THE EXTENT OF NUTRITION EDUCATION TAUGHT IN CHILD CARE CENTERS

By

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CHAPTER I

INTRODUCTION

With twenty million preschool children now attending daycare, the child care center serves as an appropriate nutrition education starting point (Bourne, 1986). Federal law requires these centers to provide nutritious meals and snacks, but no other nutrition education efforts are mandated. The potential for instilling sound nutrition practices at this age has been recognized by a number of child care centers resulting in a variety of efforts at nutrition education.

Nutrition should be a part of every child's early training, both at home and in the child care center. Healthful meals served in an atmosphere of eating enjoyment can set the stage for a lifetime of balanced eating and sensible nutrition practices. If food is force fed and the importance of nutrition is either overemphasized or ignored, undesirable eating patterns may develop at an early age, resulting in obesity, food obsessions, malnutrition, and a lifetime of eating problems (Bourne, 1986).

It is in the day care setting where children often receive two of their daily meals. Consequently, the responsibility for developing sound eating habits has fallen heavily on preschool and child care programs (White & Welch, 1985). Since hard-to-alter food habits are acquired early in life, even before the primary grades, the implication is that we need to teach nutrition concepts to children during the preschool years (Lee, Schvaneveldt, and Sorenson, 1984). Beyond the preschool years, children

are increasingly responsible for their own nutrition, given that families are eating fewer meals together and parents thus supervise children's food intake less. If nutrition is to be taught in early childhood, the teaching must take place in the home setting or in a child care environment.

According to Lee et al. (1984), children who learn nutritional food habits in early life are likely to keep them throughout life. Thus the attempt to assess the extent of nutrition education in child care centers is a major focus of this study.

Purpose and Objectives

The overall purpose of this study is to determine the extent of nutrition education taught in child care centers. The objectives of this study are to:

1. determine the perceived acceptability by caregivers of teaching nutrition education in the child care center.
2. identify teaching methods used and nutrition topics emphasized in child care centers.
3. determine if the educational and nutritional background of the caregiver relates to the attention given nutrition education in the child care center.
4. determine the perceived contributions of the Child Care Food Program to the child care center.
5. identify which type of child care center gives greater emphasis on nutrition education.
6. make recommendations for future studies in nutrition education in child care centers.

Research Questions

The following research questions have been raised for this study:

1. Do age, gender, education, experience with children, and length of employment of the director relate to whether the child care center teaches nutrition education?
2. Is the importance placed on nutrition and mealtime in the director's personal life reflected in the mealtime atmosphere in the child care center?
3. Who does the director perceive as having the greatest influence on children's food preference?
4. What procedures are used in child care centers to introduce new foods?
5. What are the perceptions of child care center directors toward federally assisted child feeding programs.
6. Is there a relationship between the educational and nutritional background of the child care center director and the teaching methods used and nutritional topics emphasized?
7. What accounts for the lack of nutrition education teaching in child care centers.

Assumptions

It is assumed that:

1. All child care center directors completed the questionnaire to the best of their ability.
2. The Oklahoma Child Care Food Program has an effect on the dietary habits of children in participating child care centers.

3. The integration of nutrition education is an effective means of educating young children to good nutritional habits.

Limitations

1. The questionnaires were mailed to the participants for completion and mailed back rather than being administered in person.
2. The study will be limited to child care centers participating in the Oklahoma Child Care Food Program.

Definitions

For the purpose of this study, the following terms have been defined:

1. Caregiver: An adult who is responsible for the direct care of children (Louisiana Dept. of Education, 1986, p. iv).
2. Child Care Food Program: A national nutrition program funded by the United States Department of Agriculture and administered in Oklahoma by the Oklahoma State Department of Education. The purpose of the program is to provide nutritious meals to children age 12 or younger (Okla. State Dept. of Education, 1987).
3. Day Care/Child Care Center: A facility which provides care for six or more children for six or more hours of the 24 hour day (Oklahoma Dept. of Human Services, 1988, p. 5).
4. Nutrition Education: The knowledge of food, how the body uses it, and the application of this knowledge to the formation of good eating habits (Okla. State Dept. of Education, 1983, p. B-1).
5. Preschooler: A child not yet enrolled in kindergarten who ranges

in age from 3 to 5 years (U.S. Dept. of Health and Human Services, 1984, p. 1).

6. Title XX Center: A private for profit proprietary Title XX child care center which receives Title XX compensation from the Department of Human Services for at least 25 percent of the children enrolled (Okla. State Dept. of Education, 1987).
7. Head Start Center: A federally funded child care center designed to provide preschool children of low income families with a comprehensive program to meet their emotional, social, health, nutritional, and psychological needs (U.S. Dept. of Health and Human Services, 1984, p. 1).
8. Private Non-profit Center: A child care center which has a tax exempt certificate from the Internal Revenue Service or participate in another federally funded program requiring tax-exempt status (Okla. State Dept. of Education, 1987).
9. Public Center: A child care center created and existing by an act of the state, county, city or other political subdivision. The operation remains under the control of a government agency (Oklahoma Dept. of Human Services, 1988, p. 6).
10. CDA Credential: The Child Development Association Credential (CDA) was initiated to upgrade the quality of staff caring for children 3 to 5 years of age in child care programs in the nation. The foundation of the CDA Program is based on a set of competencies necessary for staff to maximize the physical, intellectual, social and emotional needs of children in their care (U.S. Dept. of Health and Human Services, 1984, p. 7).

CHAPTER II

REVIEW OF LITERATURE

This chapter contains information on the need for nutrition education in child care centers. The influence of caregivers on children's eating habits is discussed. Children's food preferences and their acceptance of new foods are presented. The ability of preschool children to learn and suitable nutrition education learning experiences will also be discussed.

Need for Nutrition Education in Child Care Centers

The preschool years are a time when children are developing eating behaviors and food preferences and dislikes. In general, the food preferences and dislikes of preschoolers are similar to those of their parents. This observation is not surprising, since the home traditionally has been the primary environment for the developing child. Today, while many parents work, non-family members often care for children. The number of child care centers has risen substantially since 1967 (Phillips & Kolasa, 1980).

If we want to help children establish eating habits that are nutritionally sound, giving them a basis for lifelong healthful eating patterns, it is better if such habits are established very early in life. Children's food choices are primarily prescribed by their parents or caregivers. Changes in food habits are more likely to occur if education is provided for children, their

parents and caregivers (Church, 1979).

Clifford (cited in Gillis & Sabry, 1980) points out the significance of the child care environment on the young child's emerging food habits: "sound nutrition and the creation of lasting attitudes toward nutrition may prove to be one of the most important features of a quality child care program". Child care teachers are in a position to influence the quality and type of food available to the preschooler as well as the child's developing food preferences and subsequent acceptance of a variety of foods (Gillis & Sabry, 1980, pg. 200).

The mothers of young children may not have an adequate source of knowledge about their children's eating behaviors when a child care center feeds and cares for their children (Phillips & Kolasa, 1980). Anthropologist nutritionist, Frances R. Davidson, followed 48 District of Columbia elementary school children for three years to see if the children ate what their parents thought they did. The bottom line, Davidson said, is that "mommies don't know what their children eat," (Hale, 1987, pg. 25). Today, the caregiver's food habits may augment and supplant that of the parents (White & Welch, 1985).

Research institutions and medical organizations are turning their attention to the special dietary needs of children, and there is a growing belief among physicians and nutritionists alike that what many individuals eat during childhood will have a longlasting even permanent effect on their adult health (Hale, 1987). The early years in a child's life are critical to the formation of health-promoting nutritional concepts and behaviors (Lee, Schvaneveldt, & Sorenson, 1984).

Influence of Caregivers on Children's Eating Habits

Nutritious foods are often served to the children in an atmosphere that does not help children establish appropriate behavior (Davis, Bassler, Anderson, & Fryer, 1983). The child care staff should maintain a positive emotional climate at mealtimes, during which children may accept and enjoy food (Nutrition Standards, 1987). Marion (1978) found that teachers and caregivers must help children develop a positive attitude toward food and an awareness of foods conducive to good health.

The best way to teach children about good nutrition is by example. Foods that provide high quality nutrition should be made available to the children. Roberta Henry, a Boston dietician, stated "trying to teach kids about good nutrition is contradictory and useless unless parents themselves set good examples in their own eating habits. Parents who clean up their own nutrition acts by eating right may serve as good role models for their children" (Hale, 1987, pg. 27). The same principle also applies to caregivers in a child care center.

During the preschool years, food consumption patterns and habits are established that may determine the quality of diet throughout life. These patterns and habits although primarily formed through imitating the example of adults in the child's life may be taught within the day care setting. The lunch room or eating area can play an important role in the young child's attitudes toward nutrition along with providing good, nutritious food (SPEAC, 1980). The best situation is a social setting where teachers and other staff members sit with the children. This provides a special opportunity to satisfy physical and emotional needs, as well as to observe and guide behavior. Caregivers can detect much about

the well-being of children by observing their responses. It is important for caregivers to be aware of these behaviors and report them to parents. Caregivers can guide behavior by helping the children serve the food and by introducing manners. Caregivers can guide behavior with education by encouraging children to talk about the foods they are eating. Because children look to adults for examples, the staff should eat the same foods to set examples of good eating habits. Hopefully, the children will develop a better association with food and bring that feeling to mealtime at home (SPEAC, 1980).

The federal Head Start Program stresses that mealtime and snack time should be a planned part of the day's learning experience. This time can be used to help the child learn to eat and enjoy a wide variety of foods. Other learning experiences such as motor and sensory development, language development and socialization are a secondary benefit (U. S. Dept. of HEW, 1976). Eating should be regarded by children as pleasurable and fun. The caregiver can promote this attitude by providing an environment for mealtime that is cheerful and bright. Burbansstipanov, Giarratano, and Portis (1988) found that personnel need to demonstrate healthy eating habits, provide children with a nutritionally balanced diet, and encourage regular physical activity.

The adult who works with young children must be knowledgeable about foods and food groups; as well as serving as a good role model. Teachers and caregivers can help children learn good nutrition habits at an early age. A caregiver's attention to the importance of planning and preparing healthy foods increases a child's cognitive and affective responses to food and thereby improves the child's ability to make wiser food choices (Church, 1979). The Minneapolis Public Schools (SPEAC,

1980) found that adults influence children by their facial expressions, comments about food, foods eaten and not eaten, foods prepared and not prepared, their approach to new foods, pleasant atmosphere at mealtime, food service, cleanliness, similarity of serving sizes, and their reaction to the child's exploration of food.

Harper and Sander (1975) found that a child sampled an unfamiliar food more readily when that food was also eaten by an adult than if the food item had been merely offered. Cooper, Payne, and Edwards (1971) observed that the volume of food waste, measured by plate waste, was decreased and children ate much better when an adult was present at their table. This finding suggests that the adult is a highly influential person and is a finding of which mealtime personnel need to be aware. Derogatory remarks about a food item have been shown to drastically increase the plate waste of the food item (Cooper et al., 1971). Birch, Zimmerman, and Hind (1981) also found that food preferences are enhanced when foods are presented during a brief social interaction with a friendly adult.

Caregivers play an important role in the formation of nutrition habits and attitudes by the example they set, the meals and supplements they serve, and through the presentation of learning activities that focus on nutrition concepts. In order to provide a wide variety of meaningful experiences related to nutrition, caregivers need to be aware of the ways they influence young children and how this influence can become an integral part of the nutrition education curriculum (SPEAC, 1980).

Children's Food Preferences

Parents have a great influence over their child's food preferences. This is because parents determine the child's familiarity with food items

by deciding which foods are offered in the home. Foods which are disliked by, or are unfamiliar to the parents are also often unfamiliar to the child (White & Welch, 1985). White and Welch (1985) found that many factors influence the development of a child's food preferences. These factors include familiarity, age, parents, peers, teachers, other significant adults, and programs specifically designed to influence food habits. According to Hale (1987), adult eating habits may also be influenced earlier in life. Preferences developed during childhood for a diet high in salt and calories may continue into adulthood.

Young children often may imitate less mannerly mealtime behaviors and the dislikes, as well as likes, of those around the table. If the child's father, for example, announces that he hates squash and refuses to eat zucchini, the child may imitate this action and zucchini is rejected (Baker & Henry, 1987). Parents' food preferences are reliable predictors of a child's lifelong food preferences. Parents practicing sensible eating habits themselves are more influential than parents criticizing, nagging, or laying down long lists of what to eat and what not to eat. According to Baker and Henry (1987, p. 70), the "do-as-I-say-not-as-I-do" approach rarely works with children. Informal discussions with parents reveal that they sometimes resort to coercion and punishment and generally negative contexts in their attempts to increase their children's consumption of "nutritious" foods (Birch, Marlin, & Rotter, 1984). Young children may come to the conclusion that if they must work to earn the right to participate in a reward activity, the work (eating spinach) must not be very desirable (Staff, 1986). To enjoy and feel good about food is important to self-awareness in the young child. Good experiences with a variety of foods in many forms help the child to achieve an awareness that

nutritious eating is a pleasurable experience (Marbach, Plass, & O'Connell, 1978).

Children are not born with definite likes and dislikes. Their eating habits and food preferences are gradually formed by experiences with food (U. S. Dept. of HEW, 1976). The child's early food choices are limited by the foods given him. Pleasant association with eating and foods including cultural and ethnic foods will help the child learn to eat and enjoy nutritious foods.

Deficiencies of vitamin A and C, the most common vitamin deficiencies among preschool children, are remedied simply by eating a greater quantity of certain vegetables or fruits, yet this need is in sharp contrast with the reality of what foods are preferred and chosen by preschool children (Marion, 1978). A complex and varied diet increases the probability that foods containing essential nutrients are consumed (White & Welch, 1985). Glasser (1964) studied children's acceptance of foods at a child care center and then evaluated their acceptance of foods years later. The results demonstrated that the acceptance of foods that are observed in the child care setting do persist and carry over into the home. Former child care center children were also found to select foods other than sweets more often than non-day care center children.

Children's Acceptance of New Foods

It is important for parents and people whose business it is to feed children to know how children relate to food. Dr. Kathryn Kolasa, a nutrition professor with East Carolina University, states that children are born with tastes for sweets and salty foods, but other tastes such as a preference for spicy foods must be acquired. Children do not detect bitter

or sour tastes until sometime after the age of two. From a physiological perspective, adults have nerves in their mouths and throats to detect different tastes. Babies have nerves even on their lips, although their sense of smell is not as well developed as that of adults. Therefore, tastes and food preferences change as people get older (Kolasa, 1986).

While most people develop an instant dislike for a particular food, a liking of a food is something that is acquired over time with repeated exposures. For this reason, one should not serve a new food to children just once and accept a lukewarm reaction as a true response (Kolasa, 1986). The more often a food item is presented, whether or not it is eaten, the more positive the attitude of the child toward that food item. This attitude change may increase the chances of that food item being tried at a later time by that child (White & Welch, 1985). The age of the child affects his acceptance and willingness to try unfamiliar foods, with the younger child being more receptive than the older child (Staff, 1986). Birch et al. (1984) found that the more times a two year old child was exposed to a novel cheese or fruit, the higher that child's preference for the food. Mere exposure is sufficient to increase preference for a particular food in young children. In 1979, Birch found that repeated exposure of the individual to a stimulus is a sufficient condition for the enhancement of his or her attitude toward it. Presumably, exposure leads to increased familiarity, which is reflected in increased liking. The quantity of experience is crucial in food acceptance; novel foods are frequently rejected but, with successive exposures, often become an accepted part of the diet (Birch, 1987). The quality of early experience with food shapes food acceptance patterns. The quality of the social context in which eating occurs can affect the formation of food

preferences (Birch, 1987).

Only one new food should be introduced at a time. Plenty of time should be allowed for the children to look at and examine the food. New foods should not be introduced when children do not feel well or are cross and irritable. New foods which are accepted should be given again soon so that children can become familiar with them (SPEAC, 1980). If a new food is rejected, a fuss should not be made. The new food should be offered later again and again.

The amount of food offered, the way it is prepared, the color, smell, shape and texture of the food may determine whether a child eats. If children are unwilling to try a new food, caregivers and parents should not pressure, force or punish them (Baker & Henry, 1987).

Ability of Preschool Children to Learn

Assuming that a knowledge base is necessary for an attitudinal change to occur, it is possible that significant changes in food acceptance may occur if the child's knowledge base of food is increased (Church, 1979). Piaget (cited in Gorelick & Clark, 1985) advised that children in the preoperational stage of cognition (characteristic of the preschool age) actively struggle to understand their environment by manipulating concrete objects rather than symbolic material. Piaget (cited in Gorelick & Clark, 1985) emphasized the importance of activity-based teaching strategies that encourage interaction with real-world objects. Nutrients, protein, and vitamins are abstract concepts to the preschool child (Contento, 1981). Young children see little connection between these concepts as food components and their personal experience of the eating process and bodily growth; yet many curricula for use with small children

talk extensively about nutrients (Contento, 1981). Church (1979) found that children must be involved with foods in as many ways as possible on the concrete level before these learnings can be extended to the abstract. Poolton (1972) advised that nutrition teaching be designed to employ the levels of complexity of learning types appropriate to the developmental stage of the individual. She concluded that a variety of student centered activities that focus on relevant problems and are developmentally appropriate will result in children gaining knowledge of nutrition, which may in turn change values and nutrition related behavior (Poolton, 1972).

Piagetian research emphasizes the importance of the child's interaction with real world objects and events for his or her development. Nutrition education for children should, therefore, include information and experiences from the real world which will help children distinguish between which foods and snacks to eat and which ones to avoid (Contento, 1981). Nutrition education for preschoolers, then, involves learning about foods through sensory experiences. For example, a child who helps to plant green bean seeds in a garden, watches these beans grow, picks and washes his or her very own bean for lunch, then watches the bean simmer, and who finally gets to eat the bean is learning about nutrition: where the food comes from, what it looks like, what the texture is before and after cooking, and what the flavor is like (Marion, 1978, p. 12). Contrast that experience with that of a child who is served green beans and who is told to eat them "because they are good for you" (Marion, 1978, p. 12).

To develop a positive attitude or to change a negative attitude toward certain foods, teachers might start by leaving out value judgements when presenting food to children (Marion, 1978). Asking a child if an apple tastes "good" or "bad" does little more than illicit an answer of "yes" or

"no". Instead, one could focus on the physical characteristics of the apple. Looking, touching, smelling, and tasting an apple are sensory experiences that establish an image of an apple for a young child (Marion, 1978).

Gorelick and Clark (1985) found that when developmentally appropriate materials are used, a classroom nutrition education program can be effectively implemented with children as young as three to five years of age. Preschool children are capable of learning basic concepts of nutrition, including nutritive value, nutritive function, and the impact of nutrition on health (Lee et al., 1984). Nutrition educators need to experiment with nutrition materials that are more perceptually based and less dependent on formal structures. These materials will need to relate to foods children actually eat and the food choices they actually make in everyday life (Contento, 1981).

Suitable Nutrition Education Learning Experiences

For young children, the food experience does far more than provide nourishment for their physical bodies. Because young children enter into all experiences with their whole being, food may become a vehicle for providing motor, sensory, intellectual, emotional, and social experiences and learnings (U. S. Dept. of HEW, 1976). Through thoughtful planning and implementation, caregivers may make food activities into valuable learning experiences for many developmental areas in young children.

When meals and snacks are plunked on the plates day after day with little or no conversation about the food or opportunity for the children ever to help in the preparation of the food, an important educational opportunity is missed (Marion, 1978). Bourne (1986) suggests the

inadequate nutrition training and difficulty in eliciting behavior change cause many caregivers to sidestep the subject of nutrition altogether. Day care providers should develop and implement a nutrition education plan that will help children, parents, families, and personnel involved in the care of children to make informed decisions affecting their health and well-being (Nutrition Standards, 1987).

Children must learn more than just the names of foods. Children need to know the vocabulary that helps them to discriminate between foods, the sources of foods, and the forms of foods. Caregivers can stimulate interactions with food, and help children learn what food can do for them, as well as many other basic concepts (Marbach et al., 1978). To be successful, nutrition education must be informal and practical so that the subject is recognized as one which has real meaning outside of the classroom. To promote this, active participation in the learning process is highly desirable, and suitable practical exercises and experiences should be provided (Bourne, 1986). Children will take a genuine interest in new foods and enthusiastically participate in their preparation (Church, 1979). When a new food is introduced as something that tastes good, is fun to prepare, and contains familiar ingredients, a liking for it follows naturally (Juhus, 1973).

According to Baker and Henry (1987), children learn best when they are directly involved in an activity. An astonishing range of skills and concepts are involved in cooking. Motor skills, science, math and social skills all come into play during the cooking and cleaning process. Through experiences with food, young children use all of their senses and learn about shape, size, amount, color and texture (Baker & Henry, 1987). This is also the ideal time and way to begin to teach children the basics of

a balanced diet.

Planned opportunities for children to participate in food-tasting parties, simple food preparation, and planting and growing vegetables should be an integral part of the nutrition education program (Nutrition Standards, 1987). Nutrition concepts can be taught using discussion, skits, puppets, resource visitors, food preparation, food service, and age appropriate visual tools (Lee et al., 1984). The alert caregiver may want to talk about color, texture, taste, number, weight, and possible one-to-one correspondence (Church, 1979). Mealtime is also an excellent time to show that one food can be found in many forms. Some children who do not like fresh apples might enjoy applesauce, canned apple slices, apple butter, apple juice, spiced apple rings or dried apples (Marion, 1978). In addition to meal time, a preschool curriculum which entails art, science, math, creative movement, music, literature, and dramatic play is replete with opportunities for designing nutrition education activities (Marion, 1978).

Learning about food can be associated with mealtime and with other daily activities. Successful planning of simple "hands on" food experiences in keeping with the child's interest, needs and development requires the cooperative effort of caregiver and food service personnel (U. S. Dept. of HEW, 1976).

Early childhood is the ideal time to begin nutrition education. The food habits of adults are shaped and molded during infancy and the preschool years. These habits influence nutritional attitudes and health throughout the entire lifespan (Phillips, 1983).

The absence of on-site food preparation facilities need not be a deterrent to providing children with food-related activities. Portable

electric appliances such as an electric frying pan or the more elaborate combination oven-broiler hot-plate can be used successfully in the classroom under proper supervision and safety precautions (U. S. Dept. of HEW, 1976).

As outlined in the preschool curriculum guide, SPEAC (1980, p. 6), a thoughtfully planned and executed nutrition activity may encourage young children to one or more of the following ways:

"1. Practice of good health and safety skills.

2. Increased feeling of self-esteem. This gives a feeling of competence and self-worth.

3. Practice in cause and effect thinking and problem solving skills.

4. Stimulation of sensory responsitivity.

5. Practice in fine motor skills.

6. Refinement and exploration of social skills.

7. Stimulation of creative thought and action.

8. Utilization and enrichment of language skills, especially vocabulary building skills.

9. Exposure to adult role models and opportunity to rehearse life skills."

In selecting and developing nutrition education activities for the preschool child, caregivers must keep in mind the basic principles of how children learn. Caregivers should recognize that young children have a growing desire to be independent and to perform independently, and that they want to be actively involved in the process of learning. Caregivers should know that young children want to reach out to feel things and to explore because children are stimulated by sounds, color, and smells.

Child care programs need to focus on the child as a learner in real life situations (Phillips, 1983).

To effectively teach nutrition to young children requires not only a knowledge of food but also of the behavior of young children. Foods vary in their colors, textures, flavors, sizes, cultural and emotional associations, and nutritional value. Children vary in the amount, kinds, range and forms of foods they will eat. Putting together children and food in healthy combinations often requires skill, sensitivity and imagination (SPEAC, 1980).

The Child Care Food Program as an Educational Tool

Established as a pilot program in 1968 and expanded nationally in 1975, the Child Care Food Program, hereafter referred to as CCFP, provides both financial support and USDA-donated food to child care facilities. Currently, the CCFP provides nutritious meals and snacks to more than 1.2 million children in nearly 90,000 family day care homes and 18,000 day care centers across the country (Staff, 1988, p. 22).

The CCFP has grown steadily, serving 42 million meals in 1970, 436 million in 1980, and 725 million in fiscal year 1987. Federal funding has also increased. Last year, federal funding totaled more than $551 million, not including the value of USDA-donated food provided through the program (Staff, 1988, p. 22).

The CCFP, and the training that comes with it, have a tremendous impact. David Allen of Resources for Child Caring (Staff, 1988) states that the CCFP makes a significant difference in the quality of what a child eats in the formative years which is important for both physical and

mental development. Allen also comments that the CCFP helps make child care affordable for low-income families; without the CCFP, child care fees would rise 10 to 20 percent.

The Child Care Food Program funded by USDA provides nutritious meals and supplements for children who are not in school. USDA provides federal regulations that guide the program and develops the meal patterns for children. The CCFP assists the food service worker in understanding his/her role in the child care center and the important role of nutrition in the child's total physical, mental and social development (SPEAC, 1980).

Child Care Food Program legislation does not limit participation only to children from low income families because the program is intended to be a public health and educational program. Nutritional need, however, spans all income levels. Although higher income is associated with fewer nutrition deficiencies, a higher income does not guarantee adequate nutrition (Pelican, O'Connell, Lewis, & Bredbenner, 1985).

Nutrition education for children and parents is an important aspect of the CCFP. The CCFP, therefore, is an important vehicle for teaching the child early in life to eat and enjoy a large variety of nutritious foods at mealtime and supplements (U. S. Dept. of HEW, 1976). Children should start learning about nutrition when they are young. During this period, a young child can develop a positive attitude toward food, learn to accept a wide variety of foods and appreciate the pleasurable experiences eating provides. This can be accomplished by incorporating into the CCFP educational activities that are centered around foods. It is better to establish good food habits early in life than try to change eating habits later (USDA, 1985). Directors, caregivers and food service personnel

should serve nutritious meals and supplements that provide an opportunity for excellent learning activities. Being part of the CCFP may help upgrade a child care center's image. Caregivers may become a nutrition resource for parents asking questions concerning their child's eating habits (Staff, 1988). Parents will not worry because they know how well their children are eating.

Each child, like each adult, is unique and should be allowed to grow and develop according to his/her individual pattern. Children grow in spurts, during which they eat more food. When growth slows most children eat less. Development cannot be hurried. Child care centers can only supply the nutrients that are needed. Deprivation of nutrients at crucial stages not only impairs bodily growth, but hinders the development of internal organs and mental growth. Once a crucial stage is past, there is no retracing to repair the damage caused by a lack of certain nutrients (SPEAC, 1980).

Food selection and eating patterns are learned. Enjoyment of food is learned. Young children can be guided to learn good nutrition habits and attitudes by positive experiences with nourishing foods during the preschool years.

CHAPTER III

RESEARCH PROCEDURES

Introduction

The focus of this study was to determine the extent of nutrition education taught in child care centers. For the purpose of this study, the subjects were identified as directors of child care centers. Data collected from this population concerning their perceptions of the role nutrition education plays in child care centers can assist in future planning, promoting, and implementing nutrition education in child care centers.

Research Design

Descriptive research was used in this study. Moore (1983, p. 174) defines descriptive research as "the process of collecting data in an attempt to describe as accurately as possible a subject's behavior, attitude, or values". A mailed questionnaire was utilized to obtain the data for this study (Appendix A). The purpose of survey research is to obtain information that describes existing phenomena by asking individuals their perceptions, attitudes, behaviors or values (Moore, 1983, p. 174). A survey is, therefore, a self-report assessment.

The mailed questionnaire method of data collection has several advantages. This method can be administered to a large sample thereby limiting the expense of time and financial resources. It also provides for

uniform question presentation to all respondents and less opportunity for bias from the researcher (Berdie & Anderson, 1974). Use of questionnaires provide anonymity for the respondents who may then give more honest responses to each question. Questionnaires allow the investigator to determine trends or areas of interest for future studies. Berdie and Anderson (1974, p. 20) identified limitations of using a questionnaire as including the danger of not receiving a representative response and the misinterpretation of questions by the respondents. One cannot always be sure who completes the survey. The intended survey recipient may forward the questionnaire to a person believed to be more qualified to complete it (Berdie & Anderson, 1974, p. 21).

Population

A population is any group of individuals that have one or more characteristics in common that are of interest to the researcher (Best, 1981, p. 8). The population may be all the individuals of a particular type or a more restricted part of that group. This study used the entire population of child care center directors participating in the Oklahoma Child Care Food Program (CCFP). The cooperation of the Oklahoma State Department of Education made it possible to identify and contact all child care center directors participating in the Child Care Food Program. It is beyond the scope of most research projects to identify all the members of a defined population (Borg & Gall, 1963). The Oklahoma State Department of Education and the United States Department of Agriculture provided Nutrition Education Training funds for the printing and mailing of the instrument. The Oklahoma State Department of Education felt that use of the population would provide the most accurate

representation of the extent of nutrition education taught in child care centers. When a population is made up of a wide range of variables and characteristics, using a small sample would run the risk of missing or misrepresenting many of the differences (Isaacs & Michael, 1974, p. 147). The uneven geographic distribution by type of child care center provided a need to use a population for this study.

Instrument

The literature search did not disclose the availability of an instrument that could provide the specific information desired in this study; therefore, an instrument was developed. The Oklahoma Nutrition Education Survey of 1978-79 developed by the Oklahoma State Department of Education and by the Department of Food, Nutrition, and Institutional Administration, College of Home Economics, Oklahoma State University, served as a guide for the developing of the present instrument (OSDE & OSU, 1979).

The researcher developed an instrument to determine the extent of nutrition education taught in child care centers based on the objectives of this study, a review of the literature, and input provided by several experts from the United States Department of Agriculture and the Oklahoma State Department of Education. A group of Oklahoma CCFP and Nutrition Education Training professionals pretested the instrument. The survey was reviewed, pretested and revised several times before the final instrument was achieved.

Data Collection

Questionnaires were mailed to each child care center director at each Child Care Food Program facility in the State of Oklahoma (Appendix A).

Four types of child care centers were sampled: Head Start centers, Title XX centers, private nonprofit centers, and public centers. Of 483 facilities surveyed, 240 were Head Start sites, 161 were Title XX centers, 65 were private nonprofit centers, and 17 were public child care centers.

The research instrument was printed by the Oklahoma State Department of Education. An identification code was placed on each instrument for the researcher's recording purposes. The instruments were mailed with a preaddressed return envelope. The first instruments were mailed August 10, 1988.

Data Preparation and Analysis

As completed instruments were received, the identification code was used to mark the respondent off the list. Using a list of non-respondents, a follow-up telephone call was made to directors to remind them to complete and return the survey. Directors not reached by telephone and those requesting another survey were mailed a second survey on September 22, 1988. Four surveys received after October 7, 1988 were not included in this study due to time constraints.

Survey instruments were returned by 342 of the 483 centers receiving instruments. This made an overall return response of 70.8%. Response rate by directors by type of child care center show Head Start center directors responded at a 48.3% rate; Title XX directors, 33.9%; non-profit directors, 15.5%; and public center directors, 2.3% (Table I).

The instruments which had an identity code were sorted according to type of child care center. The responses on the instrument were coded and the data were transferred to the computer. The analysis of the data was structured according to the research objectives of the study. Frequencies

TABLE I

PERCENTAGES AND FREQUENCIES OF INSTRUMENTS RETURNED

Type of Center	Number Mailed	% of Mailed Total	Number Returned	% of Returned Total	% of Response by Center Type
Title XX	161	33.3	116	33.9	72.0
Head Starts	240	49.7	165	48.3	68.8
Non-Profit	65	13.5	53	15.5	81.5
Public	17	3.5	8	2.3	47.1
Total	483	100	342	100	

of responses and percentages were obtained for each question. The frequencies and percentages for each question were then broken down by center type so that comparisons could be made between the four types of child care centers. The analysis of data was conducted using the SPSSX computer program (SPSS, Inc., 1986).

CHAPTER IV

FINDINGS AND DISCUSSION

This study was designed to determine the extent of nutrition education taught in child care centers. Findings of the study are presented in this chapter.

Descriptive Statistics

Characteristics of Center Directors

The data were analyzed according to age, gender, highest level of education and background in nutrition of the center directors (Table II). Most of the directors who responded were 31-40 years of age (35.6%). When age was examined by center type, the 31-40 age group was still predominant in each type of center (Table III). Most of the respondents were female (97.6%). Eight center directors were males (2.4%). Of these 8 males, 5 were Title XX center directors.

The highest level of education attained by most directors was that of a high school graduate (32.1%). Slightly fewer of the directors had attained the Child Development Associate (CDA) credential (31.2%). The CDA credential was initiated to upgrade the quality of staff caring for children 3-5 years of age in child care programs throughout the nation. The foundation of the CDA program is based on a set of competencies necessary for staff to maximize the physical, intellectual, social and

TABLE II

DISTRIBUTION OF CHILD CARE CENTER DIRECTORS ACCORDING TO SELECTED CHARACTERISTICS

Variable	Number N = 342	%
Age		
Below 21	43	12.8
21-30	48	14.2
31-40	120	35.6
41-50	68	20.2
51+	58	17.2
Missing Observations (5)		
Gender		
Male	8	2.4
Female	326	97.6
Missing Observations (8)		
Highest Level of Education		
College Graduate	98	28.8
CDA Credential	106	31.2
Senior High School Diploma	109	32.1
G.E.D.	27	7.9
Below 12th Grade	0	0
Missing Observations (2)		

TABLE II (continued)

Variable	Number N = 342	%
Background in Nutrition*		
Took Nutrition Course in College	130	38.0
Studied Nutrition in Junior or Senior High School	164	48.0
Attended a CCFP Workshop	276	80.7
Learned About Nutrition on My Own	156	45.6
Attended a Nutrition Class at a Child Care Organization Meeting	199	58.2
Never Studied Nutrition	1	.29

*Totals for Background in Nutrition are greater than 342 and 100 percent since directors could check more than 1 response.

TABLE III

DISTRIBUTION OF CHILD CARE CENTER DIRECTORS BY AGE AND GENDER

Variable	Title XX	% Title XX	Head Start	% Head Start	Private Non Profit	% Non Profit	Public	% Public	Total by Item	% by Item
Age										
Below 21	18	15.8	20	12.3	3	5.7	2	25.0	43	12.8
21-30	18	15.8	18	11.1	10	18.9	2	25.0	48	14.2
31-40	37	32.5	58	35.8	22	41.5	3	37.5	120	35.6
41-50	23	20.2	31	19.1	13	24.5	1	12.5	68	20.2
50+	18	15.8	35	21.6	5	9.4	0	0	58	17.2
Total by Center Type	114		162		53		8		337	
% by Center Type	33.8		48.1		15.7		2.4		100.00	
Missing Observations (5)										
Gender										
Male	5	4.4	2	1.2	1	1.9	0	0	8	2.4
Female	107	94.7	160	98.2	51	98.1	8	100.00	326	97.6
Total by Center Type	112		162		52		8		334	
% by Center Type	33.6		48.5		15.5		2.4		100.00	
Missing Observations (8)										

emotional needs of children (U.S. Dept. of Health & Human Services, 1984, p. 7). Candidates working toward this credential receive credits from colleges or universities. Many states have incorporated the CDA credential into their regulations for child care staff. Of the public center directors who responded, 6 of the directors were college graduates (Table IV). Public centers include vocational technical schools and universities which may require a college degree for employment.

Most respondents showed that they had participated in three different types of nutrition training (Appendix B). The different types of training received by the respondents were tallied by hand. A majority of respondents (80.7%) had attended a CCFP workshop. Other nutrition training received were classes taken at child care organizational meetings (58.2%). Slightly less than half (48.0%) studied nutrition in junior or senior high school.

More than half (55.4%) of the directors responding had 10 plus years of experience working with young children (Table V). Only 1.5% of the respondents had worked with children one year or less. A little more than one-third (38.8%) of the directors had been employed at their present child care center 2-5 years. Slightly fewer than one-third (30.0%) had been employed at the center 10 plus years (Table V).

Several questions were included in the instrument to determine directors' personal feelings regarding nutrition. When asked to describe their weight, 46.9% of the respondents indicated that they could lose a few pounds, 29.2% indicated that they were just right, and only 22.7% indicated that they were overweight (Table VI). Subjects were asked to indicate all situations when they normally ate (Table VII). These items were tallied by hand. Subjects who responded were found normally to eat

TABLE IV

FREQUENCIES AND PERCENTAGES OF DIRECTORS' EDUCATION LEVEL BY TYPE OF CHILD CARE CENTER

Variable	Title XX	% Title XX	Head Start	% Head Start	Private Non Profit	% Non Profit	Public	% Public	Total by Item	% by Item
College Graduate	35	30.4	36	22.0	21	39.6	6	75.0	98	28.8
CDA Credential	12	10.4	90	54.9	3	5.7	1	12.5	106	31.2
Senior High School	50	43.5	32	19.5	26	49.1	1	12.5	109	32.1
G.E.D.	18	15.7	6	3.7	3	5.7	0	0	27	7.9
Below 12th Grade	0	0	0	0	0	0	0	0	0	0
Total by Center Type	115		164		53		8		340	
% by Center Type	33.8		48.2		15.6		2.4		100.00	
Missing Observations (2)										

TABLE V

FREQUENCIES AND PERCENTAGES CONCERNING DIRECTORS' EMPLOYMENT EXPERIENCE

Variable	Title XX	% Title XX	Head Start	% Head Start	Private Non Profit	% Non Profit	Public	% Public	Total by Item	% by Item
Length of Time Working with Children										
Less than 1 yr.	2	1.7	2	1.2	1	1.9	0	0	5	1.5
2-5 yrs.	22	19.1	31	18.8	8	15.1	1	12.5	62	18.2
6-9 yrs.	24	20.9	44	26.7	14	26.4	3	37.5	85	24.9
10+	67	58.3	88	53.3	30	56.6	4	50.0	189	55.4
Total by Center Type	115		165		53		8		341	
% by Center Type	33.7		48.4		15.5		2.3		100.00	
Missing Observations (1)										
Time at Current Child Care Center										
Less than 1 yr.	14	12.1	11	6.7	8	15.1	1	12.5	34	10.0
2-5 yrs.	54	46.6	59	36.2	18	34.0	1	12.5	132	38.8
6-9 yrs.	21	18.1	32	19.6	14	26.4	5	62.5	72	21.2
10+	27	23.3	61	37.4	13	24.5	1	12.5	102	30.0
Total by Center Type	116		163		53		8		340	
% by Center Type	34.1		47.9		15.6		2.4		100.00	
Missing Observations (2)										

TABLE VI

FREQUENCIES AND PERCENTAGES OF PERSONAL ITEMS REGARDING NUTRITION

Variable	Number N = 342	% of All Respondents
Weight Description		
Underweight	4	1.2
Just Right	99	29.2
Need to lose a few pounds	159	46.9
Overweight	77	22.7
Total	339	100.00
Missing Observations (3)		
Mealtime Atmosphere in Own Home		
Eat together as a Family at the Table	203	60.2
Eat "on-the-run"	61	18.1
Eat in front of the television	44	13.1
Rarely eats at home	10	3.0
Eat Out as a Family	19	5.6
Total	337	100.00
Missing Observations (5)		

TABLE VII

FREQUENCIES AND PERCENTAGES OF SITUATIONS WHEN DIRECTORS NORMALLY EAT

Variable	Number N = 342*	% of All Respondents
Only When Hungry	85	24.9
At Mealtime	265	77.5
When Tense or Nervous	69	20.2
When Alone	39	11.4
When Depressed	39	11.4
To be Sociable	42	12.3

*Note that totals are greater than 342 and 100 percent since directors could check more than one response.

mainly at mealtime (77.5%). Other situations indicated the director ate only when hungry (24.9%), and when tense or nervous (20.2%). Respondents were asked to describe mealtime in their own home (Table VI). A plurality (60.2%) revealed that meals in their home were still eaten as a family at the table. The next most frequently checked item was eating meals "on the run" at home or away from home (18.1%).

Mealtime in the Child Care Center

The instrument contained several questions concerning the mealtime atmosphere at the director's center. As shown in Table VIII, respondents were asked how often they sat and ate meals with the children in the child care center. Nearly two-thirds (63.7%) expressed that they sat and ate meals with the children daily. Some of the directors indicated that they sat and ate with the children less than once per week (16.2%). Head start directors were most likely to sit daily and eat with the children, probably due to their nutritional guidelines which stress the importance of adults sitting with the children family style at mealtime. The best way to teach children about good nutrition is by example. The best situation is a social setting where teachers and other staff members sit with the children (SPEAC, 1980).

Directors described the mealtime atmosphere at the child care center as being a happy time with some discussion about nutrition (46.1%), or as being pleasant and enjoyable (47.0%). Some of the directors (4.8%) indicated that mealtime was usually chaotic and nerve-wracking. Eating should be regarded by children as pleasurable and fun. The caregiver can promote this attitude by providing an environment for mealtime that is cheerful and bright. Directors were asked if their job included

TABLE VIII

FREQUENCIES AND PERCENTAGES CONCERNING MEALTIME AT THE CHILD CARE CENTER

Variable	Title XX	% Title XX	Head Start	% Head Start	Private Non Profit	% Non Profit	Public	% Public	Total by Item	% by Item
Director Sits and Eats with the Children										
Everyday	48	41.7	146	89.6	19	35.8	3	37.5	216	63.7
3-4 times a week	18	15.7	5	3.1	6	11.3	0	0	29	8.6
1-2 times a week	18	15.7	6	3.7	12	22.6	3	37.5	39	11.5
Less than once per week	31	27.0	6	3.7	16	30.2	2	25.0	55	16.2
Total by Center Type	115		163		53		8		339	
% by Center Type	33.9		48.1		15.6		2.4		100.00	
Missing Observations (3)										
Mealtime Atmosphere										
Pleasant and Enjoyable	60	53.6	63	38.7	30	56.6	5	62.5	158	47.0
Happy Time w/Some Discussion about Nutrition	41	36.6	93	57.1	18	34.0	3	37.5	155	46.1
Quiet w/No Talking Allowed	3	2.7	2	1.2	2	3.8	0	0	7	2.1
Usually Chaotic & Nerve-Wracking	8	7.1	5	31	3	5.7	0	0	16	4.8
Total by Center Type	112		163		53		8		336	
% by Center Type	33.3		48.5		15.8		2.4		100.00	
Missing Observations (6)										

TABLE VIII (Continued)

Variable	Title XX	% Title XX	Head Start	% Head Start	Private Non Profit	% Non Profit	Public	% Public	Total by Item	% by Item
Dining Area Supervision										
Everyday	84	73.0	147	91.3	29	56.9	4	50.0	264	78.8
Every Other Day	5	4.3	3	1.9	2	3.9	0	0	10	3.0
At Least Once a Week	12	10.4	3	1.9	5	9.8	1	12.5	21	6.3
Less than Once a Week	10	8.7	5	3.1	10	19.6	2	25.0	27	8.1
Never	4	3.5	3	1.9	5	9.8	1	12.5	13	3.9
Total by Center Type	115		161		51		8		335	
% by Center Type	34.3		48.1		15.2		2.4		100.00	
Missing Observations (7)										

supervising the dining area at mealtime. A majority (78.8%) indicated that they supervised mealtime daily. The child care staff should maintain a positive emotional climate at mealtimes, during which children may accept and enjoy food (Nutrition Standards, 1987). Teachers and caregivers must help children develop a positive attitude toward food and an awareness of foods conducive to good health (Marion, 1978).

Child care center directors were asked if they perceived meals eaten by the children elsewhere other than the child care center to be well-balanced and nutritious. As shown in Table IX almost two-thirds of the directors (63.0%) indicated no. Directors expressing that these meals were nutritious made up 35.7 percent of the response. This question had 42 missing responses. Many of the directors noted on the survey that they were not knowledgeable enough about meals eaten outside the child care center to answer the question. When asked which meal type would be most likely eaten outside of the child care center, a majority of the directors (83.9%) expressed that the evening meal is generally eaten elsewhere. Some of the directors (7.9%) indicated that breakfast was not eaten at the child care center.

Influences on Children's Eating Habits

Directors were asked about their opinions concerning factors influencing children's eating habits. When asked about the greatest influence on a child's food preferences, nearly half (45.4%) of the respondents indicated parents were the most influential. Table X shows that television was thought by 17.2% of the respondents to be the greatest influence on a child's food preferences. Directors who believed caregivers and other children were the most influential comprised 14.2%

TABLE IX

FREQUENCIES AND PERCENTAGES CONCERNING MEALS NOT EATEN AT THE CHILD CARE CENTER

Variable	Title XX	% Title XX	Head Start	% Head Start	Private Non Profit	% Non Profit	Public	% Public	Total by Item	% by Item
Meal Type Eaten Elsewhere										
Breakfast	11	9.9	7	4.4	8	15.7	0	0	26	7.9
Lunch	2	1.8	5	3.1	3	5.9	0	0	10	3.0
Evening Meal	95	85.6	134	84.3	40	78.4	7	87.5	276	83.9
Supplement	3	2.7	13	8.2	0	0	1	12.5	17	5.2
Total by Center Type	111		159		51		8		329	
% by Center Type	33.7		48.3		15.5		2.4		100.00	
Missing Observations (13)										
Directors' Opinion of Whether Meals Eaten Elsewhere are Nutritious										
Yes	29	27.1	57	39.9	20	44.4	1	20.0	107	35.7
No	76	71.0	85	59.4	24	53.3	4	80.0	189	63.0
Other	2	1.9	1	.7	1	2.2	0		4	1.3
Total by Center Type	107		143		45		5		300	
% by Center Type	35.7		47.7		15.0		1.7		100.00	
Missing Observations (42)										

TABLE X

FREQUENCIES AND PERCENTAGES OF THE GREATEST INFLUENCE ON A CHILD'S FOOD PREFERENCES

Variable	Number N = 342	% of All Respondents
Parents	153	45.4
Caregivers	48	14.2
Other Children	51	15.1
Programs Designed to Influence Food Habits	27	8.0
Television	58	17.2
Total	337	100.0
Missing Observations (5)		

and 15.1%, respectively. Since many parents work, non-family members often care for the children. Caregivers need to realize that they are in a position to influence the quality and type of food available to children as well as the child's developing food preferences and subsequent acceptance of a variety of foods (Gillis & Sabry, 1980). The CCFP encourages the offering of new food. When asked about the introduction of new foods to children, a majority of the directors (85.5%) believed that new foods should be offered several times to see if the children learned to accept them. Table XI shows that some of the directors (13.0%) believed new foods should be offered regularly regardless of whether the children learned to accept the new foods. A majority of respondents (88.7%) were of the opinion that the offering of new foods led to the increased acceptance of a wider variety of foods. Some of the directors (6.5%) believed the offering of new foods did not make any noticeable change in food habits, and 4.8% of the directors believed the offering of new foods resulted in plate waste and money down-the-drain. A child's early food choices are limited by the foods given him. Children are not born with definite likes or dislikes. Eating habits and food preferences are gradually formed by experiences with food (U. S. Dept. of HEW, 1976). A liking of food is something that is acquired over time with repeated exposures. The more often a food item is presented, whether or not it is eaten, the more positive the attitude of the child toward that food item (Kolasa, 1986). Children who are unwilling to try a new food should not be pressured, forced or punished (Baker & Henry, 1987).

Federally Assisted Child Feeding Programs

Several questions on the survey dealt with federally assisted child

TABLE XI

FREQUENCIES AND PERCENTAGES CONCERNING CHILDREN'S ACCEPTANCE OF NEW FOODS

Variable	Number N = 342	% of All Respondents
Procedure Used to Offer New Foods		
Offer once, if rejected, never again	5	1.5
Offer several times until accepted	290	85.5
Offer regularly, regardless of acceptance	44	13.0
Total	339	100.00
Missing Observations (3)		
Results of Offering New Foods		
Plate waste and money down the drain	16	4.8
Increased acceptance of a wide variety of foods	298	88.7
No noticeable change in food habits	22	6.5
Total	336	100.00
Missing Observations (6)		

feeding programs. These questions were asked to get an idea of the directors' opinion of federally assisted child feeding programs, specifically the CCFP. The directors responded as shown in Table XII. A majority of the respondents (88.8%) were of the opinion that all federally assisted child feeding programs are valuable to the people. About 10.0 percent of the respondents believed that some federally assisted child feeding programs have merit and some do not. Directors were asked to rank reasons for participating in the CCFP by importance (Table XIII). Directors ranked all six reasons as being very important. Three of the reasons were ranked as being very important by more than 90% of the respondents. These three reasons were; meeting 2/3 of the child's daily dietary needs (96.2%), provides meals for economically deprived children (96.8%), and helping children form good food habits (90.9%). The reason ranked as being not important by the most respondents was the CCFP helps keep day care costs lower for parents. The CCFP provides both financial support and USDA-donated food to child care facilities. The CCFP makes a significant difference in the quality of what a child eats in the formative years which is important for both physical and mental development (Food and Nutrition, 1988).

Nutrition Education in Child Care Centers

Directors were asked about the grade level nutrition education should begin. Table XIV shows a majority of directors indicated that nutrition education should begin at ages 3-5 years (preschool age). When asked what was the best reason for not teaching nutrition education to children ages 3-5, 45.8% of the directors indicated that the children were not yet capable of understanding nutrition concepts. Almost 35% of the directors

TABLE XII

FREQUENCIES AND PERCENTAGES OF DIRECTORS' OPINION OF FEDERALLY ASSISTED CHILD FEEDING PROGRAMS

Variable	Number N = 342	% of All Respondents
All are valuable to people	301	88.8
Some have merit, some do not	34	10.0
Few, if any, are valuable	2	.6
Federal Government should not be involved	2	.6
Total	339	100.00
Missing Observations (3)		

TABLE XIII

FREQUENCIES AND PERCENTAGES OF REASONS FOR HAVING A CHILD CARE FOOD PROGRAM

Variable	Title XX	% Title XX	Head Start	% Head Start	Private Non Profit	% Non Profit	Public	% Public	Total by Item	% by Item
Provides Meals for Children of Workng Parents										
Very Important	91	79.8	104	63.0	47	88.7	1	12.5	249	73.2
Moderately Important	22	19.3	53	32.1	6	11.3	0	0	81	23.8
Not Important	1	.9	7	4.2	0	0	7	87.5	9	2.6
Total by Center Type	114		165		53		0		340	
% by Center Type	93.5		48.5		15.6		8		100.00	
Missing Observations (2										
Financial Funding to Center										
Very Important	83	73.5	127	77.4	38	73.1	4	50.0	252	74.8
Moderately Important	29	25.7	33	20.1	13	25.0	3	37.5	78	23.1
Not Important	1	.9	4	2.4	1	1.9	1	12.5	7	2.1
Total by Center Type	113		164		52		8		337	
% by Center Type	33.5		48.7		15.4		2.4		100.0	
Missing Observations (5)										
Meets 2/3 of Child's Daily Dietary Needs										
Very Important	109	95.6	161	98.2	50	94.3	6	75.0	329	96.2
Moderately Important	5	4.4	3	1.8	2	3.8	2	25.0	12	3.5
Not Important	0	0	0	0	1	1.9	0	0	1	.3
Total by Center Type	114		164		53		8		339	
% by Center Type	33.6		48.4		15.6		2.4		100.0	
Missing Observations (3)										

TABLE XIII (Continued)

Variable	Title XX	% Title XX	Head Start	% Head Start	Private Non Profit	% Non Profit	Public	% Public	Total by Item	% by Item
Provides Meals for Economically Deprived Children										
Very Important	110	96.5	163	98.8	50	94.3	6	75.0	329	96.8
Moderately Important	3	2.6	2	1.2	2	3.8	2	25.0	9	2.6
Not Important	1	.9	0	0	1	1.9	0	0	2	.6
Total by Center Type	114		165		53		8		340	
% by Center Type	33.5		48.5		15.6		2.4		100.0	
Missing Observations (2)										
Help Children Form Good Food Habits										
Very Important	100	87.0	154	93.9	47	88.7	8	100.0	309	90.9
Moderately Important	15	13.0	10	6.1	5	9.4	0	0	30	8.8
Not Important	0	0	0	0	1	1.9	0	0	1	.3
Total by Center Type	115		164		53		8		340	
% by Center Type	33.8		48.2		15.6		2.4		100.0	
Missing Observations (2)										
Keep Day Care Costs Lower for Parents										
Very Important	81	72.3	85	53.5	38	73.1	5	62.5	209	63.1
Moderately Important	21	18.8	48	30.2	12	23.1	2	25.0	83	25.1
Not Important	10	8.9	26	16.4	2	3.8	1	12.5	39	11.8
Total by Center Type	112		159		52		8		331	
% by Center Type	33.8		48.0		15.7		2.4		100.0	
Missing Observations (11)										

TABLE XIV

FREQUENCIES AND PERCENTAGES CONCERNING NUTRITION IN CHILD CARE CENTERS

Variable	Title XX	% Title XX	Head Start	% Head Start	Private Non Profit	% Non Profit	Public	% Public	Total by Item	% by Item
Grade Level Nutrition Education Should Begin										
Ages 3-5 yrs	100	86.2	160	98.2	47	90.4	7	87.5	314	92.6
In K-3 grades	13	11.2	1	.6	2	3.8	0	0	17	5.0
In 4-6 grades	3	2.6	1	.6	2	3.8	0	0	6	1.8
In Junior High or Middle School	0	0	1	.6	0	0	1	12.5	2	.6
Total by Center Type	116		163		52		8		339	
% by Center Type	34.2		48.1		15.3		2.4		100.0	
Missing Observations (3)										
Best Reason For Not Teaching Education										
Children Not Capable of Understanding Concepts	34	47.2	48	53.3	9	25.0	1	33.3	92	45.8
Nutrition Education Has No Place in Child Care Centers	0	0	1	1.1	2	5.6	0	0	3	1.5
Not Enough Time to Teach It	17	23.6	10	11.1	8	22.2	1	33.3	36	17.9
Not Enough Nutrition Background to Teach It	21	29.2	31	34.4	17	42.2	1	33.3	70	34.8
Totals by Center Type	72		90		36		3		201	
% by Center Type	35.8		44.8		17.9		1.5		100.0	
Missing Observations (141)										

TABLE XIV (Continued)

Variable	Title XX	% Title XX	Head Start	% Head Start	Private Non Profit	% Non Profit	Public	% Public	Total by Item	% by Item
Does Director Teach a Learning Unit on Nutrition in Any of the Center's Classes										
No	19	16.7	1	.6	8	15.7	0	0	28	8.3
Yes	95	83.3	162	99.4	43	84.3	8	100.0	308	91.7
Total by Center Type	114		163		51		8		336	
% by Center Type	33.9		48.5		15.2		2.4		100.0	
Missing Observations (6)										

thought they did not have enough nutrition background to teach it, and 17.9% said that they did not have enough time to teach it. Many of the directors (141) did not respond to this question and noted on the survey that there was no reason not to teach nutrition education to 3-5 year olds. Gorelick and Clark (1985) found that when developmentally appropriate materials are used, a classroom nutrition education program can be effectively implemented with children as young as 3-5 years of age.

When asked if they taught a learning unit on nutrition, 91.7% indicated yes and 8.3% indicated no (Table XV). More than half of the respondents (58.2%) said that they taught nutrition education daily, about one-tenth of the respondents (11.2%) said they taught nutrition education once a year (Table XV). The main source of nutrition information used by respondents was CCFP consultants and workshops (38.0%). About 19.5% of the respondents expressed that they relied on their own experiences as a source of nutrition information. Slightly less than 2/3 of the respondents (64.3%) indicated that they used the Nutrition Education Training (NET) curriculum guide provided by the Oklahoma State Department of Education.

Thoughtful planning and implementation can make nutrition activities into valuable learning experiences for many developmental areas in young children. A list of activities was provided on the instrument. Respondents were asked to check all activities into which the center implements nutrition education. Respondents checked anywhere from 1 to 20 activities (Appendix B). The writer made a hand tally of the most frequently checked activities. The top five activities checked were group time, food preparation experiences, growing plants and seeds, food tasting

TABLE XV

FREQUENCIES AND PERCENTAGES OF SOURCES USED TO TEACH NUTRITION EDUCATION

Variable	Title XX	% Title XX	Head Start	% Head Start	Private Non Profit	% Non Profit	Public	% Public	Total by Item	% by Item
How Often Nutrition Education is Taught										
Part of Daily Routine	45	47.4	113	70.6	16	39.0	3	37.5	177	58.2
Once a Week	14	14.7	40	25.0	11	26.8	1	12.5	66	21.7
Once a Month	17	17.9	3	1.9	7	17.1	0	0	27	8.9
Generally, Once a Year	19	20.0	4	2.5	7	17.1	4	50.0	34	11.2
Total by Center Type	95		160		41		8		304	
% by Center Type	31.3		52.6		13.5		2.6		100.0	
Missing Observations (38)										
Main Source Used to Teach Nutrition Education										
Textbooks	16	16.7	22	13.9	7	17.1	4	50.0	49	16.2
Pamphlets & Newsletters	15	15.6	27	17.1	9	22.0	1	12.5	52	17.2
Child Care Food Program Consultants & Workshops	37	38.5	63	39.9	15	36.6	0	0	115	38.0
Other Government Agencies	7	7.3	19	12.0	1	2.4	1	12.5	28	9.2
My Own Experiences	21	21.9	27	17.1	9	22.0	2	25.0	59	19.5
Total by Center Type	96		158		41		8		303	
% by Center Type	31.7		52.1		13.5		2.6		100.0	
Missing Observations (39)										

TABLE XV (Continued)

Variable	Title XX	% Title XX	Head Start	% Head Start	Private Non Profit	% Non Profit	Public	% Public	Total by Item	% by Item
Center Uses Nutrition Education Training (NET) Guide										
Yes	66	71.7	94	61.0	25	62.5	4	50.0	189	64.5
No	6	6.5	6	3.9	2	5.0	0	0	14	4.8
Do Not Have This Guide	20	21.7	54	34.4	13	32.5	4	50.0	91	30.9
Total by Center Type	92		154		40		8		294	
% by Center Type	31.3		52.4		13.6	2.7		100.0		
Missing Observations (48)										

parties, and stories. Table XVI lists the twenty activities and provides frequencies and percentages of each activity.

Ten nutrition topics were listed and directors were asked to check all nutrition topics that were emphasized at their child care center. The writer hand tallied these topics and found the top three topics emphasized were positive results of good nutrition (82.5%), the importance of a good breakfast (73.9%), and the sources of food (67.5%). Table XVII lists the ten nutrition topics. Respondents most often checked 5-7 different topics (Appendix B). Day care centers should develop and implement a nutrition education plan that will help children, parents, families, and personnel involved in the care of children to make informed decisions affecting their health and well-being (Nutrition Standards, 1987).

Teaching methods were listed and respondents were asked to rank each method as successful, unsuccessful or have not tried. As shown on Table XVIII, the three methods reported as being the most unsuccessful were naming food sources of vitamin A and vitamin C, encouraging children to taste all foods at mealtime, and classifying foods into the four basic food groups. The three methods most often not tried were having a two bite club, showing films and filmstrips and using resource people to tell about nutrition. The five most successful teaching methods were discussing the food the children were having at mealtime, discussing how foods are needed for growth, learning and identifying new foods, using food models or pictures, and tasting new and unfamiliar foods. Baker and Henry (1987) found that children learn best about nutrition when they are directly involved in the activity. Young children use all of their senses and learn about shape, size, amount, color and texture through nutrition education activities.

TABLE XVI

FREQUENCIES AND PERCENTAGES OF ACTIVITIES INTO WHICH NUTRITION EDUCATION IS IMPLEMENTED

Activity	Number N = 342*	% of All Respondents*
Group Time	276	80.7
Outside Play	66	9.6
Self-Selected Activities	155	45.3
Stories	221	64.6
Dramatic Play	162	47.4
Growing Plants & Seeds	244	71.3
Songs	214	62.6
Planning Menus	146	42.7
Role Playing	133	38.9
Field Trips (to market, farm, etc.)	207	60.5
Ethnic Foods and Habits of Other Cultures	186	54.5
Art	220	64.3
Food Preparation Experiences	245	71.6
Skits, Plays	72	21.1
Puppets	146	42.7
Food Tasting Parties	226	66.1
Setting the Table	215	62.9
Cleaning Up After Meals	206	60.2
Feeding Classroom Pets	96	28.1
Films, Filmstrips, etc.	120	35.1

*Note the totals are greater than 342 and 100 percent since directors could check more than one activity.

TABLE XVII

FREQUENCIES AND PERCENTAGES OF NUTRITION TOPICS EMPHASIZED IN TEACHING NUTRITION EDUCATION

Variable	Number N = 342*	% of All Respondents*
Source of Food	231	67.5
Individual Food Differences	153	44.7
Eating a Well-balanced Diet	87	25.4
Sources of Nutrients	137	40.1
How Food Is Digested	55	16.1
Cultural Food Patterns	138	40.4
Making Food Choices	196	57.3
Importance of a Good Breakfast	253	73.9
Ways Nutrients Affect the Body	179	52.3
Positive Results of Good Nutrition (Strong Bones, Good Complexion, etc.)	282	82.5

*Note the totals are greater than 342 and 100 percent since directors could check more than 1 activity.

TABLE XVIII

FREQUENCIES AND PERCENTAGES OF NUTRITION EDUCATION TEACHING METHODS

Method	Successful	% by Item	Unsuccessful	% by Item	Have Not Tried	% by Item	Total
Testing new foods	267	88.7	21	7.0	12	4.0	301
Identifying new foods	271	92.2	13	4.4	10	3.4	294
Using food models or pictures	273	92.2	12	4.1	11	3.7	296
Encouraging children to taste all foods at mealtime	259	86.6	35	11.7	5	1.7	299
Discussing foods at mealtime	290	97.0	4	1.3	5	1.7	299
Classifying foods into the 4 Basic Food Groups	238	81.5	33	11.3	21	7.2	292
Naming sources of Vitamin A & C	167	56.8	54	18.4	73	24.8	294
Going on field trips	231	77.8	6	2.0	60	20.2	297
Planting vegetables and seeds	248	84.1	11	3.7	36	12.2	295
Having a "two bite" club	75	26.1	8	2.8	204	71.1	287
Studying food habits of other cultures	157	55.5	17	60	108	38.2	282
Using resource people	148	51.9	9	3.2	128	44.9	285
Showing films and filmstrips	142	48.5	16	5.5	135	46.1	293
Discussing weight and height of children	218	73.4	6	2.0	73	24.6	297
Discussing foods needed for bodily growth	275	94.5	4	1.4	12	4.1	291

Respondents who indicated that they did not teach a learning unit on nutrition education (Table XIX) were asked to complete additional questions so that the writer could find out the rationale for not teaching nutrition education. Respondents checked as the best reasons for not teaching nutrition education not having enough time to teach it (42.9%) and lack of suitable nutrition teaching materials (35.7%). Ninety-six percent of the respondents indicated that they would teach nutrition education if they received training. Over half (59.3%) would like to receive this training at a workshop in their area. Overwhelmingly, respondents indicated that they would use free nutrition education materials if they were provided. Use of a resource person to speak to the children about nutrition would be welcomed by 81.5% of the directors who currently do not teach nutrition education.

Nutrition education should prepare children to make the correct choices of food. Children should start learning about nutrition when they are young. Many factors must work together to make a nutrition education successful. A primary factor is the cooperation of directors, teachers, food service personnel and parents in helping children learn about food. A young child can develop positive attitudes towards foods and appreciate the pleasurable experiences eating provides (USDA, 1985).

Analysis of Data

Selected data were analyzed using the chi-square statistical test. Chi-square is a test of association. The data were run in an effort to give relationships. Most violate the assumption requiring that expected frequencies should not be less than five; therefore, these results must be accepted with caution. Future analyses will collapse cells to avoid

TABLE XIX

FREQUENCIES AND PERCENTAGES CONCERNING LACK OF NUTRITION EDUCATION IN CHILD CARE CENTERS

Variable	Title XX	% Title XX	Head Start	% Head Start	Private Non Profit	% Non Profit	Public	% Public	Total by Item	% by Item
Best Reason Not to Treach Nutrition Education										
Lack of Finances	2	10.5	–	–	–	–	–	–	2	7.1
Lack of Nutrition Knowledge	2	10.5	–	–	2	28.6	–	–	4	14.3
Lack of Time	7	36.8	1	50.0	4	57.1	–	–	12	42.9
Not an Important Subject	–	–	–	–	–	–	–	–	–	–
Lack of Teaching Materials	8	42.1	1	50.0	1	14.3	–	–	10	35.7
Total by Center Type	19		2		7		–		28	
% by Center Type	67.9		7.1		25.0		–		100.0	
Missing Observations (314)										
Would Teach Nutrition Education if Received Training										
Yes	18	94.7	1	100.0	5	100.0	–	–	24	96.0
No	1	5.3	–	–	–	–	–	–	1	4.0
Total by Center Type	19		1		5		–		25	
% by Center Type	76.0		4.0		20.0		–		100.0	
Missing Observations (317)										

TABLE XIX (Continued)

Variable	Title XX	% Title XX	Head Start	% Head Start	Private Non Profit	% Non Profit	Public	% Public	Total by Item	% by Item
Where Would Like to Receive Training										
At My Child Care Center	6	30.0	–	–	2	33.3	–	–	8	29.6
Attend Workshop in My Area	12	60.0	1	100.0	3	50.0	–	–	16	59.3
Attend Workshop in Oklahoma City or Tulsa	1	5.0	–	–	1	16.7	–	–	2	7.4
Other	1	5.0	–	–	–	–	–	–	1	3.7
Total by Center Type	20		1		6		–		27	
% by Center Type	74.1		3.7		22.2		–		100.0	
Missing Observations (315)										
Would Use Free Teaching Materials										
Yes	18	100.0	1	100.0	4	80.0	–	–	23	95.8
No	–	–	–	–	1	20.0	–	–	1	4.2
Total by Center Type	18		1		5	–		24		
% by Center Type	75.0		4.2		20.8		–		100.0	
Missing Observations (318)										
Would Like Resource Person to Speak at Center										
Yes	15	75.0	1	100.0	6	100.0	–	–	22	81.5
No	5	25.0	0	–	0	–	–	–	5	18.5
Total by Center Type	20		1		6		–		27	
% by Center Type	74.1		3.7		22.2		–		100.0	
Missing Observations (315)										

violating the assumption. All analyses are found in Appendix B.

Teaching Nutrition Education

Whether or not a learning unit on nutrition education was taught was found to be independent of the director's age and gender. The director's level of education was a significant factor in whether a learning unit on nutrition education was taught, χ^2 (3, N=334) = 10.35, $p < .05$. Length of time working with young children was also found to be a significant factor, χ^2 (3, N=335) = 9.26, $p < .05$.

Mealtime Atmosphere and Director's Characteristics

Three analyses produced no significant effects. The director's mealtime in his own home and weight description; mealtime in the director's home and sitting and eating meals with the children in the child care center; and the director's weight and mealtime at the child care center were evidenced no significant associations.

Educational and Nutritional Background

The director's level of education and the number of nutrition topics emphasized was significant, χ^2 (30, N=307) = 60.10, $p < .05$. The director's level of education and the number of activities in which nutrition education is implemented was not significant. The nutrition background of the director was found to be independent of the number of nutrition topics emphasized and the number of activities in which nutrition was implemented. The director's age and level of education were found to be unrelated to the best reason for not teaching nutrition education.

Whether the director would teach nutrition education after receiving training was independent of age and level of education.

CHAPTER V

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Findings

Objective one was to determine the perceived acceptability by caregivers of teaching nutrition education in the child care center. Child care center directors responded very positively to nutrition education being taught in the child care center. Almost 92% of the directors currently teach nutrition education. A majority of the directors (92.6%) believed nutrition education should begin at an early age — 3-5 years.

Identifying teaching methods used and nutrition topics emphasized in child care centers was the second objective of the study. Activities into which nutrition education was implemented were identified. The top five activities were group time. food preparation experiences, growing plants and seeds, food tasting parties and stories (Table XVI). Respondents could check all activities that applied. The number of activities checked varied greatly. Head Start centers tended to check more activities than the other center types. The top three nutrition topics emphasized were positive results of good nutrition, importance of a good breakfast, and sources of food. Directors could check up to ten nutrition topics. Again, the number of total responses checked varied greatly. Head Starts tended to check more topics than other center types. Respondents were asked to rate

teaching methods by degree of success. The five most successful teaching methods were discussing foods at mealtime, discussing foods needed for bodily growth, using food models or pictures, identifying new foods, and tasting new foods (Table XVIII).

One research question asked whether there was a relationship between the educational and nutritional background of the child care center director and the teaching methods used and nutrition topics emphasized. A relationship between the director's level of education and the number of activities in which nutrition education is implemented was not significant. The director's level of education and the number of nutrition topics emphasized was significant. The director's nutrition background was not related to the number of nutrition topics emphasized or the number of nutrition activities utilized. An objective of the study was to determine if the educational and nutritional background of the caregiver relates to the attention given nutrition education in the child care center.

The second research question raised for this study was do age, gender, education, experience with children, and length of employment of the director relate to whether a child care center teaches nutrition education. Chi-square analysis revealed that age, gender and length of employment were not significantly related to whether nutrition education was taught. Level of education was related significantly to teaching nutrition education. Experience with young children was also found to be related to teaching nutrition education.

Another research question raised was is the importance placed on nutrition and mealtime in the director's personal life reflected in the mealtime atmosphere in the child care center. Chi-square analysis revealed no significant relationships between these factors.

Directors were of the opinion that parents are the greatest influence on a child's food preferences. Television, other children and caregivers followed as having the greatest influences on children's food preferences. This answered the research question of who had the greatest influence on children's food preferences.

In response to the research question concerning the procedures used in child care centers to introduce new foods, most of the directors believed that new foods should be offered several times until accepted (Table XI). The offering of new foods was believed by 88.7% of the directors to increase acceptance of a wide variety of foods.

An objective of the study was to determine the perceived contributions of the Child Care Food Program to the child care center. A research question raised was what are the perceptions of child care center directors toward federally assisted child feeding programs. Child care center directors were asked questions concerning federally assisted child feeding programs. A majority of the respondents (88.8%) had the opinion that all federally assisted child feeding programs are valuable to the people (Table XII). Over half of the directors rated all six of the reasons for participating in the child care food program as being very important. Of these six reasons, three were rated as being very important by over 90% of the respondents (Table XIII). The three most important reasons for having a CCFP were: meeting two-thirds of the child's daily dietary needs, providing meals for economically deprived children, and helping children form good food habits. Respondents indicated that the CCFP was very valuable and beneficial to child care centers.

Another objective of the study was to identify which type of child care center gives greater emphasis on nutrition education. All public

center directors (100%) indicated that they taught a learning unit on nutrition education. Seventy-five percent of all public directors had a college degree. Virtually all Head Start directors (99.4%) taught nutrition education. Title XX directors made up almost two-thirds of the directors who did not teach nutrition education. Ninety-five percent of the Head Start directors indicated they taught nutrition education either once a week or daily. Almost two-thirds of the Title XX directors and private nonprofit directors taught nutrition education either once a week or daily. The public directors were divided between teaching it once a week or daily, and teaching it once a year.

Accounting for the lack of nutrition education teaching in child care centers was the final research problem. When asked the best reason for not teaching nutrition education to young children ages 3-5, under half of the directors indicated that the children were not yet capable of understanding nutrition concepts (Table XIV). One-third of the directors felt that they did not have enough background to teach nutrition education. Under 20% indicated lack of time as a reason not to teach nutrition education. A large number of directors would not complete this question and wrote on the survey that there was no reason not to teach nutrition education to young children.

Twenty-eight directors (8.3%) indicated that they did not teach a learning unit on nutrition education (Table XIX). Almost half of these 28 directors expressed lack of time as their main reason for not teaching it. Over one-third listed lack of teaching material as the reason for not teaching nutrition education. Ninety-six percent of these directors would teach nutrition education if they received training. Most of them would like to receive training in their area of the state and nearly all would use

free nutrition education materials.

Conclusions

The Child Care Food Program encourages the teaching of nutrition education. Survey questions were answered more favorably toward nutrition education than the researcher had anticipated. A study similar to this study sponsored by another agency might perhaps obtain different findings.

Directors of Head Start centers are required to follow federal nutritional guidelines set by the Head Start Program to meet their child development component of health. This may account for the greater number of nutrition topics, activities, and teaching methods used in Head Start programs.

The director's level of education was significantly related to both the number of nutrition topics emphasized and whether nutrition education was taught. The director's experience in working with young chidlren was found to also be significantly related to whether nutrition education was taught at the center.

Caregivers are in the position to influence children's food preferences by example; however, these director's did not view themselves as being very influential. Child care center directors indicated an interest in teaching nutrition education. These directors responded positively to the survey and appear to be open to implementing nutrition education in child care centers.

Recommendations

This study dealt with quantity types of data. Future studies could

focus on the quality of nutrition education being taught in child care centers. Actual observation of nutrition education activities and interviews with the center staff could be utilized instead of the survey method of research.

Child care center directors have indicated an interest in teaching nutrition education. If nutrition education is important to the directors and the nutrition education knowledge of the directors could be improved, there might be more nutrition education taught in child care centers. It is recommended that workshops could be developed for child care centers which present nutrition education materials and ideas for implementing nutrition into the day care curriculum. Activities should be presented that would work well with younger children ages 3-5. These activities should be planned in terms of the children's mental and physical capabilities.

These directors believed parents had the most influence on children's food preferences. Nutrition education curriculum for child care centers should include ideas and information useful to the parents. It is recommended that child care centers involve parents in nutrition education via newsletters, meetings, activities, etc., so that the home may also serve as a good environment for learning good nutrition. It is recommended that all caregivers be educated on the importance of good nutrition and their position as a role model for nutritious eating habits.

The potential for instilling sound nutrition practices in young children has been recognized by a number of child care specialists resulting in a variety of efforts at nutrition education. Caregivers in child care centers are in the position to influence the quality and type of food available to the preschooler as well as the child's developing food preferences and subsequent acceptance of a variety of foods (Gillis & Sabry, 1980).

Young children can be guided to learn good nutrition habits and attitudes by positive experiences with nourishing foods during early childhood. Sound nutrition habits established very early in life will give children the basis for lifelong healthful eating patterns.

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APPENDICES

APPENDIX A

RESEARCH INSTRUMENT

Oklahoma State Department of Education

2500 North Lincoln Boulevard • Oklahoma City, Oklahoma 73105-4599

JOHN M. FOLKS
State Superintendent

TO: Child Care Center Director/Head Start Supervisor

FROM: Tom Freeman, Assistant Superintendent
Child Nutrition Programs Division

SUBJECT: Child Care Food Program Nutrition Education Survey

Child Care Food Program Consultant, Stephanie Curtis, is currently researching the extent nutrition education is being taught in child care centers participating in the Oklahoma Child Care Food Program. Your participation and cooperation are needed to reach this goal. Please complete and return the enclosed survey.

The Oklahoma State Department of Education will use the results from this survey to develop new nutrition education training materials specifically designed to be used in child care centers. Your responses are necessary to make the new Nutrition Education Training (NET) materials relevant.

The surveys are numbered for recording purposes only. Your answers will remain anonymous. The responses given on this survey will not affect the status of your center on the Child Care Food Program. This survey will take approximately 5 - 10 minutes to complete. Upon completion of the survey, please mail it to the Oklahoma State Department of Education, Child Nutrition Programs Division using the enclosed self-addressed envelope. To enhance our progress, please return the survey by August 22, 1988.

Results of this Child Care Food Program nutrition education survey are available upon request to the Oklahoma State Department of Education, Child Nutrition Programs Division.

Dedicated to growin and excellence

Oklahoma State Department of Education

Gerald E. Hoeltzel, State Superintendent of Public Instruction

TO: Child Care Center Director/Head Start Supervisor

FROM: Tom Freeman, Assistant Superintendent
Child Nutrition Programs Division

SUBJECT: Child Care Food Program Nutrition Education Survey

Child Care Food Program Consultant, Stephanie Curtis, is currently researching the extent nutrition education is being taught in child care centers participating in the Oklahoma Child Care Food Program. Your participation and cooperation are needed to reach this goal. Please complete and return the enclosed survey.

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The surveys are numbered for recording purposes only. Your answers will remain anonymous. The responses given on this survey will not affect the status of your center on the Child Care Food Program. This survey will take approximately 5 - 10 minutes to complete. Upon completion of the survey, please mail it to the Oklahoma State Department of Education, Child Nutrition Programs Division using the enclosed self-addressed envelope. To enhance our progress, please return the survey by October 7, 1988.

Results of this Child Care Food Program nutrition education survey are available upon request to the Oklahoma State Department of Education, Child Nutrition Programs Division.

2500 North Lincoln Boulevard Oklahoma City, Oklahoma 73105-4599

CHILD NUTRITION
A Partner in Education

CHILD CARE FOOD PROGRAM NUTRITION SURVEY

DIRECTIONS - This survey consists of a number of questions and statements which have no right or wrong answers and should be completed by the Director/ Supervisor of the center. Your personal opinion is needed. Carefully read each question or statement and decide what you think about it. Select the one answer that most accurately describes your situation for each question or statement and check the line to the left, unless instructed to check all that apply.

SECTION A - Demographics and Personal Questions Concerning Nutrition

[Questions 1 - 11 are personal questions included to see if and how they may be related to the professional questions that follow.]

1. Please mark the type of child care center where you are now teaching.
   ____ Title XX Center
   ____ Head Start Center
   ____ Non-profit Center (Church, Community Center, etc.)
   ____ Public Center (Vo-Tech, College, etc.)
2. What age group are you presently in?
   ____ below 21 years
   ____ 21 - 30 years
   ____ 31 - 40 years
   ____ 41 - 50 years
   ____ 50 years plus
3. What is your gender?
   ____ Male
   ____ Female
4. What is your highest level of education?
   ____ college graduate
   ____ C.D.A. Credential (Child Development Associate)
   ____ senior high school diploma
   ____ G.E.D. (General Education Development Certificate)
   ____ below 12th grade
5. How long have you been working with young children?
   ____ less than 1 year
   ____ 2 - 5 years
   ____ 6 - 9 years
   ____ 10 years or more
6. How long have you worked at the child care center where you are now employed?
   ____ less than 1 year
   ____ 2 - 5 years
   ____ 6 - 9 years
   ____ 10 years or more
7. How would you describe your weight?
   ____ underweight
   ____ just right for my body frame
   ____ could stand to lose a few pounds
   ____ overweight
8. When do you normally eat? (Check all that apply.)
   ____ only when I am hungry
   ____ at meal time
   ____ when I am tense or nervous
   ____ when I am alone
   ____ when I am depressed
   ____ to be sociable
9. How would you describe mealtime in <u>your own home</u>?
   ____ we eat together as a family at the table
   ____ we eat "on the run", which may or may not be at home
   ____ we eat in front of the television
   ____ we rarely eat at home
   ____ we eat out as a family

*Funded by the Oklahoma State Department of Education, Child Nutrition Programs Division, and the United States Department of Agriculture.

10. Describe your background in nutrition. (Check all that apply.)
_____ took a nutrition course in college
_____ studied nutrition in junior high or senior high school
_____ attended a Child Care Food Program workshop
_____ learned about nutrition on my own (i.e. reading, television)
_____ attended a nutrition class at a child care organizational meeting
_____ never studied nutrition

SECTION B - Professional Questions Regarding Nutrition Education

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11. How often do you sit at the table and eat meals with the children in your child care center?
_____ every day
_____ 3 - 4 times a week
_____ 1 - 2 times a week
_____ less than once per week

12. How would you describe mealtime in your center?
_____ pleasant and enjoyable
_____ a happy time with some discussion about nutrition
_____ quiet with no talking allowed
_____ usually chaotic and nerve-wracking

13. How often does your job include supervising in the dining area at mealtime?
_____ every day
_____ every other day
_____ at least once a week
_____ less than once a week
_____ never

14. Many child care center directors generally indicate that children eat one meal during the course of the day somewhere other than at the child care center. Which meals are most likely to be eaten elsewhere by the children at your center?
_____ breakfast
_____ lunch
_____ evening meal
_____ supplement

15. Would you consider the meals eaten elsewhere to be well-balanced and nutritious?
_____ yes
_____ no

[Questions 16 - 23 are questions which ask for <u>your own opinion</u>. There are no right or wrong answers.]

16. Which of the following factors has the <u>greatest</u> influence on a child's food preferences?
_____ parents
_____ caregivers
_____ other children
_____ programs designed to influence food habits
_____ television

17. When introducing children to new foods, it is best to
_____ offer the food once; if it is rejected, never serve it again
_____ offer the food several times to see if the children gradually learn to accept it
_____ offer the new food regularly, regardless of whether the children learn to like the food item

18. The offering of new foods to children, usually
_____ results in plate waste and money down-the-drain
_____ increases the child's acceptance of a wider variety of foods
_____ does not result in any noticeable change in children's eating habits

19. At what grade level do you think nutrition education should begin?
_____ ages 3 yrs - 5 yrs (preschool)
_____ in K-3 grades (elementary)
_____ in 4-6 grades (elementary)
_____ in junior high or middle schoo

20. Which of the following is the best reason for <u>not teaching</u> nutrition education to children ages 3 - 5 yrs (preschool)?
_____ the children are not yet capable of understanding nutrition concepts
_____ nutrition education has no place in the child care center
_____ I do not have enough time to teach it
_____ I do not have enough nutrition background to teach it

21. How do you feel about federally assisted child feeding programs (school breakfast, school lunch, child care food program, etc.)?
_____ almost all federal feeding programs are valuable to the people
_____ some of the federal feeding programs have merit; some do not
_____ few, if any, are valuable
_____ the federal government should not be involved in feeding programs

22. Here are some reasons for having a Child Care Food Program. How important is each? (Check one response for each reason.)

Very Important	Moderately Important	Not Important	Reasons
_____	_____	_____	A. A means of providing meals for the children of working parents.
_____	_____	_____	B. Financial funding to the center (reimbursement for meals and commodity foods)
_____	_____	_____	C. A means of meeting 2/3 of the child's daily dietary needs.
_____	_____	_____	D. To provide meals for economically deprived children.
_____	_____	_____	E. To help children form good food habits.
_____	_____	_____	F. To keep overall day care costs lower for the parents.

23. Do you teach a learning unit on nutrition in any of your classes?
_____ no
_____ yes

IF YOU ANSWERED "NO" TO QUESTION #23, SKIP TO QUESTION #30. IF YOU ANSWERED "YES", PLEASE CONTINUE.

24. How often do you teach nutrition education?
_____ it is part of our daily routine
_____ once a week
_____ once a month
_____ generally once a year

25. Which of the following do you use as your main source of nutrition information?
_____ textbooks
_____ pamphlets and newsletters
_____ Child Care Food Program Consultants and Workshops
_____ other government agencies
_____ my own experiences

26. Do you use the Nutrition Education Training (NET) curriculum guide supplied by the Oklahoma State Department of Education?
_____ yes
_____ no
_____ I do not have this nutrition guide

27. If you teach nutrition education in your center, into which of the following activities do you implement nutrition education (Check all that apply.)
_____ group time
_____ outside play
_____ self-selected activities
_____ stories
_____ dramatic play
_____ growing plants and seeds
_____ songs
_____ planning menus
_____ role playing
_____ field trips (to market, farm, etc.)
_____ ethnic foods and habit of other cultures
_____ art
_____ food preparation experiences
_____ skits, plays
_____ puppets
_____ food tasting parties
_____ setting the table
_____ cleaning up after meals
_____ feeding classroom pets
_____ films, filmstrips, etc.

28. Which of the following nutrition topics do you emphasize in teaching nutrition education? (Check all that apply.)
_____ source of food
_____ individual food differences
_____ eating a well-balanced diet
_____ sources of nutrients
_____ how food is digested
_____ cultural food patterns
_____ making food choices
_____ importance of a good breakfast
_____ ways nutrients affect the body
_____ positive results of good nutrition strong bones, good complexion, etc.)

29. Listed below are various methods of teaching nutrition education. Reflecting back on your teaching, check one blank for each method.

Successful	Unsuccessful	Have Not Tried	Method
____	____	____	A. Testing new and unfamiliar foods
____	____	____	B. Learning and identifying new foods
____	____	____	C. Using food models or pictures
____	____	____	D. Encouraging children to taste all food at mealtime
____	____	____	E. Discussing the food children are having at mealtime
____	____	____	F. Classifying food into the four basic groups
____	____	____	G. Naming food sources of Vitamin A and Vitamin C
____	____	____	H. Going on field trips
____	____	____	I. Planting vegetables and seeds
____	____	____	J. Having a "two bite" club
____	____	____	K. Studying food habits of other cultures
____	____	____	L. Using resource people to tell about nutrition
____	____	____	M. Showing film and filmstrips
____	____	____	N. Discussing weight and height of the children
____	____	____	O. Discussing how various foods are needed for growth of the body

Thank you for completing this survey. Your time is appreciated and will provide valuable information for future development of nutrition education in the Child Care Food Program.

ANSWER THESE QUESTIONS **ONLY** IF YOU ANSWERED "NO" TO QUESTION #23.

30. Which of the following is the best reason you have for not teaching nutrition education?
    _____ lack of finances
    _____ lack of nutrition knowledge
    _____ lack of time
    _____ it is not an important subject
    _____ lack of suitable nutrition teaching materials

31. Would you teach nutrition education if you received training?
    _____ yes
    _____ no

32. Where would you like to receive nutrition education training?
    _____ at my child care center
    _____ attend a workshop in my area
    _____ attend a workshop in Oklahoma City or Tulsa

33. If you received free nutrition education teaching materials, would you use them?
    _____ yes
    _____ no

34. If you do not feel comfortable teaching nutrition education, would you be interested in having a resource person speak to the children at your child care center about nutrition?
    _____ yes
    _____ no

Thank you for completing this survey. Your time is appreciated and will provide valuable information for future development of nutrition education in the Child Care Food Program.

APPENDIX B

CODED INSTRUMENT AND

TABULAR INFORMATION

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A Partner in Education

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   - 4 41 - 50 years
   - 5 50 years plus
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   - 1 Male
   - 2 Female
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   - 1 college graduate
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7. How would you describe your weight?
   - 1 underweight
   - 2 just right for my body frame
   - 3 could stand to lose a few pounds
   - 4 overweight

Total Number Checked Given On Table.

8. When do you normally eat? (Check all that apply.)
   - ____ only when I am hungry
   - ____ at meal time
   - ____ when I am tense or nervous
   - ____ when I am alone
   - ____ when I am depressed
   - ____ to be sociable
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2 lunch
3 evening meal
4 supplement

15. Would you consider the meals eaten elsewhere to be well-balanced and nutritious?
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2 no

[Questions 16 - 23 are questions which ask for <u>your own opinion</u>. There are no right or wrong answers.]

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3	2	1	B. Financial funding to the center (reimbursement for meals and commodity foods)
3	2	1	C. A means of meeting 2/3 of the child's daily dietary needs.
3	2	1	D. To provide meals for economically deprived children.
3	2	1	E. To help children form good food habits.
3	2	1	F. To keep overall day care costs lower for the parents.

23. Do you teach a learning unit on nutrition in any of your classes?
   1 no
   2 yes

IF YOU ANSWERED "NO" TO QUESTION #23, SKIP TO QUESTION #30. IF YOU ANSWERED "YES", PLEASE CONTINUE.

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   4 other government agencies
   5 my own experiences

26. Do you use the Nutrition Education Training (NET) curriculum guide supplied by the Oklahoma State Department of Education?
   1 yes
   2 no
   3 I do not have this nutrition guide

Total Number Checked Given On Table.

27. If you teach nutrition education in your center, into which of the following activities do you implement nutrition education (Check all that apply.)
   ____ group time
   ____ outside play
   ____ self-selected activities
   ____ stories
   ____ dramatic play
   ____ growing plants and seeds
   ____ songs
   ____ planning menus
   ____ role playing
   ____ field trips (to market, farm, etc.)
   ____ ethnic foods and habit of other cultures
   ____ art
   ____ food preparation experiences
   ____ skits, plays
   ____ puppets
   ____ food tasting parties
   ____ setting the table
   ____ cleaning up after meals
   ____ feeding classroom pets
   ____ films, filmstrips, etc.

Total Number Checked Given On Table.

28. Which of the following nutrition topics do you emphasize in teaching nutrition education? (Check all that apply.)
   ____ source of food
   ____ individual food differences
   ____ eating a well-balanced diet
   ____ sources of nutrients
   ____ how food is digested
   ____ cultural food patterns
   ____ making food choices
   ____ importance of a good breakfast
   ____ ways nutrients affect the body
   ____ positive results of good nutrition strong bones, good complexion, etc.)

29. Listed below are various methods of teaching nutrition education. Reflecting back on your teaching, check one blank for each method.

Successful	Unsuccessful	Have Not Tried	Method
3	2	1	A. Testing new and unfamiliar foods
3	2	1	B. Learning and identifying new foods
3	2	1	C. Using food models or pictures
3	2	1	D. Encouraging children to taste all food at mealtime
3	2	1	E. Discussing the food children are having at mealtime
3	2	1	F. Classifying food into the four basic groups
3	2	1	G. Naming food sources of Vitamin A and Vitamin C
3	2	1	H. Going on field trips
3	2	1	I. Planting vegetables and seeds
3	2	1	J. Having a "two bite" club
3	2	1	K. Studying food habits of other cultures
3	2	1	L. Using resource people to tell about nutrition
3	2	1	M. Showing film and filmstrips
3	2	1	N. Discussing weight and height of the children
3	2	1	O. Discussing how various foods are needed for growth of the body

---

Thank you for completing this survey. Your time is appreciated and will provide valuable information for future development of nutrition education in the Child Care Food Program.

ANSWER THESE QUESTIONS **ONLY** IF YOU ANSWERED "NO" TO QUESTION #23.

30. Which of the following is the best reason you have for not teaching nutrition education?
    - 1 lack of finances
    - 2 lack of nutrition knowledge
    - 3 lack of time
    - 4 it is not an important subject
    - 5 lack of suitable nutrition teaching materials

31. Would you teach nutrition education if you received training?
    - 1 yes
    - 2 no

32. Where would you like to receive nutrition education training?
    - 1 at my child care center
    - 2 attend a workshop in my area
    - 3 attend a workshop in Oklahoma City or Tulsa

33. If you received free nutrition education teaching materials, would you use them?
    - 1 yes
    - 2 no

34. If you do not feel comfortable teaching nutrition education, would you be interested in having a resource person speak to the children at your child care center about nutrition?
    - 1 yes
    - 2 no

Thank you for completing this survey. Your time is appreciated and will provide valuable information for future development of nutrition education in the Child Care Food Program.

TABLE XX

CROSSTABULATION OF CHILD CARE CENTER DIRECTORS' PRESENT AGE GROUP BY CENTER TYPE

Q1	COUNT / ROW PCT / COL PCT / TOT PCT	BELOW 21 (1)	21-30 (2)	31-40 (3)	41-50 (4)	50 + (5)	ROW TOTAL
TITLE XX	1	18	18	37	23	18	114
		15.8	15.8	32.5	20.2	15.8	33.8
		41.9	37.5	30.8	33.8	31.0	
		5.3	5.3	11.0	6.8	5.3	
HEAD START	2	20	18	58	31	35	162
		12.3	11.1	35.8	19.1	21.6	48.1
		46.5	37.5	48.3	45.6	60.3	
		5.9	5.3	17.2	9.2	10.4	
NON-PROFIT	3	3	10	22	13	5	53
		5.7	18.9	41.5	24.5	9.4	15.7
		7.0	20.8	18.3	19.1	8.6	
		.9	3.0	6.5	3.9	1.5	
PUBLIC	4	2	2	3	1		8
		25.0	25.0	37.5	12.5		2.4
		4.7	4.2	2.5	1.5		
		.6	.6	.9	.3		
COLUMN TOTAL		43	48	120	68	58	337
		12.8	14.2	35.6	20.2	17.2	100.0

NUMBER OF MISSING OBSERVATIONS = 5

TABLE XXI

CROSSTABULATION OF CHILD CARE CENTER DIRECTORS' GENDER BY CENTER TYPE

Q1	COUNT / ROW PCT / COL PCT / TOT PCT	MALE	FEMALE			ROW TOTAL
		1	2	3	4	
1 TITLE XX		5	107	1		~~113~~ 112
	ROW PCT	4.4	94.7	.9		33.6
	COL PCT	62.5	32.8	100.0		
	TOT PCT	1.5	31.8	.3		
2 HEAD START		2	160		1	~~168~~ 160
	ROW PCT	1.2	98.2		.6	48.5
	COL PCT	25.0	49.1		100.0	
	TOT PCT	.6	47.6		.3	
3 NON-PROFIT		1	51			52
	ROW PCT	1.9	98.1			15.5
	COL PCT	12.5	15.6			
	TOT PCT	.3	15.2			
4 PUBLIC			8			8
	ROW PCT		100.0			2.4
	COL PCT		2.5			
	TOT PCT		2.4			
COLUMN TOTAL		8	326	1	1	336
		2.4	97.0 ~~96~~	.3	.3	100.0

NUMBER OF MISSING OBSERVATIONS = ~~89~~

TABLE XXII

CROSSTABULATION OF CHILD CARE CENTER DIRECTORS' HIGHEST LEVEL OF EDUCATION BY CENTER TYPE

Q1	COUNT / ROW PCT / COL PCT / TOT PCT	COLLEGE GRAD (1)	CDA (2)	HS GRAD (3)	GED (4)	ROW TOTAL
1 TITLE XX	1	35	12	50	18	115
		30.4	10.4	43.5	15.7	33.8
		35.7	11.3	45.9	66.7	
		10.3	3.5	14.7	5.3	
2 HEAD START	2	36	90	32	6	164
		22.0	54.9	19.5	3.7	48.2
		36.7	84.9	29.4	22.2	
		10.6	26.5	9.4	1.8	
3 NON-PROFIT	3	21	3	26	3	53
		39.6	5.7	49.1	5.7	15.6
		21.4	2.8	23.9	11.1	
		6.2	.9	7.6	.9	
4 PUBLIC	4	6	1	1		8
		75.0	12.5	12.5		2.4
		6.1	.9	.9		
		1.8	.3	.3		
	COLUMN TOTAL	98	106	109	27	340
		28.8	31.2	32.1	7.9	100.0

NUMBER OF MISSING OBSERVATIONS = 2

TABLE XXIII

CROSSTABULATION OF CHILD CARE CENTER DIRECTORS' LENGTH OF TIME WORKING WITH YOUNG CHILDREN

Q1		< 1 (1)	2-5 (2)	6-9 (3)	10 + (4)	ROW TOTAL
TITLE XX	1	2	22	24	67	115
	ROW PCT	1.7	19.1	20.9	58.3	33.7
	COL PCT	40.0	35.5	28.2	35.4	
	TOT PCT	.6	6.5	7.0	19.6	
HEAD START	2	2	31	44	88	165
	ROW PCT	1.2	18.8	26.7	53.3	48.4
	COL PCT	40.0	50.0	51.8	46.6	
	TOT PCT	.6	9.1	12.9	25.8	
NON-PROFIT	3	1	8	14	30	53
	ROW PCT	1.9	15.1	26.4	56.6	15.5
	COL PCT	20.0	12.9	16.5	15.9	
	TOT PCT	.3	2.3	4.1	8.8	
PUBLIC	4		1	3	4	8
	ROW PCT		12.5	37.5	50.0	2.3
	COL PCT		1.6	3.5	2.1	
	TOT PCT		.3	.9	1.2	
COLUMN TOTAL		5	62	85	189	341
		1.5	18.2	24.9	55.4	100.0

NUMBER OF MISSING OBSERVATIONS = 1

TABLE XXIV

CROSSTABULATION OF DIRECTORS' LENGTH OF EMPLOYMENT AT CURRENT CHILD CARE CENTER

Q1		< 1 (1)	2-5 (2)	6-9 (3)	10 + (4)	ROW TOTAL
TITLE XX	1	14	54	21	27	116
		12.1	46.6	18.1	23.3	34.1
		41.2	40.9	29.2	26.5	
		4.1	15.9	6.2	7.9	
HEAD START	2	11	59	32	61	163
		6.7	36.2	19.6	37.4	47.9
		32.4	44.7	44.4	59.8	
		3.2	17.4	9.4	17.9	
NON-PROFIT	3	8	18	14	13	53
		15.1	34.0	26.4	24.5	15.6
		23.5	13.6	19.4	12.7	
		2.4	5.3	4.1	3.8	
PUBLIC	4	1	1	5	1	8
		12.5	12.5	62.5	12.5	2.4
		2.9	.8	6.9	1.0	
		.3	.3	1.5	.3	
COLUMN TOTAL		34	132	72	102	340
		10.0	38.8	21.2	30.0	100.0

NUMBER OF MISSING OBSERVATIONS = 2

TABLE XXV

CROSSTABULATION OF CHILD CARE CENTER DIRECTORS' DESCRIPTION OF OWN WEIGHT

	COUNT / ROW PCT / COL PCT / TOT PCT	UNDERWEIGHT 1	JUST RIGHT 2	COULD LOSE WEIGHT 3	OVERWEIGHT 4	ROW TOTAL
TITLE XX	1	40	48	25	113	
		35.4	42.5	22.1	33.3	
		40.4	30.2	32.5		
		11.8	14.2	7.4		
HEAD START	2	3	47	84	31	165
		1.8	28.5	50.9	18.8	48.7
		75.0	47.5	52.8	40.3	
		.9	13.9	24.8	9.1	
NON-PROFIT	3	1	8	27	17	53
		1.9	15.1	50.9	32.1	15.6
		25.0	8.1	17.0	22.1	
		.3	2.4	8.0	5.0	
PUBLIC	4		4		4	8
			50.0		50.0	2.4
			4.0		5.2	
			1.2		1.2	
COLUMN TOTAL		4	99	159	77	339
		1.2	29.2	46.9	22.7	100.0

NUMBER OF MISSING OBSERVATIONS = 3

TABLE XXVI

NUMBER OF TIMES CHECKED WHEN DIRECTORS NORMALLY EAT

		1	2	3	4	5	6	ROW TOTAL
TITLE XX	1	73	29	4	3	2	2	113
		64.6	25.7	3.5	2.7	1.8	1.8	33.7
		33.0	43.3	15.4	27.3	33.3	50.0	
		21.8	8.7	1.2	.9	.6	.6	
HEAD START	2	114	24	11	6	4	2	161
		70.8	14.9	6.8	3.7	2.5	1.2	48.1
		51.6	35.8	42.3	54.5	66.7	50.0	
		34.0	7.2	3.3	1.8	1.2	.6	
NON-PROFIT	3	30	10	11	2			53
		56.6	18.9	20.8	3.8			15.8
		13.6	14.9	42.3	18.2			
		9.0	3.0	3.3	.6			
PUBLIC	4	4	4					8
		50.0	50.0					2.4
		1.8	6.0					
		1.2	1.2					
COLUMN TOTAL		221	67	26	11	6	4	335
		66.0	20.0	7.8	3.3	1.8	1.2	100.0

NUMBER OF MISSING OBSERVATIONS = 7

TABLE XXVII

CROSSTABULATION OF DIRECTORS' DESCRIPTION OF MEALTIME IN THEIR OWN HOME

		TOGETHER ON THE R AT TABL UN 1	IN FRONT OF TV 2	RARELY E AT AT HO 3	EAT OUT AS FAMIL 4	5	ROW TOTAL
TITLE XX	1	62	26	12	5	8	113
		54.9	23.0	10.6	4.4	7.1	33.5
		30.5	42.6	27.3	50.0	42.1	
		18.4	7.7	3.6	1.5	2.4	
HEAD START	2	106	28	20	2	7	163
		65.0	17.2	12.3	1.2	4.3	48.4
		52.2	45.9	45.5	20.0	36.8	
		31.5	8.3	5.9	.6	2.1	
NON-PROFIT	3	29	6	11	3	4	53
		54.7	11.3	20.8	5.7	7.5	15.7
		14.3	9.8	25.0	30.0	21.1	
		8.6	1.8	3.3	.9	1.2	
PUBLIC	4	6	1	1			8
		75.0	12.5	12.5			2.4
		3.0	1.6	2.3			
		1.8	.3	.3			
COLUMN TOTAL		203	61	44	10	19	337
		60.2	18.1	13.1	3.0	5.6	100.0

NUMBER OF MISSING OBSERVATIONS = 5

TABLE XXVIII

NUMBER OF ITEMS CHECKED BY DIRECTORS CONCERNING BACKGROUND IN NUTRITION

	COUNT / ROW PCT / COL PCT / TOT PCT	1	2	3	4	5	6	ROW TOTAL
TITLE XX	1	17	29	33	26	6		111
		15.3	26.1	29.7	23.4	5.4		33.2
		25.4	37.7	35.9	42.6	16.7		
		5.1	8.7	9.9	7.8	1.8		
HEAD START	2	36	36	41	25	24		162
		22.2	22.2	25.3	15.4	14.8		48.5
		53.7	46.8	44.6	41.0	66.7		
		10.8	10.8	12.3	7.5	7.2		
NON-PROFIT	3	12	11	18	9	3		53
		22.6	20.8	34.0	17.0	5.7		15.9
		17.9	14.3	19.6	14.8	8.3		
		3.6	3.3	5.4	2.7	.9		
PUBLIC	4	2	1		1	3	1	8
		25.0	12.5		12.5	37.5	12.5	2.4
		3.0	1.3		1.6	8.3	100.0	
		.6	.3		.3	.9	.3	
COLUMN TOTAL		67	77	92	61	36	1	334
		20.1	23.1	27.5	18.3	10.8	.3	100.0

NUMBER OF MISSING OBSERVATIONS = 8

TABLE XXIX

CROSSTABULATION OF WHEN DIRECTOR SITS AND EATS MEALS WITH THE CHILDREN IN THE CHILD CARE CENTER

		EVERYDAY	3-4 TIME S/WEEK	1-2 TIME S/WEEK	< ONCE/WEEK	ROW TOTAL
		1	2	3	4	
TITLE XX	1	48	18	18	31	115
		41.7	15.7	15.7	27.0	33.9
		22.2	62.1	46.2	56.4	
		14.2	5.3	5.3	9.1	
HEAD START	2	146	5	6	6	163
		89.6	3.1	3.7	3.7	48.1
		67.6	17.2	15.4	10.9	
		43.1	1.5	1.8	1.8	
NON-PROFIT	3	19	6	12	16	53
		35.8	11.3	22.6	30.2	15.6
		8.8	20.7	30.8	29.1	
		5.6	1.8	3.5	4.7	
PUBLIC	4	3		3	2	8
		37.5		37.5	25.0	2.4
		1.4		7.7	3.6	
		.9		.9	.6	
COLUMN TOTAL		216	29	39	55	339
		63.7	8.6	11.5	16.2	100.0

NUMBER OF MISSING OBSERVATIONS = 3

TABLE XXX

CROSSTABULATION OF DIRECTORS' DESCRIPTION OF MEALTIME ATMOSPHERE IN THE CHILD CARE CENTER

	COUNT / ROW PCT / COL PCT / TOT PCT	PLEASANT HAPPY & ENJOY ME (1)	QUIET/NO TALKING (2)	CHAOTIC (3)	(4)	ROW TOTAL
TITLE XX	1	60	41	3	8	112
		53.6	36.6	2.7	7.1	33.3
		38.0	26.5	42.9	50.0	
		17.9	12.2	.9	2.4	
HEAD START	2	63	93	2	5	163
		38.7	57.1	1.2	3.1	48.5
		39.9	60.0	28.6	31.3	
		18.8	27.7	.6	1.5	
NON-PROFIT	3	30	18	2	3	53
		56.6	34.0	3.8	5.7	15.8
		19.0	11.6	28.6	18.8	
		8.9	5.4	.6	.9	
PUBLIC	4	5	3			8
		62.5	37.5			2.4
		3.2	1.9			
		1.5	.9			
COLUMN TOTAL		158	155	7	16	336
		47.0	46.1	2.1	4.8	100.0

NUMBER OF MISSING OBSERVATIONS = 6

TABLE XXXI

CROSSTABULATION OF WHEN DIRECTOR SUPERVISES IN THE DINING AREA AT MEALTIME

	COUNT / ROW PCT / COL PCT / TOT PCT	EVERY DAY 1	EVERY OTHER DAY 2	ONCE/WEEK 3	< ONCE/WEEK 4	NEVER 5	ROW TOTAL
TITLE XX	1	84	5	12	10	4	115
		73.0	4.3	10.4	8.7	3.5	34.3
		31.8	50.0	57.1	37.0	30.8	
		25.1	1.5	3.6	3.0	1.2	
HEAD START	2	147	3	3	5	3	161
		91.3	1.9	1.9	3.1	1.9	48.1
		55.7	30.0	14.3	18.5	23.1	
		43.9	.9	.9	1.5	.9	
NON-PROFIT	3	29	2	5	10	5	51
		56.9	3.9	9.8	19.6	9.8	15.2
		11.0	20.0	23.8	37.0	38.5	
		8.7	.6	1.5	3.0	1.5	
PUBLIC	4	4		1	2	1	8
		50.0		12.5	25.0	12.5	2.4
		1.5		4.8	7.4	7.7	
		1.2		.3	.6	.3	
COLUMN TOTAL		264	10	21	27	13	335
		78.8	3.0	6.3	8.1	3.9	100.0

NUMBER OF MISSING OBSERVATIONS = 7

TABLE XXXII

MEALS MOST LIKELY EATEN OUTSIDE OF THE CHILD CARE CENTER

		BREAKFAST	LUNCH	EVENING MEAL	SUPPLEMENT	ROW TOTAL
	1	11	2	95	3	111
TITLE XX		9.9	1.8	85.6	2.7	33.7
		42.3	20.0	34.4	17.6	
		3.3	.6	28.9	.9	
	2	7	5	134	13	159
HEAD START		4.4	3.1	84.3	8.2	48.3
		26.9	50.0	48.6	76.5	
		2.1	1.5	40.7	4.0	
	3	8	3	40		51
NON-PROFIT		15.7	5.9	78.4		15.5
		30.8	30.0	14.5		
		2.4	.9	12.2		
	4			7	1	8
PUBLIC				87.5	12.5	2.4
				2.5	5.9	
				2.1	.3	
COLUMN TOTAL		26	10	276	17	329
		7.9	3.0	83.9	5.2	100.0

NUMBER OF MISSING OBSERVATIONS = 13

TABLE XXXIII

DIRECTORS' PERCEPTION OF WHETHER MEALS EATEN OUTSIDE THE CHILD CARE CENTER ARE NUTRITIOUS

	COUNT / ROW PCT / COL PCT / TOT PCT	YES	NO			ROW TOTAL
		1	2	3		
TITLE XX	1	29	76	2		107
		27.1	71.0	1.9		35.7
		27.1	40.2	50.0		
		9.7	25.3	.7		
HEAD START	2	57	85	1		143
		39.9	59.4	.7		47.7
		53.3	45.0	25.0		
		19.0	28.3	.3		
NON-PROFIT	3	20	24	1		45
		44.4	53.3	2.2		15.0
		18.7	12.7	25.0		
		6.7	8.0	.3		
PUBLIC	4	1	4			5
		20.0	80.0			1.7
		.9	2.1			
		.3	1.3			
COLUMN TOTAL		107	189	4		300
		35.7	63.0	1.3		100.0

NUMBER OF MISSING OBSERVATIONS = 42

TABLE XXXIV

DIRECTORS' OPINION OF THE GREATEST INFLUENCE ON A CHILD'S FOOD PREFERENCES

		PARENTS	CAREGIVERS	OTHER CHILDREN	PROGRAMS	TV	ROW TOTAL
	1	45	20	22	9	19	115
TITLE XX		39.1	17.4	19.1	7.8	16.5	34.1
		29.4	41.7	43.1	33.3	32.8	
		13.4	5.9	6.5	2.7	5.6	
	2	80	21	19	16	26	162
HEAD START		49.4	13.0	11.7	9.9	16.0	48.1
		52.3	43.8	37.3	59.3	44.8	
		23.7	6.2	5.6	4.7	7.7	
	3	23	6	8	2	13	52
NON-PROFIT		44.2	11.5	15.4	3.8	25.0	15.4
		15.0	12.5	15.7	7.4	22.4	
		6.8	1.8	2.4	.6	3.9	
	4	5	1	2			8
PUBLIC		62.5	12.5	25.0			2.4
		3.3	2.1	3.9			
		1.5	.3	.6			
COLUMN TOTAL		153	48	51	27	58	337
		45.4	14.2	15.1	8.0	17.2	100.0

NUMBER OF MISSING OBSERVATIONS = 5

TABLE XXXV

CROSSTABULATION OF PROCEDURES USED BY DIRECTORS TO INTRODUCE NEW FOODS TO CHILDREN

	COUNT / ROW PCT / COL PCT / TOT PCT	OFFER ON ICE (1)	OFFER SEVERAL TIMES (2)	OFFER REGULARLY (3)	ROW TOTAL
TITLE XX	1	2	103	11	116
		1.7	88.8	9.5	34.2
		40.0	35.5	25.0	
		.6	30.4	3.2	
HEAD START	2	2	131	29	162
		1.2	80.9	17.9	47.8
		40.0	45.2	65.9	
		.6	38.6	8.6	
NON-PROFIT	3	1	49	3	53
		1.9	92.5	5.7	15.6
		20.0	16.9	6.8	
		.3	14.5	.9	
PUBLIC	4		7	1	8
			87.5	12.5	2.4
			2.4	2.3	
			2.1	.3	
COLUMN TOTAL		5	290	44	339
		1.5	85.5	13.0	100.0

NUMBER OF MISSING OBSERVATIONS = 3

TABLE XXXVI

DIRECTORS' PERCEIVED RESULTS OF OFFERING NEW FOODS TO CHILDREN

		INCREASE ACCEPTANCE	NO CHANGE	ROW TOTAL
TITLE XX	1	6	96	14	116
		5.2	82.8	12.1	34.5
		37.5	32.2	63.6	
		1.8	28.6	4.2	
HEAD START	2	3	153	5	161
		1.9	95.0	3.1	47.9
		18.8	51.3	22.7	
		.9	45.5	1.5	
NON-PROFIT	3	7	41	3	51
		13.7	80.4	5.9	15.2
		43.8	13.8	13.6	
		2.1	12.2	.9	
PUBLIC	4		8		8
			100.0		2.4
			2.7		
			2.4		
COLUMN TOTAL		16	298	22	336
		4.8	88.7	6.5	100.0

NUMBER OF MISSING OBSERVATIONS = 6

TABLE XXXVII

DIRECTORS' PERCEIVED GRADE LEVEL OF WHEN NUTRITION EDUCATION SHOULD BEGIN

Q1		1 3-5 YRS	2 K-3 GRAD ES	3 4-6 GRAD ES	4 JR HI	ROW TOTAL
TITLE XX	1	100	13	3		116
		86.2	11.2	2.6		34.2
		31.8	76.5	50.0		
		29.5	3.8	.9		
HEAD START	2	160	1	1	1	163
		98.2	.6	.6	.6	48.1
		51.0	5.9	16.7	50.0	
		47.2	.3	.3	.3	
NON-PROFIT	3	47	3	2		52
		90.4	5.8	3.8		15.3
		15.0	17.6	33.3		
		13.9	.9	.6		
PUBLIC	4	7			1	8
		87.5			12.5	2.4
		2.2			50.0	
		2.1			.3	
COLUMN TOTAL		314	17	6	2	339
		92.6	5.0	1.8	.6	100.0

NUMBER OF MISSING OBSERVATIONS = 3

TABLE XXXVIII

DIRECTORS' PERCEIVED BEST REASON FOR NOT TEACHING NUTRITION EDUCATION TO CHILDREN AGES 3-5 YEARS (PRESCHOOLERS)

Q1	COUNT / ROW PCT / COL PCT / TOT PCT	1 I CAN'T UNDERSTAND	2 NO PLACE IN CENT	3 NOT ENOUGH TIME	4 NO BACKGROUND	ROW TOTAL
1 TITLE XX	COUNT	34		17	21	72
	ROW PCT	47.2		23.6	29.2	35.8
	COL PCT	37.0		47.2	30.0	
	TOT PCT	16.9		8.5	10.4	
2 HEAD START	COUNT	48	1	10	31	90
	ROW PCT	53.3	1.1	11.1	34.4	44.8
	COL PCT	52.2	33.3	27.8	44.3	
	TOT PCT	23.9	.5	5.0	15.4	
3 NON-PROFIT	COUNT	9	2	8	17	36
	ROW PCT	25.0	5.6	22.2	47.2	17.9
	COL PCT	9.8	66.7	22.2	24.3	
	TOT PCT	4.5	1.0	4.0	8.5	
4 PUBLIC	COUNT	1		1	1	3
	ROW PCT	33.3		33.3	33.3	1.5
	COL PCT	1.1		2.8	1.4	
	TOT PCT	.5		.5	.5	
COLUMN TOTAL		92 / 45.8	3 / 1.5	36 / 17.9	70 / 34.8	201 / 100.0

NUMBER OF MISSING OBSERVATIONS = 141

TABLE XXXIX

DIRECTORS' OPINIONS OF FEDERALLY ASSISTED CHILD FEEDING PROGRAMS

Q1	COUNT / ROW PCT / COL PCT / TOT PCT	1 ALL VALUABLE	2 SOME VALUABLE	3 FEW, IF ANY	4 NO INVOLVEMENT	ROW TOTAL
1 TITLE XX		104	10		1	115
		90.4	8.7		.9	33.9
		34.6	29.4		50.0	
		30.7	2.9		.3	
2 HEAD START		148	12	2	1	163
		90.8	7.4	1.2	.6	48.1
		49.2	35.3	100.0	50.0	
		43.7	3.5	.6	.3	
3 NON-PROFIT		43	10			53
		81.1	18.9			15.6
		14.3	29.4			
		12.7	2.9			
4 PUBLIC		6	2			8
		75.0	25.0			2.4
		2.0	5.9			
		1.8	.6			
COLUMN TOTAL		301	34	2	2	339
		88.8	10.0	.6	.6	100.0

NUMBER OF MISSING OBSERVATIONS = 3

TABLE XXXX

REASONS FOR HAVING A CCFP-PROVIDING MEALS FOR CHILDREN OF WORKING PARENTS

		Q22P1				
	COUNT					
	ROW PCT	NOT IMPO	MOD IMPO	VERY IMP		ROW
	COL PCT	RTANT	RTANT	ORTANT		TOTAL
	TOT PCT	1	2	3	8	
Q1						
	1	1	22	91		114
TITLE XX		.9	19.3	79.8		33.5
		11.1	27.2	36.5		
		.3	6.5	26.8		
	2	7	53	104	1	165
HEAD START		4.2	32.1	63.0	.6	48.5
		77.8	65.4	41.8	100.0	
		2.1	15.6	30.6	.3	
	3		6	47		53
NON-PROFIT			11.3	88.7		15.6
			7.4	18.9		
			1.8	13.8		
	4	1		7		8
PUBLIC		12.5		87.5		2.4
		11.1		2.8		
		.3		2.1		
COLUMN TOTAL		9 2.6	81 23.8	249 73.2	1 .3	340 100.0

NUMBER OF MISSING OBSERVATIONS = 2

TABLE XXXXI

REASONS FOR HAVING A CCFP-PROVIDE FINANCIAL FUNDING TO CENTER

Q1		Q22P2 NOT IMPORTANT (1)	MOD IMPORTANT (2)	VERY IMPORTANT (3)	ROW TOTAL
TITLE XX	1	1	29	83	113
		.9	25.7	73.5	33.5
		14.3	37.2	32.9	
		.3	8.6	24.6	
HEAD START	2	4	33	127	164
		2.4	20.1	77.4	48.7
		57.1	42.3	50.4	
		1.2	9.8	37.7	
NON-PROFIT	3	1	13	38	52
		1.9	25.0	73.1	15.4
		14.3	16.7	15.1	
		.3	3.9	11.3	
PUBLIC	4	1	3	4	8
		12.5	37.5	50.0	2.4
		14.3	3.8	1.6	
		.3	.9	1.2	
COLUMN TOTAL		7	78	252	337
		2.1	23.1	74.8	100.0

NUMBER OF MISSING OBSERVATIONS = 5

TABLE XXXXII

REASONS FOR HAVING A CCFP-MEETS 2/3 OF CHILD'S DAILY DIETARY NEEDS

Q1		Q22P3 1 NOT IMPORTANT	Q22P3 2 MOD IMPORTANT	Q22P3 3 VERY IMPORTANT	ROW TOTAL
TITLE XX	1		5	109	114
	ROW PCT		4.4	95.6	33.6
	COL PCT		41.7	33.4	
	TOT PCT		1.5	32.2	
HEAD START	2		3	161	164
	ROW PCT		1.8	98.2	48.4
	COL PCT		25.0	49.4	
	TOT PCT		.9	47.5	
NON-PROFIT	3	1	2	50	53
	ROW PCT	1.9	3.8	94.3	15.6
	COL PCT	100.0	16.7	15.3	
	TOT PCT	.3	.6	14.7	
PUBLIC	4		2	6	8
	ROW PCT		25.0	75.0	2.4
	COL PCT		16.7	1.8	
	TOT PCT		.6	1.8	
	COLUMN TOTAL	1 .3	12 3.5	326 96.2	339 100.0

NUMBER OF MISSING OBSERVATIONS = 3

TABLE XXXXIII

REASONS FOR HAVING A CCFP-PROVIDES MEALS FOR ECONOMICALLY DEPRIVED CHILDREN

		Q22P4			
	COUNT / ROW PCT / COL PCT / TOT PCT	NOT IMPORTANT 1	MOD IMPORTANT 2	VERY IMPORTANT 3	ROW TOTAL
Q1					
TITLE XX	1	1 .9 50.0 .3	3 2.6 33.3 .9	110 96.5 33.4 32.4	114 33.5
HEAD START	2	0 0 0 0	2 1.2 22.2 .6	163 98.8 49.5 47.9	165 48.5
NON-PROFIT	3	1 1.9 50.0 .3	2 3.8 22.2 .6	50 94.3 15.2 14.7	53 15.6
PUBLIC	4	0 0 0 0	2 25.0 22.2 .6	6 75.0 1.8 1.8	8 2.4
	COLUMN TOTAL	2 .6	9 2.6	329 96.8	340 100.0

NUMBER OF MISSING OBSERVATIONS = 2

TABLE XXXXIV

REASONS FOR HAVING A CCFP-HELP CHILDREN FORM GOOD FOOD HABITS

Q1		Q22P5 1 NOT IMPORTANT	2 MOD IMPORTANT	3 VERY IMPORTANT	ROW TOTAL
TITLE XX	1		15	100	115
			13.0	87.0	33.8
			50.0	32.4	
			4.4	29.4	
HEAD START	2		10	154	164
			6.1	93.9	48.2
			33.3	49.8	
			2.9	45.3	
NON-PROFIT	3	1	5	47	53
		1.9	9.4	88.7	15.6
		100.0	16.7	15.2	
		.3	1.5	13.8	
PUBLIC	4			8	8
				100.0	2.4
				2.6	
				2.4	
COLUMN TOTAL		1	30	309	340
		.3	8.8	90.9	100.0

NUMBER OF MISSING OBSERVATIONS = 2

TABLE XXXXV

REASONS FOR HAVING A CCFP-KEEP OVERALL DAY CARE COSTS LOWER FOR THE PARENTS

Q1		Q22P6 1 NOT IMPORTANT	2 MOD IMPORTANT	3 VERY IMPORTANT	ROW TOTAL
TITLE XX	1	10	21	81	112
	ROW PCT	8.9	18.8	72.3	33.8
	COL PCT	25.6	25.3	38.8	
	TOT PCT	3.0	6.3	24.5	
HEAD START	2	26	48	85	159
	ROW PCT	16.4	30.2	53.5	48.0
	COL PCT	66.7	57.8	40.7	
	TOT PCT	7.9	14.5	25.7	
NON-PROFIT	3	2	12	38	52
	ROW PCT	3.8	23.1	73.1	15.7
	COL PCT	5.1	14.5	18.2	
	TOT PCT	.6	3.6	11.5	
PUBLIC	4	1	2	5	8
	ROW PCT	12.5	25.0	62.5	2.4
	COL PCT	2.6	2.4	2.4	
	TOT PCT	.3	.6	1.5	
	COLUMN TOTAL	39	83	209	331
		11.8	25.1	63.1	100.0

NUMBER OF MISSING OBSERVATIONS = 11

TABLE XXXXVI

DIRECTOR'S RESPONSE TO WHETHER A LEARNING UNIT ON NUTRITION IS TAUGHT

Q1	COUNT / ROW PCT / COL PCT / TOT PCT	No (1)	Yes (2)	ROW TOTAL
TITLE XX	1	19	95	114
		16.7	83.3	33.9
		67.9	30.8	
		5.7	28.3	
HEAD START	2	1	162	163
		.6	99.4	48.5
		3.6	52.6	
		.3	48.2	
NON-PROFIT	3	8	43	51
		15.7	84.3	15.2
		28.6	14.0	
		2.4	12.8	
PUBLIC	4		8	8
			100.0	2.4
			2.6	
			2.4	
COLUMN TOTAL		28	308	336
		8.3	91.7	100.0

NUMBER OF MISSING OBSERVATIONS = 6

TABLE XXXXVII

DIRECTOR'S RESPONSE TO WHEN NUTRITION EDUCATION IS TAUGHT

Q1		DAILY (1)	ONCE/WEEK (2)	ONCE/MONTH (3)	ONCE/YEAR (4)	ROW TOTAL
TITLE XX	1	45	14	17	19	95
	ROW PCT	47.4	14.7	17.9	20.0	31.3
	COL PCT	25.4	21.2	63.0	55.9	
	TOT PCT	14.8	4.6	5.6	6.3	
HEAD START	2	113	40	3	4	160
	ROW PCT	70.6	25.0	1.9	2.5	52.6
	COL PCT	63.8	60.6	11.1	11.8	
	TOT PCT	37.2	13.2	1.0	1.3	
NON-PROFIT	3	16	11	7	7	41
	ROW PCT	39.0	26.8	17.1	17.1	13.5
	COL PCT	9.0	16.7	25.9	20.6	
	TOT PCT	5.3	3.6	2.3	2.3	
PUBLIC	4	3	1		4	8
	ROW PCT	37.5	12.5		50.0	2.6
	COL PCT	1.7	1.5		11.8	
	TOT PCT	1.0	.3		1.3	
COLUMN TOTAL		177	66	27	34	304
		58.2	21.7	8.9	11.2	100.0

NUMBER OF MISSING OBSERVATIONS = 38

TABLE XXXXVIII

MAIN SOURCE OF NUTRITION INFORMATION

Q1	COUNT / ROW PCT / COL PCT / TOT PCT	TEXTBOOKS 1	PAMPHLET & NEWSP 2	CCFP HELPS 3	GOV'T AGENCIES 4	OWN EXPERIENCES 5	ROW TOTAL
TITLE XX	1	16	15	37	7	21	96
		16.7	15.6	38.5	7.3	21.9	31.7
		32.7	28.8	32.2	25.0	35.6	
		5.3	5.0	12.2	2.3	6.9	
HEAD START	2	22	27	63	19	27	158
		13.9	17.1	39.9	12.0	17.1	52.1
		44.9	51.9	54.8	67.9	45.8	
		7.3	8.9	20.8	6.3	8.9	
NON-PROFIT	3	7	9	15	1	9	41
		17.1	22.0	36.6	2.4	22.0	13.5
		14.3	17.3	13.0	3.6	15.3	
		2.3	3.0	5.0	.3	3.0	
PUBLIC	4	4	1		1	2	8
		50.0	12.5		12.5	25.0	2.6
		8.2	1.9		3.6	3.4	
		1.3	.3		.3	.7	
	COLUMN TOTAL	49	52	115	28	59	303
		16.2	17.2	38.0	9.2	19.5	100.0

NUMBER OF MISSING OBSERVATIONS = 39

TABLE IL

DIRECTOR'S RESPONSE TO WHETHER A NUTRITION EDUCATION TRAINING (NET) GUIDE IS UTILIZED

Q1		YES (1)	NO (2)	DON'T HAVE GUIDE (3)	(4)	ROW TOTAL
TITLE XX	1	66	6	20		92
		71.7	6.5	21.7		31.3
		34.9	42.9	22.2		
		22.4	2.0	6.8		
HEAD START	2	94	6	53	1	154
		61.0	3.9	34.4	.6	52.4
		49.7	42.9	58.9	100.0	
		32.0	2.0	18.0	.3	
NON-PROFIT	3	25	2	13		40
		62.5	5.0	32.5		13.6
		13.2	14.3	14.4		
		8.5	.7	4.4		
PUBLIC	4	4		4		8
		50.0		50.0		2.7
		2.1		4.4		
		1.4		1.4		
COLUMN TOTAL		189	14	90	1	294
		64.3	4.8	30.6	.3	100.0

NUMBER OF MISSING OBSERVATIONS = 48

TABLE L

NUMBER OF ACTIVITIES CHECKED INTO WHICH NUTRITION EDUCATION IS IMPLEMENTED

	Q27										
COUNT / ROW PCT / COL PCT / TOT PCT	1	2	3	4	5	6	7	8	9	10	ROW TOTAL
TITLE XX	2	1	6	9	6	14	9	7	6	6	94
	2.1	1.1	6.4	9.6	6.4	14.9	9.6	7.4	6.4	6.4	30.5
	40.0	25.0	60.0	60.0	42.9	66.7	52.9	38.9	42.9	27.3	
	.6	.3	1.9	2.9	1.9	4.5	2.9	2.3	1.9	1.9	
HEAD START	2	2	1	2	3	4	5	7	5	11	164
	1.2	1.2	.6	1.2	1.8	2.4	3.0	4.3	3.0	6.7	53.2
	40.0	50.0	10.0	13.3	21.4	19.0	29.4	38.9	35.7	50.0	
	.6	.6	.3	.6	1.0	1.3	1.6	2.3	1.6	3.6	
NON-PROFIT	1	1	3	4	4	3	3	4	3	4	42
	2.4	2.4	7.1	9.5	9.5	7.1	7.1	9.5	7.1	9.5	13.6
	20.0	25.0	30.0	26.7	28.6	14.3	17.6	22.2	21.4	18.2	
	.3	.3	1.0	1.3	1.3	1.0	1.0	1.3	1.0	1.3	
PUBLIC	4				1					1	8
					12.5					12.5	2.6
					7.1					4.5	
					.3					.3	
COLUMN TOTAL	5	4	10	15	14	21	17	18	14	22	308
	1.6	1.3	3.2	4.9	4.5	6.8	5.5	5.8	4.5	7.1	100.0

(CONTINUED)

TABLE L (Continued)

	Q27																								ROW TOTAL
COUNT		11		12		13		14		15		16		17		18		19		20					
ROW PCT																									
COL PCT																									
TOT PCT																									
TITLE XX	1	7		5		4		1		1		2		1		4		2		1					94
		7.4		5.3		4.3		1.1		1.1		2.1		1.1		4.3		2.1		1.1					30.5
		36.8		31.3		20.0		10.0		9.1		8.7		7.1		19.0		12.5		5.6					
		2.3		1.6		1.3		.3		.3		.6		.3		1.3		.6		.3					
HEAD START	2	8		9		13		8		8		18		12		15		14		17					164
		4.9		5.5		7.9		4.9		4.9		11.0		7.3		9.1		8.5		10.4					53.2
		42.1		56.3		65.0		80.0		72.7		78.3		85.7		71.4		87.5		94.4					
		2.6		2.9		4.2		2.6		2.6		5.8		3.9		4.9		4.5		5.5					
NON-PROFIT	3	4		2		3				1		1		1											42
		9.5		4.8		7.1				2.4		2.4		2.4											13.6
		21.1		12.5		15.0				9.1		4.3		7.1											
		1.3		.6		1.0				.3		.3		.3											
PUBLIC	4							1		1		2				2									8
								12.5		12.5		25.0				25.0									2.6
								10.0		9.1		8.7				9.5									
								.3		.3		.6				.6									
COLUMN TOTAL		19		16		20		10		11		23		14		21		16		18					308
		6.2		5.2		6.5		3.2		3.6		7.5		4.5		6.8		5.2		5.8					100.0

NUMBER OF MISSING OBSERVATIONS = 34

TABLE LI

NUMBER OF NUTRITION TOPICS EMPHASIZED IN TEACHING NUTRITION EDUCATION

	Q28										
COUNT / ROW PCT / COL PCT / TOT PCT	1	2	3	4	5	6	7	8	9	10	ROW TOTAL
TITLE XX											
1	1	5	8	13	22	19	13	7	4	3	95
	1.1	5.3	8.4	13.7	23.2	20.0	13.7	7.4	4.2	3.2	30.7
	16.7	41.7	34.8	35.1	44.9	42.2	28.9	22.6	10.5	13.6	
	.3	1.6	2.6	4.2	7.1	6.1	4.2	2.3	1.3	1.0	
HEAD START											
2	3	5	9	15	19	22	26	18	29	17	164
	1.8	3.0	5.5	9.1	11.6	13.4	15.9	11.0	17.7	10.4	53.1
	50.0	41.7	39.1	40.5	38.8	48.9	57.8	58.1	76.3	77.3	
	1.0	1.6	2.9	4.9	6.1	7.1	8.4	5.8	9.4	5.5	
NON-PROFIT											
3	2	2	5	9	7	3	6	5	1	2	42
	4.8	4.8	11.9	21.4	16.7	7.1	14.3	11.9	2.4	4.8	13.6
	33.3	16.7	21.7	24.3	14.3	6.7	13.3	16.1	2.6	9.1	
	.6	.6	1.6	2.9	2.3	1.0	1.9	1.6	.3	.6	
PUBLIC											
4			1		1	1		1	4		8
			12.5		12.5	12.5		12.5	50.0		2.6
			4.3		2.0	2.2		3.2	10.5		
			.3		.3	.3		.3	1.3		
COLUMN TOTAL	6	12	23	37	49	45	45	31	38	22	309
	1.9	3.9	7.4	12.0	15.9	14.6	14.6	10.0	12.3	7.1	100.0

NUMBER OF MISSING OBSERVATIONS = 33

TABLE LII

METHODS USED TO TEACH NUTRITION EDUCATION: TESTING NEW AND UNFAMILIAR FOODS

Q1	Q29P1	1 HAVE NOT TRIED	2 UNSUCCESSFUL	3 SUCCESSFUL	5	ROW TOTAL
TITLE XX	1	4	11	78		93
	ROW PCT	4.3	11.8	83.9		30.9
	COL PCT	33.3	52.4	29.2		
	TOT PCT	1.3	3.7	25.9		
HEAD START	2	5	8	145	1	159
	ROW PCT	3.1	5.0	91.2	.6	52.8
	COL PCT	41.7	38.1	54.3	100.0	
	TOT PCT	1.7	2.7	48.2	.3	
NON-PROFIT	3	3	2	36		41
	ROW PCT	7.3	4.9	87.8		13.6
	COL PCT	25.0	9.5	13.5		
	TOT PCT	1.0	.7	12.0		
PUBLIC	4			8		8
	ROW PCT			100.0		2.7
	COL PCT			3.0		
	TOT PCT			2.7		
	COLUMN TOTAL	12 4.0	21 7.0	267 88.7	1 .3	301 100.0

NUMBER OF MISSING OBSERVATIONS = 41

TABLE LIII

METHODS USED TO TEACH NUTRITION EDUCATION: LEARNING AND IDENTIFYING NEW FOODS

Q1	Q29P2				
	COUNT / ROW PCT / COL PCT / TOT PCT	HAVE NOT TRIED (1)	UNSUCCESSFUL (2)	SUCCESSFUL (3)	ROW TOTAL
TITLE XX	1	4	6	80	90
		4.4	6.7	88.9	30.6
		40.0	46.2	29.5	
		1.4	2.0	27.2	
HEAD START	2	4	7	145	156
		2.6	4.5	92.9	53.1
		40.0	53.8	53.5	
		1.4	2.4	49.3	
NON-PROFIT	3	2		38	40
		5.0		95.0	13.6
		20.0		14.0	
		.7		12.9	
PUBLIC	4			8	8
				100.0	2.7
				3.0	
				2.7	
COLUMN TOTAL		10	13	271	294
		3.4	4.4	92.2	100.0

NUMBER OF MISSING OBSERVATIONS = 48

TABLE LIV

METHODS USED TO TEACH NUTRITION EDUCATION: USING FOOD MODELS OR PICTURES

Q1		Q29P3 1 HAVE NOT TRIED	Q29P3 2 UNSUCCESSFUL	Q29P3 3 SUCCESSFUL	ROW TOTAL
TITLE XX	1	9	7	73	89
		10.1	7.9	82.0	30.1
		81.8	58.3	26.7	
		3.0	2.4	24.7	
HEAD START	2	1	4	154	159
		.6	2.5	96.9	53.7
		9.1	33.3	56.4	
		.3	1.4	52.0	
NON-PROFIT	3	1	1	38	40
		2.5	2.5	95.0	13.5
		9.1	8.3	13.9	
		.3	.3	12.8	
PUBLIC	4			8	8
				100.0	2.7
				2.9	
				2.7	
COLUMN TOTAL		11	12	273	296
		3.7	4.1	92.2	100.0

NUMBER OF MISSING OBSERVATIONS = 46

TABLE LV

METHODS USED TO TEACH NUTRITION EDUCATION: ENCOURAGING CHILDREN TO TASTE ALL FOODS AT MEALTIME

Q1		Q29P4 1 HAVE NOT TRIED	2 UNSUCCESSFUL	3 SUCCESSFUL	ROW TOTAL
TITLE XX	1	1	12	81	94
		1.1	12.8	86.2	31.4
		20.0	34.3	31.3	
		.3	4.0	27.1	
HEAD START	2	4	17	137	158
		2.5	10.8	86.7	52.8
		80.0	48.6	52.9	
		1.3	5.7	45.8	
NON-PROFIT	3		6	33	39
			15.4	84.6	13.0
			17.1	12.7	
			2.0	11.0	
PUBLIC	4			8	8
				100.0	2.7
				3.1	
				2.7	
COLUMN TOTAL		5	35	259	299
		1.7	11.7	86.6	100.0

NUMBER OF MISSING OBSERVATIONS = 43

TABLE LVI

METHODS USED TO TEACH NUTRITION EDUCATION: DISCUSSING THE FOOD CHILDREN ARE HAVING AT MEALTIME

Q1	Q29P5	1 HAVE NOT TRIED	2 UNSUCCESSFUL	3 SUCCESSFUL	ROW TOTAL
TITLE XX	1	2	2	87	91
		2.2	2.2	95.6	30.4
		40.0	50.0	30.0	
		.7	.7	29.1	
HEAD START	2	1	2	156	159
		.6	1.3	98.1	53.2
		20.0	50.0	53.8	
		.3	.7	52.2	
NON-PROFIT	3	2		39	41
		4.9		95.1	13.7
		40.0		13.4	
		.7		13.0	
PUBLIC	4			8	8
				100.0	2.7
				2.8	
				2.7	
COLUMN TOTAL		5	4	290	299
		1.7	1.3	97.0	100.0

NUMBER OF MISSING OBSERVATIONS = 43

TABLE LVII

METHODS USED TO TEACH NUTRITION EDUCATION: CLASSIFYING FOOD INTO THE 4 BASIC FOOD GROUPS

Q1	Q29P6	1 HAVE NOT TRIED	2 UNSUCCESSFUL	3 SUCCESSFUL	ROW TOTAL
1 TITLE XX	COUNT	8	10	68	86
	ROW PCT	9.3	11.6	79.1	29.5
	COL PCT	38.1	30.3	28.6	
	TOT PCT	2.7	3.4	23.3	
2 HEAD START	COUNT	9	20	129	158
	ROW PCT	5.7	12.7	81.6	54.1
	COL PCT	42.9	60.6	54.2	
	TOT PCT	3.1	6.8	44.2	
3 NON-PROFIT	COUNT	4	3	33	40
	ROW PCT	10.0	7.5	82.5	13.7
	COL PCT	19.0	9.1	13.9	
	TOT PCT	1.4	1.0	11.3	
4 PUBLIC	COUNT			8	8
	ROW PCT			100.0	2.7
	COL PCT			3.4	
	TOT PCT			2.7	
COLUMN TOTAL		21	33	238	292
		7.2	11.3	81.5	100.0

NUMBER OF MISSING OBSERVATIONS = 50

TABLE LVIII

METHODS USED TO TEACH NUTRITION EDUCATION: NAMING FOOD SOURCES OF VITAMIN A AND VITAMIN C

Q1		Q29P7 1 HAVE NOT TRIED	Q29P7 2 UNSUCCESSFUL	Q29P7 3 SUCCESSFUL	ROW TOTAL
TITLE XX	1	25	13	51	89
	ROW PCT	28.1	14.6	57.3	30.3
	COL PCT	34.2	24.1	30.5	
	TOT PCT	8.5	4.4	17.3	
HEAD START	2	34	33	90	157
	ROW PCT	21.7	21.0	57.3	53.4
	COL PCT	46.6	61.1	53.9	
	TOT PCT	11.6	11.2	30.6	
NON-PROFIT	3	14	7	20	41
	ROW PCT	34.1	17.1	48.8	13.9
	COL PCT	19.2	13.0	12.0	
	TOT PCT	4.8	2.4	6.8	
PUBLIC	4		1	6	7
	ROW PCT		14.3	85.7	2.4
	COL PCT		1.9	3.6	
	TOT PCT		.3	2.0	
	COLUMN TOTAL	73	54	167	294
		24.8	18.4	56.8	100.0

NUMBER OF MISSING OBSERVATIONS = 48

TABLE LIX

METHODS USED TO TEACH NUTRITION EDUCATION: GOING ON FIELD TRIPS

Q1		Q29P8 1 HAVE NOT TRIED	2 UNSUCCESSFUL	3 SUCCESSFUL	ROW TOTAL
TITLE XX	1	29	2	60	91
		31.9	2.2	65.9	30.6
		48.3	33.3	26.0	
		9.8	.7	20.2	
HEAD START	2	15	4	140	159
		9.4	2.5	88.1	53.5
		25.0	66.7	60.6	
		5.1	1.3	47.1	
NON-PROFIT	3	15		25	40
		37.5		62.5	13.5
		25.0		10.8	
		5.1		8.4	
PUBLIC	4	1		6	7
		14.3		85.7	2.4
		1.7		2.6	
		.3		2.0	
COLUMN TOTAL		60	6	231	297
		20.2	2.0	77.8	100.0

NUMBER OF MISSING OBSERVATIONS = 45

TABLE LX

METHODS USED TO TEACH NUTRITION EDUCATION: PLANTING VEGETABLES AND SEEDS

Q1	Q29P9	HAVE NOT TRIED (1)	UNSUCCESSFUL (2)	SUCCESSFUL (3)	ROW TOTAL
TITLE XX	1	16	2	71	89
	ROW PCT	18.0	2.2	79.8	30.2
	COL PCT	44.4	18.2	28.6	
	TOT PCT	5.4	.7	24.1	
HEAD START	2	10	7	141	158
	ROW PCT	6.3	4.4	89.2	53.6
	COL PCT	27.8	63.6	56.9	
	TOT PCT	3.4	2.4	47.8	
NON-PROFIT	3	9	2	29	40
	ROW PCT	22.5	5.0	72.5	13.6
	COL PCT	25.0	18.2	11.7	
	TOT PCT	3.1	.7	9.8	
PUBLIC	4	1		7	8
	ROW PCT	12.5		87.5	2.7
	COL PCT	2.8		2.8	
	TOT PCT	.3		2.4	
COLUMN TOTAL		36	11	248	295
		12.2	3.7	84.1	100.0

NUMBER OF MISSING OBSERVATIONS = 47

TABLE LXI

METHODS USED TO TEACH NUTRITION EDUCATION: HAVING A "TWO BITE" CLUB

Q1		Q29P10 1 HAVE NOT TRIED	2 UNSUCCESSFUL	3 SUCCESSFUL	ROW TOTAL
TITLE XX	1	63	1	23	87
		72.4	1.1	26.4	30.3
		30.9	12.5	30.7	
		22.0	.3	8.0	
HEAD START	2	109	5	39	153
		71.2	3.3	25.5	53.3
		53.4	62.5	52.0	
		38.0	1.7	13.6	
NON-PROFIT	3	29	1	10	40
		72.5	2.5	25.0	13.9
		14.2	12.5	13.3	
		10.1	.3	3.5	
PUBLIC	4	3	1	3	7
		42.9	14.3	42.9	2.4
		1.5	12.5	4.0	
		1.0	.3	1.0	
COLUMN TOTAL		204	8	75	287
		71.1	2.8	26.1	100.0

NUMBER OF MISSING OBSERVATIONS = 55

TABLE LXII

METHODS USED TO TEACH NUTRITION EDUCATION: STUDYING FOOD HABITS OF OTHER CULTURES

Q1	Q29P11	1 HAVE NOT TRIED	2 UNSUCCESSFUL	3 SUCCESSFUL	5	ROW TOTAL
TITLE XX	1	51	4	29	1	85
	COL PCT	60.0	4.7	34.1	1.2	30.0
	ROW PCT	47.2	23.5	18.5	100.0	
	TOT PCT	18.0	1.4	10.2	.4	
HEAD START	2	34	10	109		153
	COL PCT	22.2	6.5	71.2		54.1
	ROW PCT	31.5	58.8	69.4		
	TOT PCT	12.0	3.5	38.5		
NON-PROFIT	3	22	3	13		38
	COL PCT	57.9	7.9	34.2		13.4
	ROW PCT	20.4	17.6	8.3		
	TOT PCT	7.8	1.1	4.6		
PUBLIC	4	1		6		7
	COL PCT	14.3		85.7		2.5
	ROW PCT	.9		3.8		
	TOT PCT	.4		2.1		
COLUMN TOTAL		108	17	157	1	283
		38.2	6.0	55.5	.4	100.0

NUMBER OF MISSING OBSERVATIONS = 59

TABLE LXIII

METHODS USED TO TEACH NUTRITION EDUCATION: USING RESOURCE PEOPLE TO SPEAK ABOUT NUTRITION

Q1	COUNT / ROW PCT / COL PCT / TOT PCT	Q29P12 1 HAVE NOT TRIED	2 UNSUCCESSFUL	3 SUCCESSFUL	ROW TOTAL
1		60	2	22	84
TITLE XX		71.4	2.4	26.2	29.5
		46.9	22.2	14.9	
		21.1	.7	7.7	
2		36	5	114	155
HEAD START		23.2	3.2	73.5	54.4
		28.1	55.6	77.0	
		12.6	1.8	40.0	
3		29	2	8	39
NON-PROFIT		74.4	5.1	20.5	13.7
		22.7	22.2	5.4	
		10.2	.7	2.8	
4		3		4	7
PUBLIC		42.9		57.1	2.5
		2.3		2.7	
		1.1		1.4	
COLUMN TOTAL		128	9	148	285
		44.9	3.2	51.9	100.0

NUMBER OF MISSING OBSERVATIONS = 57

TABLE LXIV

METHODS USED TO TEACH NUTRITION EDUCATION: SHOWING FILMS AND FILMSTRIPS

Q1	Q29P13	1 HAVE NOT TRIED	2 UNSUCCESSFUL	3 SUCCESSFUL	ROW TOTAL
TITLE XX	1	71	2	13	86
	ROW PCT	82.6	2.3	15.1	29.4
	COL PCT	52.6	12.5	9.2	
	TOT PCT	24.2	.7	4.4	
HEAD START	2	33	13	112	158
	ROW PCT	20.9	8.2	70.9	53.9
	COL PCT	24.4	81.3	78.9	
	TOT PCT	11.3	4.4	38.2	
NON-PROFIT	3	29	1	11	41
	ROW PCT	70.7	2.4	26.8	14.0
	COL PCT	21.5	6.3	7.7	
	TOT PCT	9.9	.3	3.8	
PUBLIC	4	2		6	8
	ROW PCT	25.0		75.0	2.7
	COL PCT	1.5		4.2	
	TOT PCT	.7		2.0	
COLUMN TOTAL		135	16	142	293
		46.1	5.5	48.5	100.0

NUMBER OF MISSING OBSERVATIONS = 49

TABLE LXV

METHODS USED TO TEACH NUTRITION EDUCATION: DISCUSSING WEIGHT AND HEIGHT OF THE CHILDREN

Q1		Q29P14 1 HAVE NOT TRIED	2 UNSUCCESSFUL	3 SUCCESSFUL	ROW TOTAL
TITLE XX	1	29		61	90
		32.2		67.8	30.3
		39.7		28.0	
		9.8		20.5	
HEAD START	2	27	4	127	158
		17.1	2.5	80.4	53.2
		37.0	66.7	58.3	
		9.1	1.3	42.8	
NON-PROFIT	3	14	2	25	41
		34.1	4.9	61.0	13.8
		19.2	33.3	11.5	
		4.7	.7	8.4	
PUBLIC	4	3		5	8
		37.5		62.5	2.7
		4.1		2.3	
		1.0		1.7	
COLUMN TOTAL		73	6	218	297
		24.6	2.0	73.4	100.0

NUMBER OF MISSING OBSERVATIONS = 45

TABLE LXVI

METHODS USED TO TEACH NUTRITION EDUCATION: DISCUSSING HOW VARIOUS FOODS ARE NEEDED FOR GROWTH OF THE BODY

Q1		Q29P15 1 HAVE NOT TRIED	2 UNSUCCESSFUL	3 SUCCESSFUL	ROW TOTAL
TITLE XX	1	3	3	78	84
		3.6	3.6	92.9	28.9
		25.0	75.0	28.4	
		1.0	1.0	26.8	
HEAD START	2	4	1	153	158
		2.5	.6	96.8	54.3
		33.3	25.0	55.6	
		1.4	.3	52.6	
NON-PROFIT	3	4		37	41
		9.8		90.2	14.1
		33.3		13.5	
		1.4		12.7	
PUBLIC	4	1		7	8
		12.5		87.5	2.7
		8.3		2.5	
		.3		2.4	
COLUMN TOTAL		12	4	275	291
		4.1	1.4	94.5	100.0

NUMBER OF MISSING OBSERVATIONS = 51

TABLE LXVII

DIRECTOR'S BEST REASON FOR NOT TEACHING NUTRITION EDUCATION

Q1		Q30 1 LACK OF FINANCES	2 LACK OF KNOWLEDG	3 LACK OF TIME	5 LACK MAT ERIALS	ROW TOTAL
TITLE XX	1	2	2	7	8	19
		10.5	10.5	36.8	42.1	67.9
		100.0	50.0	58.3	80.0	
		7.1	7.1	25.0	28.6	
HEAD START	2			1	1	2
				50.0	50.0	7.1
				8.3	10.0	
				3.6	3.6	
NON-PROFIT	3		2	4	1	7
			28.6	57.1	14.3	25.0
			50.0	33.3	10.0	
			7.1	14.3	3.6	
COLUMN TOTAL		2	4	12	10	28
		7.1	14.3	42.9	35.7	100.0

NUMBER OF MISSING OBSERVATIONS = 314

TABLE LXVIII

DIRECTOR'S RESPONSE TO WHETHER THEY WOULD LIKE TO RECEIVE NUTRITION EDUCATION TRAINING

Q1		Q31 YES	1	3	ROW TOTAL
TITLE XX	1	18	1	19	
	ROW PCT	94.7	5.3	76.0	
	COL PCT	75.0	100.0		
	TOT PCT	72.0	4.0		
HEAD START	2	1		1	
	ROW PCT	100.0		4.0	
	COL PCT	4.2			
	TOT PCT	4.0			
NON-PROFIT	3	5		5	
	ROW PCT	100.0		20.0	
	COL PCT	20.8			
	TOT PCT	20.0			
COLUMN TOTAL		24	1	25	
		96.0	4.0	100.0	

NUMBER OF MISSING OBSERVATIONS = 317

TABLE LXIX

WHERE DIRECTORS WOULD LIKE TO RECEIVE NUTRITION EDUCATION TRAINING

Q1		Q32 1	2	3	8	ROW TOTAL
	COUNT	I				
	ROW PCT	IAT CENTE	IN MY AR	IN OKC O		
	COL PCT	IR	EA	R TULSA		
	TOT PCT	I	I	I	I	
	1	I 6	I 12	I 1	I 1	I 20
TITLE XX		I 30.0	I 60.0	I 5.0	I 5.0	I 74.1
		I 75.0	I 75.0	I 50.0	I 100.0	I
		I 22.2	I 44.4	I 3.7	I 3.7	I
	2	I	I 1	I	I	I 1
HEAD START		I	I 100.0	I	I	I 3.7
		I	I 6.3	I	I	I
		I	I 3.7	I	I	I
	3	I 2	I 3	I 1	I	I 6
NON-PROFIT		I 33.3	I 50.0	I 16.7	I	I 22.2
		I 25.0	I 18.8	I 50.0	I	I
		I 7.4	I 11.1	I 3.7	I	I
	COLUMN TOTAL	8 29.6	16 59.3	2 7.4	1 3.7	27 100.0

NUMBER OF MISSING OBSERVATIONS = 315

TABLE LXX

DIRECTOR'S RESPONSE TO WHETHER THEY WOULD USE FREE NUTRITION EDUCATION MATERIALS

Q1		Q33 YES (1)	Q33 NO (2)	ROW TOTAL
TITLE XX	1	18		18
	ROW PCT	100.0		75.0
	COL PCT	78.3		
	TOT PCT	75.0		
HEAD START	2	1		1
	ROW PCT	100.0		4.2
	COL PCT	4.3		
	TOT PCT	4.2		
NON-PROFIT	3	4	1	5
	ROW PCT	80.0	20.0	20.8
	COL PCT	17.4	100.0	
	TOT PCT	16.7	4.2	
COLUMN TOTAL		23	1	24
		95.8	4.2	100.0

NUMBER OF MISSING OBSERVATIONS = 318

TABLE LXXI

DIRECTORS' WILLINGNESS TO HAVE A RESOURCE PERSON SPEAK ABOUT NUTRITION

Q1		Q34 YES (1)	Q34 NO (2)	ROW TOTAL
TITLE XX	COUNT	15	5	20
	ROW PCT	75.0	25.0	74.1
	COL PCT	68.2	100.0	
	TOT PCT	55.6	18.5	
HEAD START	COUNT	1		1
	ROW PCT	100.0		3.7
	COL PCT	4.5		
	TOT PCT	3.7		
NON-PROFIT	COUNT	6		6
	ROW PCT	100.0		22.2
	COL PCT	27.3		
	TOT PCT	22.2		
COLUMN TOTAL		22	5	27
		81.5	18.5	100.0

NUMBER OF MISSING OBSERVATIONS = 315

TABLE LXXII

CHI-SQUARE ANALYSIS OF AGE AND TEACHING A LEARNING UNIT ON NUTRITION

Q23	Q2	BELOW 21	21-30	31-40	41-50	50 +	ROW TOTAL
	COUNT	1	2	3	4	5	
1	ROW PCT	7.4	11.1	25.9	37.0	18.5	8.2
	COL PCT	4.9	6.4	5.9	14.9	8.8	
	TOT PCT	.6	.9	2.1	3.0	1.5	
	COUNT	39	44	112	57	52	304
2	ROW PCT	12.8	14.5	36.8	18.8	17.1	91.8
	COL PCT	95.1	93.6	94.1	85.1	91.2	
	TOT PCT	11.8	13.3	33.8	17.2	15.7	
COLUMN TOTAL		41	47	119	67	57	331
		12.4	14.2	36.0	20.2	17.2	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
5.73342	4	0.2200	3.344	3 OF 10 (30.0%)

NUMBER OF MISSING OBSERVATIONS = 11

TABLE LXXIII

CHI-SQUARE ANALYSIS OF GENDER AND TEACHING A LEARNING UNIT ON NUTRITION

Q23	Q3 MALE	FEMALE			ROW TOTAL
		1	2	3	
1	1	26			27
	3.7	96.3			8.2
	12.5	8.1			
	.3	7.9			
2	7	296	1		304
	2.3	97.4	.3		91.8
	87.5	91.9	100.0		
	2.1	89.4	.3		
COLUMN TOTAL	8	322	1		331
	2.4	97.3	.3		100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
0.29315	2	0.8637	0.082	3 OF 6 (50.0%)

NUMBER OF MISSING OBSERVATIONS = 11

TABLE LXXIV

CHI-SQUARE ANALYSIS OF HIGHEST LEVEL OF EDUCATION AND TEACHING A LEARNING UNIT ON NUTRITION

Q23	Q4	1 COLLEGE GRAD	2 CDA	3 HS GRAD	4 GED	ROW TOTAL
	COUNT	8	2	14	4	28
	ROW PCT	28.6	7.1	50.0	14.3	8.4
	COL PCT	8.4	1.9	13.0	15.4	
	TOT PCT	2.4	.6	4.2	1.2	
	2	87	103	94	22	306
		28.4	33.7	30.7	7.2	91.6
		91.6	98.1	87.0	84.6	
		26.0	30.8	28.1	6.6	
	COLUMN TOTAL	95	105	108	26	334
		28.4	31.4	32.3	7.8	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
10.34671	3	0.0158	2.180	1 OF 8 (12.5%)

NUMBER OF MISSING OBSERVATIONS = 8

TABLE LXXV

CHI-SQUARE ANALYSIS OF LENGTH OF TIME WORKING WITH YOUNG CHILDREN AND TEACHING A LEARNING UNIT ON NUTRITION

		Q5				
	COUNT	I				
	ROW PCT	I< 1	2-5	6-9	10 +	ROW
	COL PCT	I				TOTAL
	TOT PCT	I 1	I 2	I 3	I 4	I
Q23	1	2	5	6	15	28
		7.1	17.9	21.4	53.6	8.4
		50.0	8.1	7.1	8.2	
		.6	1.5	1.8	4.5	
	2	2	57	79	169	307
		.7	18.6	25.7	55.0	91.6
		50.0	91.9	92.9	91.8	
		.6	17.0	23.6	50.4	
	COLUMN TOTAL	4 1.2	62 18.5	85 25.4	184 54.9	335 100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
9.26003	3	0.0260	0.334	2 OF 8 (25.0%)

NUMBER OF MISSING OBSERVATIONS = 7

TABLE LXXVI

CHI-SQUARE ANALYSIS OF TIME AT CURRENT CHILD CARE CENTER AND TEACHING A LEARNING UNIT ON NUTRITION

Q23	Q6 COUNT / ROW PCT / COL PCT / TOT PCT	< 1 (1)	2-5 (2)	6-9 (3)	10 + (4)	ROW TOTAL
1		4	9	4	11	28
		14.3	32.1	14.3	39.3	8.4
		12.1	6.8	5.6	11.2	
		1.2	2.7	1.2	3.3	
2		29	123	67	87	306
		9.5	40.2	21.9	28.4	91.6
		87.9	93.2	94.4	88.8	
		8.7	36.8	20.1	26.0	
COLUMN TOTAL		33	132	71	98	334
		9.9	39.5	21.3	29.3	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
2.75017	3	0.4318	2.766	1 OF 8 (12.5%)

NUMBER OF MISSING OBSERVATIONS = 8

TABLE LXXVII

CHI-SQUARE ANALYSIS OF DESCRIPTION OF DIRECTOR'S WEIGHT AND MEALTIME IN DIRECTOR'S OWN HOME

Q9	Q7	1 UNDERWEIGHT	2 JUST RIGHT	3 COULD LOSE	4 OVERWEIGHT	ROW TOTAL
1 TOGETHER AT TABL	COUNT	2	60	102	38	202
	ROW PCT	1.0	29.7	50.5	18.8	60.5
	COL PCT	50.0	61.9	64.6	50.7	
	TOT PCT	.6	18.0	30.5	11.4	
2 ON THE RUN	COUNT	2	21	25	13	61
	ROW PCT	3.3	34.4	41.0	21.3	18.3
	COL PCT	50.0	21.6	15.8	17.3	
	TOT PCT	.6	6.3	7.5	3.9	
3 IN FRONT OF TV	COUNT		8	19	16	43
	ROW PCT		18.6	44.2	37.2	12.9
	COL PCT		8.2	12.0	21.3	
	TOT PCT		2.4	5.7	4.8	
4 RARELY EAT AT HO	COUNT		3	3	4	10
	ROW PCT		30.0	30.0	40.0	3.0
	COL PCT		3.1	1.9	5.3	
	TOT PCT		.9	.9	1.2	
5 EAT OUT AS FAMIL	COUNT		5	9	4	18
	ROW PCT		27.8	50.0	22.2	5.4
	COL PCT		5.2	5.7	5.3	
	TOT PCT		1.5	2.7	1.2	
COLUMN TOTAL		4	97	158	75	334
		1.2	29.0	47.3	22.5	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
13.86248	12	0.3096	0.120	9 OF 20 (45.0%)

NUMBER OF MISSING OBSERVATIONS = 8

TABLE LXXVIII

CHI-SQUARE ANALYSIS OF MEALTIME IN DIRECTOR'S OWN HOME AND SITTING AND EATING WITH THE CHILDREN AT THE CHILD CARE CENTER

Q9	Q11	1 EVERYDAY	2 3-4 TIME S/WEEK	3 1-2 TIME S/WEEK	4 < ONCE/WEEK	ROW TOTAL
1 TOGETHER AT TABL	COUNT	136	17	24	25	202
	ROW PCT	67.3	8.4	11.9	12.4	60.5
	COL PCT	64.5	58.6	61.5	45.5	
	TOT PCT	40.7	5.1	7.2	7.5	
2 ON THE RUN	COUNT	34	5	7	15	61
	ROW PCT	55.7	8.2	11.5	24.6	18.3
	COL PCT	16.1	17.2	17.9	27.3	
	TOT PCT	10.2	1.5	2.1	4.5	
3 IN FRONT OF TV	COUNT	26	6	4	8	44
	ROW PCT	59.1	13.6	9.1	18.2	13.2
	COL PCT	12.3	20.7	10.3	14.5	
	TOT PCT	7.8	1.8	1.2	2.4	
4 RARELY EAT AT HO	COUNT	4	1	2	2	9
	ROW PCT	44.4	11.1	22.2	22.2	2.7
	COL PCT	1.9	3.4	5.1	3.6	
	TOT PCT	1.2	.3	.6	.6	
5 EAT OUT AS FAMIL	COUNT	11		2	5	18
	ROW PCT	61.1		11.1	27.8	5.4
	COL PCT	5.2		5.1	9.1	
	TOT PCT	3.3		.6	1.5	
COLUMN TOTAL		211	29	39	55	334
		63.2	8.7	11.7	16.5	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
11.89265	12	0.4543	0.781	7 OF 20 (35.0%)

NUMBER OF MISSING OBSERVATIONS = 8

TABLE LXXIX

CHI-SQUARE ANALYSIS OF DIRECTOR'S WEIGHT DESCRIPTION AND MEALTIME AT THE CHILD CARE CENTER

Q7	Q12	1 PLEASANT & ENJOY ME	2 HAPPY TIME	3 QUIET/NO TALKING	4 CHAOTIC	ROW TOTAL
UNDERWEIGHT	1	1	2		1	4
		25.0	50.0		25.0	1.2
		.6	1.3		6.7	
		.3	.6		.3	
JUST RIGHT	2	53	36	2	5	96
		55.2	37.5	2.1	5.2	28.7
		33.8	23.2	28.6	33.3	
		15.9	10.8	.6	1.5	
COULD LOSE	3	66	80	5	6	157
		42.0	51.0	3.2	3.8	47.0
		42.0	51.6	71.4	40.0	
		19.8	24.0	1.5	1.8	
OVERWEIGHT	4	37	37		3	77
		48.1	48.1		3.9	23.1
		23.6	23.9		20.0	
		11.1	11.1		.9	
COLUMN TOTAL		157	155	7	15	334
		47.0	46.4	2.1	4.5	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
11.68489	9	0.2317	0.084	9 OF 16 (56.3%)

NUMBER OF MISSING OBSERVATIONS = 8

TABLE LXXX

CHI-SQUARE ANALYSIS OF TOTAL NUTRITION TOPICS EMPHASIZED AND HIGHEST LEVEL OF EDUCATION

Q28	Q4 COUNT / ROW PCT / COL PCT / TOT PCT	COLLEGE GRAD (1)	CDA (2)	HS GRAD (3)	GED (4)	ROW TOTAL
1		1	1	2	2	6
		16.7	16.7	33.3	33.3	2.0
		1.1	1.0	2.2	8.7	
		.3	.3	.7	.7	
2		4	2	6		12
		33.3	16.7	50.0		3.9
		4.5	1.9	6.5		
		1.3	.7	2.0		
3		5	9	8	1	23
		21.7	39.1	34.8	4.3	7.5
		5.7	8.7	8.7	4.3	
		1.6	2.9	2.6	.3	
4		8	11	16	2	37
		21.6	29.7	43.2	5.4	12.1
		9.1	10.6	17.4	8.7	
		2.6	3.6	5.2	.7	
5		12	11	14	11	48
		25.0	22.9	29.2	22.9	15.6
		13.6	10.6	15.2	47.8	
		3.9	3.6	4.6	3.6	
6		15	11	14	5	45
		33.3	24.4	31.1	11.1	14.7
		17.0	10.6	15.2	21.7	
		4.9	3.6	4.6	1.6	
7		16	12	14	2	44
		36.4	27.3	31.8	4.5	14.3
		18.2	11.5	15.2	8.7	
		5.2	3.9	4.6	.7	
8		11	12	8		31
		35.5	38.7	25.8		10.1
		12.5	11.5	8.7		
		3.6	3.9	2.6		
(CONTINUED)	COLUMN TOTAL	88	104	92	23	307
		28.7	33.9	30.0	7.5	100.0

TABLE LXXX (Continued)

Q28	Q4 COLLEGE GRAD	CDA	HS GRAD	GED	ROW TOTAL
	1	2	3	4	
9	11	23	4		38
	28.9	60.5	10.5		12.4
	12.5	22.1	4.3		
	3.6	7.5	1.3		
10	5	11	6		22
	22.7	50.0	27.3		7.2
	5.7	10.6	6.5		
	1.6	3.6	2.0		
30		1			1
		100.0			.3
		1.0			
		.3			
COLUMN TOTAL	88	104	92	23	307
	28.7	33.9	30.0	7.5	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
60.10138	30	0.0009	0.075	20 OF 44 (45.5%)

NUMBER OF MISSING OBSERVATIONS = 35

TABLE LXXXI

CHI-SQUARE ANALYSIS OF TOTAL NUTRITION TOPICS EMPHASIZED AND DIRECTOR'S BACKGROUND IN NUTRITION

Q28	COUNT / ROW PCT / COL PCT / TOT PCT	Q10 1	2	3	4	5	6	ROW TOTAL
1		3	1			1		5
		60.0	20.0			20.0		1.7
		5.2	1.5			2.9		
		1.0	.3			.3		
2		5	3	3		1		12
		41.7	25.0	25.0		8.3		4.0
		8.6	4.6	3.4		2.9		
		1.7	1.0	1.0		.3		
3		4	3	8	3	3		21
		19.0	14.3	38.1	14.3	14.3		7.0
		6.9	4.6	9.2	5.4	8.6		
		1.3	1.0	2.6	1.0	1.0		
4		9	16	6	5	1		37
		24.3	43.2	16.2	13.5	2.7		12.3
		15.5	24.6	6.9	8.9	2.9		
		3.0	5.3	2.0	1.7	.3		
5		6	14	17	8	4		49
		12.2	28.6	34.7	16.3	8.2		16.2
		10.3	21.5	19.5	14.3	11.4		
		2.0	4.6	5.6	2.6	1.3		
6		7	9	14	9	4	1	44
		15.9	20.5	31.8	20.5	9.1	2.3	14.6
		12.1	13.8	16.1	16.1	11.4	100.0	
		2.3	3.0	4.6	3.0	1.3	.3	
7		5	6	17	11	4		43
		11.6	14.0	39.5	25.6	9.3		14.2
		8.6	9.2	19.5	19.6	11.4		
		1.7	2.0	5.6	3.6	1.3		
8		6	7	8	3	6		30
		20.0	23.3	26.7	10.0	20.0		9.9
		10.3	10.8	9.2	5.4	17.1		
		2.0	2.3	2.6	1.0	2.0		
(CONTINUED)	COLUMN TOTAL	58 / 19.2	65 / 21.5	87 / 28.8	56 / 18.5	35 / 11.6	1 / .3	302 / 100.0

TABLE LXXXI (Continued)

Q28	Q10	1	2	3	4	5	6	ROW TOTAL
	9	9	4	10	10	5		38
		23.7	10.5	26.3	26.3	13.2		12.6
		15.5	6.2	11.5	17.9	14.3		
		3.0	1.3	3.3	3.3	1.7		
	10	4	1	4	7	6		22
		18.2	4.5	18.2	31.8	27.3		7.3
		6.9	1.5	4.6	12.5	17.1		
		1.3	.3	1.3	2.3	2.0		
	30		1					1
			100.0					.3
			1.5					
			.3					
	COLUMN TOTAL	58	65	87	56	35	1	302
		19.2	21.5	28.8	18.5	11.6	.3	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
64.72258	50	0.0787	0.003	38 OF 66 (57.6%)

NUMBER OF MISSING OBSERVATIONS = 40

TABLE LXXXII

CHI-SQUARE ANALYSIS OF TOTAL NUTRITION ACTIVITIES WITH HIGHEST LEVEL OF EDUCATION

Q27	Q4 COUNT / ROW PCT / COL PCT / TOT PCT	1 COLLEGE GRAD	2 CDA	3 HS GRAD	4 GED	ROW TOTAL
1			2	1	2	5
			40.0	20.0	40.0	1.6
			1.9	1.1	8.7	
			.7	.3	.7	
2		2	1	1		4
		50.0	25.0	25.0		1.3
		2.3	1.0	1.1		
		.7	.3	.3		
3		1	3	5	1	10
		10.0	30.0	50.0	10.0	3.3
		1.1	2.9	5.5	4.3	
		.3	1.0	1.6	.3	
4		3		12		15
		20.0		80.0		4.9
		3.4		13.2		
		1.0		3.9		
5		3	2	6	3	14
		21.4	14.3	42.9	21.4	4.6
		3.4	1.9	6.6	13.0	
		1.0	.7	2.0	1.0	
6		7	2	9	2	20
		35.0	10.0	45.0	10.0	6.5
		8.0	1.9	9.9	8.7	
		2.3	.7	2.9	.7	
7		3	4	8	2	17
		17.6	23.5	47.1	11.8	5.6
		3.4	3.8	8.8	8.7	
		1.0	1.3	2.6	.7	
8		8		5	5	18
		44.4		27.8	27.8	5.9
		9.1		5.5	21.7	
		2.6		1.6	1.6	
(CONTINUED)	COLUMN TOTAL	88 28.8	104 34.0	91 29.7	23 7.5	306 100.0

TABLE LXXXII (Continued)

Q27	Q4 COUNT / ROW PCT / COL PCT / TOT PCT	COLLEGE GRAD (1)	CDA (2)	HS GRAD (3)	GED (4)	ROW TOTAL
9		4	4	4	2	14
		28.6	28.6	28.6	14.3	4.6
		4.5	3.8	4.4	8.7	
		1.3	1.3	1.3	.7	
10		6	10	5	1	22
		27.3	45.5	22.7	4.5	7.2
		6.8	9.6	5.5	4.3	
		2.0	3.3	1.6	.3	
11		7	7	5		19
		36.8	36.8	26.3		6.2
		8.0	6.7	5.5		
		2.3	2.3	1.6		
12		7	2	6	1	16
		43.8	12.5	37.5	6.3	5.2
		8.0	1.9	6.6	4.3	
		2.3	.7	2.0	.3	
13		8	7	3	2	20
		40.0	35.0	15.0	10.0	6.5
		9.1	6.7	3.3	8.7	
		2.6	2.3	1.0	.7	
14		5	3	2		10
		50.0	30.0	20.0		3.3
		5.7	2.9	2.2		
		1.6	1.0	.7		
15		3	5	2		10
		30.0	50.0	20.0		3.3
		3.4	4.8	2.2		
		1.0	1.6	.7		
16		8	11	3	1	23
		34.8	47.8	13.0	4.3	7.5
		9.1	10.6	3.3	4.3	
		2.6	3.6	1.0	.3	
(CONTINUED)	COLUMN TOTAL	88	104	91	23	306
		28.8	34.0	29.7	7.5	100.0

TABLE LXXXII (Continued)

Q27	Q4 COLLEGE GRAD	CDA 1	HS GRAD 2	GED 3	4	ROW TOTAL
17	3	7	4			14
	21.4	50.0	28.6			4.6
	3.4	6.7	4.4			
	1.0	2.3	1.3			
18	7	12	1	1		21
	33.3	57.1	4.8	4.8		6.9
	8.0	11.5	1.1	4.3		
	2.3	3.9	.3	.3		
19	1	10	5			16
	6.3	62.5	31.3			5.2
	1.1	9.6	5.5			
	.3	3.3	1.6			
20	2	12	4			18
	11.1	66.7	22.2			5.9
	2.3	11.5	4.4			
	.7	3.9	1.3			
COLUMN TOTAL	88	104	91	23		306
	28.8	34.0	29.7	7.5		100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
111.32906	57	0.0000	0.301	51 OF 80 (63.8%)

NUMBER OF MISSING OBSERVATIONS = 36

TABLE LXXXIII

CHI-SQUARE ANALYSIS OF TOTAL NUTRITION ACTIVITIES AND DIRECTOR'S NUTRITION BACKGROUND

Q27	Q10	1	2	3	4	5	6	ROW TOTAL
	COUNT	1	1	1		1		4
	ROW PCT	25.0	25.0	25.0		25.0		1.3
	COL PCT	1.7	1.5	1.1		2.9		
	TOT PCT	.3	.3	.3		.3		
1	COUNT	1	1	2				4
	ROW PCT	25.0	25.0	50.0				1.3
	COL PCT	1.7	1.5	2.3				
	TOT PCT	.3	.3	.7				
2	COUNT	3	1	5				9
	ROW PCT	33.3	11.1	55.6				3.0
	COL PCT	5.2	1.5	5.7				
	TOT PCT	1.0	.3	1.7				
3	COUNT	4	6	2	3			15
	ROW PCT	26.7	40.0	13.3	20.0			5.0
	COL PCT	6.9	9.2	2.3	5.5			
	TOT PCT	1.3	2.0	.7	1.0			
4	COUNT	5	5	1	1	2		14
	ROW PCT	35.7	35.7	7.1	7.1	14.3		4.7
	COL PCT	8.6	7.7	1.1	1.8	5.7		
	TOT PCT	1.7	1.7	.3	.3	.7		
5	COUNT	3	5	8	3	1		20
	ROW PCT	15.0	25.0	40.0	15.0	5.0		6.6
	COL PCT	5.2	7.7	9.2	5.5	2.9		
	TOT PCT	1.0	1.7	2.7	1.0	.3		
6	COUNT	4	5	5	3			17
	ROW PCT	23.5	29.4	29.4	17.6			5.6
	COL PCT	6.9	7.7	5.7	5.5			
	TOT PCT	1.3	1.7	1.7	1.0			
7	COUNT	4	3	7	4			18
	ROW PCT	22.2	16.7	38.9	22.2			6.0
	COL PCT	6.9	4.6	8.0	7.3			
	TOT PCT	1.3	1.0	2.3	1.3			
8	COLUMN TOTAL	58	65	87	55	35	1	301
		19.3	21.6	28.9	18.3	11.6	.3	100.0

(CONTINUED)

TABLE LXXXIII (Continued)

Q27	COUNT / ROW PCT / COL PCT / TOT PCT	Q10 1	2	3	4	5	6	ROW TOTAL
	9	3	2	4	3	2		14
		21.4	14.3	28.6	21.4	14.3		4.7
		5.2	3.1	4.6	5.5	5.7		
		1.0	.7	1.3	1.0	.7		
	10	3	4	10	1	4		22
		13.6	18.2	45.5	4.5	18.2		7.3
		5.2	6.2	11.5	1.8	11.4		
		1.0	1.3	3.3	.3	1.3		
	11	3	5	5	5	1		19
		15.8	26.3	26.3	26.3	5.3		6.3
		5.2	7.7	5.7	9.1	2.9		
		1.0	1.7	1.7	1.7	.3		
	12	2	3	8	1	2		16
		12.5	18.8	50.0	6.3	12.5		5.3
		3.4	4.6	9.2	1.8	5.7		
		.7	1.0	2.7	.3	.7		
	13	5	3	5	4	1		18
		27.8	16.7	27.8	22.2	5.6		6.0
		8.6	4.6	5.7	7.3	2.9		
		1.7	1.0	1.7	1.3	.3		
	14	3	3	2	1			9
		33.3	33.3	22.2	11.1			3.0
		5.2	4.6	2.3	1.8			
		1.0	1.0	.7	.3			
	15		4	4	2	1		11
			36.4	36.4	18.2	9.1		3.7
			6.2	4.6	3.6	2.9		
			1.3	1.3	.7	.3		
	16	5	2	5	7	4		23
		21.7	8.7	21.7	30.4	17.4		7.6
		8.6	3.1	5.7	12.7	11.4		
		1.7	.7	1.7	2.3	1.3		
	COLUMN TOTAL	58	65	87	55	35	1	301
(CONTINUED)		19.3	21.6	28.9	18.3	11.6	.3	100.0

TABLE LXXXIII (Continued)

Q27	COUNT / ROW PCT / COL PCT / TOT PCT	Q10 1	2	3	4	5	6	ROW TOTAL
17		3	5	1	2	2		13
		23.1	38.5	7.7	15.4	15.4		4.3
		5.2	7.7	1.1	3.6	5.7		
		1.0	1.7	.3	.7	.7		
18		1	5	4	5	5	1	21
		4.8	23.8	19.0	23.8	23.8	4.8	7.0
		1.7	7.7	4.6	9.1	14.3	100.0	
		.3	1.7	1.3	1.7	1.7	.3	
19		4	1	4	4	3		16
		25.0	6.3	25.0	25.0	18.8		5.3
		6.9	1.5	4.6	7.3	8.6		
		1.3	.3	1.3	1.3	1.0		
20		1	1	4	6	6		18
		5.6	5.6	22.2	33.3	33.3		6.0
		1.7	1.5	4.6	10.9	17.1		
		.3	.3	1.3	2.0	2.0		
COLUMN TOTAL		58	65	87	55	35	1	301
		19.3	21.6	28.9	18.3	11.6	.3	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
95.08351	95	0.4783	0.013	112 OF 120 (93.3%)

NUMBER OF MISSING OBSERVATIONS = 41

TABLE LXXXIV

CHI-SQUARE ANALYSIS OF AGE AND BEST REASON FOR NOT TEACHING NUTRITION EDUCATION

Q30	Q2 BELOW 21	21-30	31-40	41-50	50 +	ROW TOTAL
1 LACK OF FINANCES			1	1		2
			50.0	50.0		7.4
			14.3	10.0		
			3.7	3.7		
2 LACK OF KNOWLEDG		1		2		3
		33.3		66.7		11.1
		33.3		20.0		
		3.7		7.4		
3 LACK OF TIME	2	1	1	4	4	12
	16.7	8.3	8.3	33.3	33.3	44.4
	100.0	33.3	14.3	40.0	80.0	
	7.4	3.7	3.7	14.8	14.8	
5 LACK MATERIALS		1	5	3	1	10
		10.0	50.0	30.0	10.0	37.0
		33.3	71.4	30.0	20.0	
		3.7	18.5	11.1	3.7	
COLUMN TOTAL	2	3	7	10	5	27
	7.4	11.1	25.9	37.0	18.5	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
12.76286	12	0.3865	0.148	20 OF 20 (100.0%)

NUMBER OF MISSING OBSERVATIONS = 315

TABLE LXXXV

CHI-SQUARE ANALYSIS OF HIGHEST LEVEL OF EDUCATION AND BEST REASON FOR NOT TEACHING NUTRITION EDUCATION

Q30	Q4 COLLEGE GRAD	CDA	HS GRAD	GED	ROW TOTAL
	1	2	3	4	
1 LACK OF FINANCES			2		2
			100.0		7.1
			15.4		
			7.1		
2 LACK OF KNOWLEDG	3		1		4
	75.0		25.0		14.3
	33.3		7.7		
	10.7		3.6		
3 LACK OF TIME	2	1	6	3	12
	16.7	8.3	50.0	25.0	42.9
	22.2	50.0	46.2	75.0	
	7.1	3.6	21.4	10.7	
5 LACK MATERIALS	4	1	4	1	10
	40.0	10.0	40.0	10.0	35.7
	44.4	50.0	30.8	25.0	
	14.3	3.6	14.3	3.6	
COLUMN TOTAL	9	2	13	4	28
	32.1	7.1	46.4	14.3	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
8.28533	9	0.5057	0.143	15 OF 16 (93.8%)

NUMBER OF MISSING OBSERVATIONS = 314

TABLE LXXXVI

CHI-SQUARE ANALYSIS OF AGE AND TEACHING NUTRITION EDUCATION AFTER TRAINING

Q31	Q2	BELOW 21 (1)	21-30 (2)	31-40 (3)	41-50 (4)	50 + (5)	ROW TOTAL
1 YES	COUNT	2	3	7	7	4	23
	ROW PCT	8.7	13.0	30.4	30.4	17.4	95.8
	COL PCT	100.0	75.0	100.0	100.0	100.0	
	TOT PCT	8.3	12.5	29.2	29.2	16.7	
3	COUNT		1				1
	ROW PCT		100.0				4.2
	COL PCT		25.0				
	TOT PCT		4.2				
COLUMN TOTAL		2	4	7	7	4	24
		8.3	16.7	29.2	29.2	16.7	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
5.21739	4	0.2657	0.083	8 OF 10 (80.0%)

NUMBER OF MISSING OBSERVATIONS = 318

TABLE LXXXVII

CHI-SQUARE ANALYSIS OF LEVEL OF EDUCATION AND TEACHING NUTRITION EDUCATION AFTER TRAINING

		Q4					
	COUNT I						
	ROW PCT I	COLLEGE	CDA	HS GRAD	GED		ROW
	COL PCT I	GRAD					TOTAL
	TOT PCT I	1	2	3	4		
Q31							
	1 I	8	1	12	3		24
YES	I	33.3	4.2	50.0	12.5		96.0
	I	88.9	100.0	100.0	100.0		
	I	32.0	4.0	48.0	12.0		
	3 I	1					1
	I	100.0					4.0
	I	11.1					
	I	4.0					
	COLUMN	9	1	12	3		25
	TOTAL	36.0	4.0	48.0	12.0		100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
1.85185	3	0.6037	0.040	6 OF 8 (75.0%)

NUMBER OF MISSING OBSERVATIONS = 317

VITA[2]

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Candidate for the Degree of

Master of Science

Thesis: THE EXTENT OF NUTRITION EDUCATION TAUGHT IN CHILD CARE CENTERS

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