Assistant, Food, Nutrition and Institution Administration, Oklahoma State University, September, 1976, to June, 1977. Teaching Associate, Food, Nutrition and Institution Administration, Oklahoma State University, September, 1977, to present.

Professional Organizations: American Dietetic Association; Oklahoma Dietetic Association; Society of Nutrition Education; Institute of Food Technology; Omicron Nu; Phi Upsilon Omicron; American Home Economics Association; Oklahoma Home Economics Association; National Hotel and Restaurant Association; OSU Alumni Association; and OSU Home Economics Alumni Association.