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Sociodemographic factors influencing the food choices of young adults in rural Iowa

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Sociodemographic factors influencing the food choices of
young adults in rural Iowa

by

Cynthia Mary Goody

A Thesis Submitted to the
Graduate Faculty in Partial Fulfillment of the
Requirements for the Degree of
MASTER OF SCIENCE

Departments: Family and Consumer Sciences Education and Studies
Food Science and Human Nutrition
Co-majors: Home Economics Education
Nutrition

Signatures have been redacted for privacy

University
Ames, Iowa

1993

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CHAPTER I. INTRODUCTION

The fundamental public health accomplishments of earlier generations have caused the current health agenda to focus on health promotion (Stoto, Behrens, & Rosemont, 1990). Nutrition has an important role in the prevention of many health conditions. The underlying factors that contribute to nutrition-related problems and conditions of poor nutrition and health status, such as behavioral, cultural, and social factors, need to be recognized. Educating both the public and health professionals about the role of lifestyle as it contributes to an individual's, especially a young adult's, nutrition and health status is an important way to facilitate nutrition education programs, and achieve nutrition goals and objectives. In order to develop better nutrition education interventions to improve the health status of a population, the behavioral, cultural, and social factors that influence each population subgroup must be understood. This research will emphasize behavioral, cultural, and social factors associated with food-related choices of young adults. In 1990, it was estimated that there was a total of 283,713 young adult (aged 18 to 24 years) females and males living in Iowa (United States Bureau of the Census, 1990). Subgroups within a population may have a disproportionate prevalence of factors known to be associated with poor health status and inadequate dietary intake. Young adults are one subgroup in which behavioral, cultural, and social factors may negatively influence their food choices.

People's lifestyle behaviors are reflected in the nature of their food intake. A person's food intake results from choices of what to eat and drink and how much to

consume (Birch, Billman, & Richards, 1984). A person's food choices, due to learned behavior, may affect his or her nutrition and health status both now and in the future.

The food choices of a person are influenced by his or her cultural experiences. Only humans have a set of culturally transmitted nutritional beliefs, values, and modes of food preparation and cuisine (Rozin, 1990). Food is a cultural object in that knowledge, beliefs, and customs surrounding food are shared by members of a society and passed on to succeeding generations (Steelman, 1976). Further, the food one chooses may have little to do with the food itself. Rather, it may be seen as a symbol with emotional meanings such as reward, punishment and/or celebration (Marralle, Shipman, & Rhodes, 1986).

However, cultural factors cannot explain entirely all the variations in food choices among members of the same culture. Many factors influencing food choices originate from family socialization (Baranowski & Nader, 1986). Some variations may be attributed to either genetic differences or individual experiences (Rozin, 1990). An example is parental influence, especially that of the mother, who in traditional settings supervises food preparation and feeding (Birch, 1980; Birch et al., 1984; Burt & Hertzler, 1978). The father's role relative to food choices is also influential. The decisions of what will be liked or disliked and/or served may be based on the father's behavior towards food (Birch, 1980; Bryan & Lowenberg, 1958).

Additionally, social factors work indirectly through cultural mediation to control what foods are experienced and in what combinations (Rozin, 1990). Humans do not eat solely to live, eating is a part of the social universe, as are most behaviors

(Mintz, 1979). An individual's food choices seem to be affected by changing societal values and attitudes because choices and changes seem to affect the values and attitudes of individuals. The emphasis on the self-realization of the individual and adjustment of living away from the family unit has implications for food consumption by individuals, especially the food consumption of young adults (Helmick, 1978).

Multiple factors behaving in a synergistic way appear to be more significant than any single factor working independently to influence food choices (Sanjur, 1982). Food choice is a multidimensional research subject that requires investigation in many areas. These areas of investigation include demographic factors such as age, education, and income; the effect of social power in the home; the cultural and symbolic meaning of food; the influence of advertising; the environment; the influence of family members and friends; and body image (Holden, 1971; Pumpian-Mindin, 1954; Pearce, Amos & Terry, 1987; Rozin & Fallon, 1988; Schafer, 1978; Schafer & Keith, 1981; Searles, Terry & Amos, 1986; Sexton, 1974).

The emphasis of this research is the behavioral, cultural, and social factors associated with young adult food choices. Young adults have unique personal situations that may influence their food choices and food-related behavior. Brodzinsky, Gormly, and Ambron (1986) have described young adulthood as a period ranging from the ages of 18 to 24. In this period of development, an individual is legally an adult, but may not have completely undertaken adult work and roles.

A young adult's life is characterized as being more stable than an adolescent's, a time when the individual has developed a sense of self-acceptance and consistency of

behavior (Daniel, 1975). During this time, thinking is often directed toward others, career, and adult life rather than one's self. As young adults seek independence from the family unit, a more influential role is played by peers and other adults in the young adult's life. Further, the young adult's concerns revolve around image, independence from the family unit, peer relationships, intellectual capacities, and career aspirations. Such independence may lead to autonomous decisions about food choices.

Numerous studies have examined various target populations and their respective food choices. Typically studied populations are those with special nutritional requirements such as pregnant and lactating women, infants, children, elderly, and hospitalized patients. Although a few studies have examined factors influencing the food choices of young adults, the sampled group usually comprises college students. No existing literature has been identified about the food choices of young adults living in rural areas. There have been vast economic and social changes in rural areas and small towns in recent years. The economic recession of 1979-1982 halted employment in rural areas and the mild economic recovery of 1982-1985 did not promote increased employment in rural areas (Larson, Saltiel, Jobes, Faulkner, & Gilchrist, 1988). These problems confronting rural areas in the United States from the mid-1970s to mid-1980s caused a farm crisis with major challenges to young people seeking agriculture-related employment. Employment opportunities, both on and off the farm, were often limited, sporadic, or nonexistent. The farm crisis created hardships in rural areas unparalleled since the Great Depression. Hardships affected individuals, families, and whole communities. Young adults in rural areas of Iowa endured the farm crisis as

adolescents, a stressful and critical time in their lives when they were still a part of their families and a time when they were beginning to plan their adult lives (Bultena, Lasley, & Geller, 1986; Van Hook, 1990). Such events may have prompted young adults to think of the rural areas as a poor prospect for growth and employment due to lack of facilities and resources and/or because of geographic locations. Young adults in rural areas may have different factors influencing their food choices and different motivations for consuming particular diets than do their counterparts who are living on college campuses and in urban areas. Further, young adults in rural areas may have different food choices. These factors may be identified through various research methods related to food choices.

Traditionally, nutrition education research has been quantitative in nature depending primarily on survey questionnaires for assessment of knowledge, attitudes, and behavior. In this type of evaluation, effectiveness is measured by the amount of change noted between pre-and post-intervention (Sims, 1981). However, nutrition educators are increasingly aware of the inadequacy of evaluation results based exclusively on quantitative data (Edwards, Mullis, & Clarke, 1986; Guthrie, 1984; Talmage, Hughes, & Eash, 1978). Such quantitative accounts do not provide researchers with any detailed insight as to how or why the changes were achieved (Mullen & Iverson, 1982). Conversely, qualitative data provide information on the process variables between pre- and post-measurements (Patton, 1990). Further, a qualitative approach may also document effects not anticipated by researchers.

In order to identify the behavioral, cultural, and social factors influencing the food choices of young adults for this study, qualitative research, using focus groups was employed. As a qualitative research approach, focus group interviews offer a way for obtaining in-depth information from informants of a selected sample in an atmosphere that encourages discussion of feelings, attitudes, and perceptions about a specific topic (Krueger, 1986; McDaniel, 1979).

Focus groups were conducted separately for females and males because of the different perspectives each may have about food choices. For example, females typically are concerned with weight-loss and dieting more than are males. In addition, a heterogeneous focus group was conducted to compare and contrast the findings with the male and female focus groups.

Definitions

The definitions provided in this section include terms that are common to nutrition and qualitative research.

Young adults: Males or females aged 18 to 24 years (Brodzinsky et al., 1986).

Persons generally living outside the home of origination for the first time.

Sociodemographic: A multidisciplinary approach to studying a sample investigating both sociological and demographic factors (Theodorson & Theodorson, 1969). The analysis of sample variables, namely demographics, that contribute to the wider field of population studies and relate population changes to nondemographic factors such as behavioral, cultural, social, and/or other factors (Kuper & Kuper, 1985).

Behavior: An observable act(s) studied in its own right; it is also a learned, consistent disposition (Ajzen & Fishbein, 1980; Allport, 1967; Fishbein & Ajzen, 1975).

Culture: The knowledge, beliefs, and customs that people share; these patterned behaviors are learned through successive generations (Eliot, 1949; Foster, 1962; Freedman, 1976; Shapiro, 1960).

Social: The efforts of a group to influence the behavior of individual members. It includes the concept of social norm. More specifically, social norm refers to the influential patterns that people exert on each other and the particular parts that given persons play in social interactions (Maccoby, Newcomb, & Hartley, 1958; Newcomb, 1943; Turner, 1991).

Food choice: The self-reported selection from various food alternatives and frequencies of food consumption. An intention to consume certain foods (Tuorila, 1990). Food choice is different from food preference which is liking specific foods over other foods and/or liking or disliking particular foods (Logue, 1991). Also, the term food habit is not to be confused with food choice. Food habit refers to the act of doing rather than thinking. Food habit is a generalized term commonly used in research (Murcott, 1988).

Rural: A location with less than 2,500 inhabitants in an incorporated area. It includes farm or nonfarm (acreage) areas (Kaplan & VanValey, 1980; United States Bureau of the Census, 1990).

Focus Group: A group discussion in which a small number (usually six to eight) of informants, under the direction of a moderator, discuss topics that are of special

importance to the investigator (Calder, 1977; Folch-Lyon & Trost, 1981; Krueger, 1988; Morgan, 1988).

The purpose of this study was to identify those behavioral, cultural, and social factors influencing the food choices of rural, young adults in Iowa. This study was a part of the North Central Cooperative Regional Research Project, NC-200, "Behavioral and Health Factors that Influence the Food Consumption of Young Adults." The objectives for the regional project are to: (a) identify traits, behaviors, concerns, and perceptions that influence the food consumption decisions of young adults, and (b) determine the cultural, behavioral, and perceptual factors, and their interactions on the diet of young adults. This study was pursued as a part of the effort to attain both of these objectives.

Objectives

1. To identify the food choices of young adults living in rural areas.
2. To determine the sociodemographic, behavioral, cultural, and social factors influencing the food choices of young adults in rural areas.
3. To characterize the significant food choices of young adults in rural areas based on data collected from focus groups.

Assumptions

1. Young adults will answer questions about their food choices honestly during focus group interviews.

2. Focus group interviews will provide meaningful data about the food choices of young adults living in rural areas.

Limitations

1. The focus group study will be conducted in specific rural areas in Iowa; conclusions will not be entirely universal for other rural areas in Iowa.
2. The study will be conducted during one time period; it cannot be generalized to past or future times.

The successive chapters of this thesis will discuss the review of literature, methodology, results, conclusions, and recommendations.

CHAPTER II. REVIEW OF LITERATURE

Increased public interest in health, specifically nutrition, has spurred an increase in the flow of information about the role of diet, factors influencing food choices, and nutritional goals among specific population groups. Such information is useful for developing nutrition intervention programs and designing nutrition education materials. In the past, as well as the present, most studies have focused on the effects of food choices on infant, child, and adolescent populations. In particular, there is little evidence given in the literature about food choices of the young adult population. It is noted that the young adult population possesses unique personal situations that may influence their food choices. This study identifies the behavioral, cultural, and social factors that influence the food choices of young adults living in rural areas of Iowa.

This literature review focuses on:

1. Qualitative research as a method for identifying factors influencing food choices.
2. Food choices of young adults in collegiate and/or urban, and rural areas.
3. Behavioral factors influencing food choices.
4. Cultural factors influencing food choices.
5. Social factors influencing food choices.

Qualitative Research as a Method for Identifying Factors Influencing Food Choices

The food choices of young adults are attributed to a multitude of interrelated sociodemographic and psychological factors. To research this topic, one must have a working knowledge of both theoretical constructs and methodologies to link food choice and sociodemographics in an alliance for research progress. In order to apply theories and methods, one needs to recognize what is required to combine the constructs of food choice and sociodemographics in order to address the research problem. This may be accomplished by understanding how qualitative research can be employed in studies relating to food choices.

There has been much discussion as to which research method is the best to use in nutrition education research; that is, considerable disagreement exists over the relative appropriateness of quantitative and qualitative methods for conducting nutrition education research. Bogdan and Taylor (1975) noted that debates over which methods are the most appropriate are debates about assumptions and goals, as well as theory and practice. The degree to which an investigator uses either or both methods is determined by the nature of the research problem (Achterberg, 1988). There is a place and a role for both methods, even within the same study, depending on the purpose of the research.

As a result, there has been a plea for developing meaningful and accurate techniques that take into account both qualitative and quantitative methods to produce verifiable and scientific knowledge. Adams (1959) contended that the most

advantageous interaction between nutrition and multidisciplinary research fields are achieved through the collaborative and collective use of the unique perspectives and areas of understanding of both scientific and applied levels of each discipline.

Because the research mode for this project is qualitative in nature, the following discussion will focus only on a qualitative approach to studying food choices, namely the use of focus groups. Bogardus (1926) first discussed focus groups for research purposes. They were mentioned occasionally in subsequent decades; however, focus groups were not widely used for thirty years. In the 1950s, the focus group data collection method was refined by marketing researchers as an alternative to surveying large samples of potential customers (Calder, 1977). This outcome occurred due to the lack of information provided by survey questionnaires as to why customers behaved as they did. Researchers turned to qualitative research techniques, such as focus groups, to develop a better understanding of the “why” behind quantitative research. Although focus group discussions have been used primarily by proprietary companies for marketing research, several studies indicate the increasing use of this method for health and nutrition education research, program planning, and formative and summative evaluation. Focus groups have been used to: evaluate nutrition education materials, develop a prenatal weight gain intervention program, identify reactions to a proposed worksite cafeteria nutrition program, explore consumers’ preferences for content and graphic design of nutrition publications, assess beliefs of older rural Americans about nutrition education, and improve health education practices (Basch, 1987; Brown et al.,

1992; Crockett, Heller, Merkel, & Peterson, 1990; Schwaller & Shepherd, 1992; Shepherd, Sims, Cronin, Shaw, & Davis, 1989; Trenkner & Achterberg, 1991).

Small groups, such as focus groups, used by health and nutrition education researchers are used for participants' benefits. Group thinking is important for the development of health promotion campaigns and nutrition education. These discussions are used by researchers to empower individuals, organizations, and communities in important ways, for example, to: (a) assist individuals to modify or maintain health-related behavior, (b) provide a supportive setting for individuals sharing a common goal or problem, and (c) organize community and/or organizational members to improve their own capability to identify and solve their own problems (Basch, 1987; Turner, 1964).

Focus groups generate qualitative data that are used in a multitude of ways depending on the design and specific purposes of the research project (Axelrod, 1976). Findings from qualitative research may assist in the design of quantitative studies, may be used in conjunction with other qualitative research to broaden or confirm findings, or findings may be used alone to generate ideas or learn more about the ways participants view the world (Stewart et al., 1993).

The widespread utilization of focus groups by marketing agencies on behalf of the commercial and private sectors and more recent application concerning health- and nutrition-related practices, programs, and materials illustrate the flexibility of focus groups as a qualitative data collection method for obtaining diverse information about samples and subsamples from a population. The focus group interview is a method to

gain insight on a variety of topics. An in-depth description of the use of focus groups for this study is included in Chapter III of this thesis.

Food Choices of Young Adults in Collegiate and/or Urban, and Rural Areas

The nature of one's health practices is attributed to lifestyle (Lau, Quandrel, & Hartman, 1990). Familial socialization may strongly influence lifestyle (Baranowski & Nader, 1986; Litman, 1974). The family is considered the most important agent of socialization (Elkin & Handel, 1978). Within the familial socialization unit, human relationships are formed, which in turn influence health habits, including the development of food choices (Hertzler & Owen, 1976). The study of food choices in family life, especially that of parental influence on their children's food choice, has been the object of much research. Under traditional thinking, the mother is the person influencing the food choices of her children, because she is responsible for buying the groceries, planning, preparing, and serving the meals. In this sense, the mother is viewed as the controlling element of the child's food practices. Sanjur and Scoma (1971) reported a high degree of agreement for foods selected by mothers and children. Although high positive correlations ($r = 0.39$ to 1.00) were obtained, correlations were reported for only a small percentage of the 50 foods rated, and no levels of significance were indicated. Mothers' reports of their children's food preferences are not always an unbiased source of information because the children's preferences may actually reflect the mother's preferences.

The influence of the father on a child's food choices is well documented. Studies have illustrated the family menu planned around the male head of the household's food choices and food preferences (Birch, 1980; Bryan & Lowenberg, 1958; Burt & Hertzler, 1978; Cosper & Wakefield, 1975; Moore, Beasley, & Moore, 1970; Sanjur & Scoma, 1971). In one study, 89% of mothers indicated that some foods were served infrequently or eliminated altogether from the family menu in deference to the father's food preferences (Bryan & Lowenberg, 1958). Bryan and Lowenberg (1958) also appraised the relationship between the food preferences of the father and those of his child. It is difficult to measure such a relationship because the child's food preferences are not as well established as the father's food preferences. The most significant correlation was for the vegetable group ($r = 0.28$; $p < .05$). Vegetables as a group were among the 36 foods least liked by both. No significant relationships were discovered for protein foods, fruits, or for all categories combined. This study measured the same percentage of the foods within a category liked by fathers and their children; it did not measure whether fathers and children liked the same foods. The fathers' influence on children's food preferences seems to be limiting the variety of foods offered to children.

Factors influencing young adult food choices in collegiate and/or urban areas

A few studies have examined the factors influencing the food choices of young adults; the sampled group typically has been comprised of college students. Further, dietary practices and food choices of college students have been of interest to

researchers for many years. College students often skip meals, make poor food choices, diet excessively, consume an inadequate amount of nutrients and calories, and practice behaviors linked to eating disorders (Carter & Moss, 1984; Einstein & Hornstein, 1970; Grunewald, 1985; Halmi, Falk, & Schwartz, 1981; Jakobovits, Halstead, Kelley, Roe, & Young, 1977; Marrale et al., 1986; O'Leary & Lee, 1975; Squires & Kogan, 1985). Several factors have been identified that influence dietary practices among college students. These factors include academic major, body image, caloric intake, and gender (Crockett & Littrell, 1985; Hemon, Skinner, Andrews, & Penfield, 1986; Melby, Femea, & Sciacca, 1986; Miller, Coffman, & Linke, 1980; Pearce et al., 1987; Wakefield & Miller, 1971).

Maintaining an adequate nutrition status is a difficult task for many young adults in collegiate and/or urban settings because much of an individual's mental, physical and social maturation occurs during this stage of life. During students' first three years of college, there are considerable changes in their health practices. Peers have a strong influence in a collegiate setting; however, parents of college students are more influential than peers as the source for health practices (Basch, 1987).

Marrale et al. (1986), in their study of eating practices of college students (n=437), reported that 49% ate two meals per day, while 36% ate three meals per day. All subjects consumed snacks, with 70% having one to two snacks per day. Further, 54% indicated they were currently dieting or had dieted in the past.

Beerman, Jennings, and Crawford (1990) identified significant differences in ($p < .05$) student's reported food choice (n=152) according to residence (dormitories,

off-campus housing, and Greek housing). The weekly consumption of alcoholic beverages was higher among students living in Greek housing or in off-campus housing ($p < .001$) than in dormitories. There were no significant differences noted in meat consumption patterns among students from the three residences. Vegetables and fruits (fresh or canned) were the least likely consumed food items by students living off-campus. Thirty-one percent of off-campus residents, 55% of Greek housing residents, and 56% of dormitory residents reported eating fresh vegetables daily. The students rated the overall adequacy of their diet on a scale of 1 to 10. The mean rating for the three groups was 6.24 for students living in Greek housing, 6.27 for students living in dormitories, and 6.68 for students living off-campus. There was no significant difference in how students rated their diet based on where they lived. Students living in Greek housing were less likely to skip meals as compared to students living on or off-campus ($p < .05$). Sixty-four percent of Greek housing students reported rarely skipping meals, whereas 34% of both students living in dormitories and off-campus rarely skipped meals. Sixty-one percent of all students reported that skipping meals was due to lack of time.

Hertzler and Frary (1989) observed similar dietary practices of college students ($n=212$) in their study. Of the sample, 43% reported skipping breakfast more than half the time, males about as often as females. Typically, breakfast has been the meal most often skipped by college students (Khan & Lipke, 1982; Schank, Thomas, & Young, 1987). Although 14% of the students noted they hardly ever snacked, 81%

indicated snacking one to three times a day, and 4% indicated four or more times per day (Hertzler & Frary, 1989). Snacking patterns had no relationship with gender, year in school, or the amount of cooking experience. Although snacks contributed significantly to the dietary intake of this group, students selected more nutritious snacks if they were available. Forty percent of the college students prepared frozen and/or canned vegetables and fresh and/or frozen meat more than three times per week, and 25 to 30% of students prepared fresh vegetables and grains and/or pastas more than three times per week.

After learning about the major nutrients and foods containing those nutrients, and through the completion of a three-day diet record, students noticed changes in their food patterns at the time of the study (Hertzler & Frary, 1989). Although amounts were not determined in this study, 50% of college students sampled increased their use of milk products and 40% increased vegetable consumption. The least amount of increase in consumption occurred for legumes (14%), and meat, fish, and poultry (12%). Fifty percent of college students indicated a decrease in their fat, sugar, salt, and caloric dietary intakes. Twenty percent of the students indicated a decrease in alcohol consumption.

In previous studies, researchers have shown that changes in food practices due to nutrition courses in education programs and/or a college course in basic nutrition is difficult to demonstrate. However, improvement in dietary intake occurs in food groups that are most limited in the diet of the college student, for example, dietary intake of milk, fruits, and vegetables (Hertzler, 1983; Mazzeo-Caputo, Danish, &

Kris-Etherton, 1985; Mitchell, 1990; Schafer, 1986). When the goal of such a program is to provide academic and practical nutrition education, it is sometimes complicated by the issue of informing consumers who value good nutrition, yet who may be reluctant to learn more complex nutrition information. Classroom tests measure textbook nutrition knowledge; however, the practical and everyday application of nutrition and dietary practices are not as measurable. Several studies have reported that nutrition knowledge is not related to dietary practices (Perron & Endres, 1985; Schwartz, 1975; Shepherd & Stockley, 1987; Sims, 1981). Many college students do not take time, or do not have the time to eat properly and may not realize how deficient their diets are. The damaging effects of inadequate dietary intake and poor food habits may result in health problems now or in the future.

Factors influencing the food choices of young adults in rural areas

Although an exhaustive literature search was conducted utilizing various computer databases and making professional contacts, no literature was located about the food choices of young adults living in rural areas. Young adults in rural areas may have different food choices and factors influencing their food choices than their collegiate and/or urban counterparts. Any differences may be influenced by behavioral, cultural, and social factors affecting their food choices.

There has been much out migration of young adults from the rural areas to the urban areas of society. As a result of isolation in some rural areas, it is sometimes difficult to identify young adults in this area. Special attention should be given to this

segment of the population because some rural young adults may not have had as much access to health promotion services as their urban counterparts. It is crucial to encourage health promotion activities that have the potential of helping young adults attain and maintain optimal health. Nutrition intervention may be needed in rural areas. Nutrition education is one of the key health promotion activities.

Behavioral Factors Influencing Food Choices

The recognition of nutrition as perhaps the ubiquitous of all factors influencing health, growth, and development has led the way to the idea of nutrition as a focus of human behavior (Sanjur, 1982). Such recognition of the importance of human behavior related to nutrition spurred the establishment of the National Research Council. The efforts of this council as well as many other groups and individuals has provided a breakthrough in the study of nutrition within appropriate sociocultural contexts. This section of the review of literature discusses the role of behavior, Fishbein-Ajzen model, social cognitive theory/social learning theory, and food choice related to behavior.

Role of behavior

Behavior is any observable act that is studied in its own right or used to infer beliefs, attitudes, and/or intentions (Fishbein & Ajzen, 1975; Triandis, 1971, 1977). Behavior can be measured directly, such as food consumption, or it can be implied from verbal statements, such as from a food frequency instrument. According to Ryan (1970), the single best predictor of an individual's behavior is a measure of intention to

perform that behavior. This does not mean a measure of intention will always correlate with a single action; there are many actions that may influence the magnitude of any intention-behavior relationship. Three factors that influence the relationship between intention and behavior include the degree to which the intention and behavior correlate; the stability of the intention; and the amount of volitional control the person exhibits. Typically, it is assumed that a person's behavior toward an object such as food is determined by his or her attitudes. An attitude is a learned predisposition to respond to an object in a consistently favorable or unfavorable manner (Fishbein & Ajzen, 1975).

If it is accepted that all behavior in every organism is ultimately determined by the body, then behavior must be affected by what is eaten (Logue, 1991). The forces and circumstances that shape the diverse patterns of human food choice may be used to explain how food choices affect human behavior in intelligible and predictable ways.

Fishbein-Ajzen Attitude-Behavioral Model

Behavioral research related to nutrition from the fields of philosophy, anthropology, sociology, and psychology is only about 35 years old with the most significant research occurring in the last 20 years. Perhaps one of the most classical models used by nutrition educators to explain behavior is the Fishbein-Ajzen Attitude-Behavioral Model. This model predicts a person's behavior from his or her attitude toward the behavior rather than from just the attitude toward the object of behavior (Fishbein and Ajzen, 1975). The attitude toward a behavior is influenced by whether the person tends to feel the peer group and/or society approves of the behavior. If one

could measure attitude, then one would be able to explain and predict behavior (Fishbein & Ajzen, 1975). Such a definition implies a strong relationship between attitude and behavior.

Fishbein and Ajzen (1975) also developed a model of reasoned action to predict an individual's intention and behavior. They viewed intention as the best predictor of behavior. Intention determines an individual's attitude toward an act (attitude) plus the perceived social pressure to perform the behavior (subjective norm). The theoretical parameters, attitude (w_1) and subjective norm (w_2), reflect the affective and subjective norm, respectively, in determining intention. These parameters are determined using regression analysis. The model components are expressed as follows:

$$\text{Behavior} = \text{Intention} = \text{Attitude}(w_1) + \text{Subjective norm}(w_2).$$

Axelsson, Brinberg, and Allen (1986) used Fishbein's theory of reasoned action in predicting food-related behavior (that is, eating at a fast-food hamburger restaurant) with collegiate and community samples. A total of 154 college students and 212 community residents completed a questionnaire that measured components of the Fishbein model. Two weeks later, 104 (68%) college students and 164 (77%) community residents completed a follow-up questionnaire that asked whether they had eaten at a fast-food hamburger restaurant in the past two weeks. The correlation between intention and behavior was 0.42 ($p < .01$) and 0.41 ($p < .01$) for the community and college samples, respectively. Seventy-one percent of the community residents behaved consistently with their intentions; 73% of intenders actually ate at

fast-food hamburger restaurants, and 68% of nonintenders did not eat at fast-food hamburger restaurants. Similarly, 74% of college students behaved consistently with their intentions: 79% of the intenders and 67% of the nonintenders acted as they predicted. The relationships among model components were similar across the two sample populations. This finding increased confidence in the use of the Fishbein model as a predictor of eating behavior.

Food-related behavior results from the combined influence of environmental, personal, and biological factors. Given those factors, there is a need to expand the studies on food choices to include factors from a wider range of environmental, personal, and biological influences. The use of the social cognitive theory provides an opportunity to accomplish this need.

Social cognitive or social learning theory

Social cognitive theory, or social learning theory, is based in the field of psychology and is intended as a framework for identifying factors that influence behavior (Bandura, 1977, 1986). It combines an emphasis on behaviorist notions, such as reinforcement, recognizing the importance of intermediate cognition roles. Research reveals that people learn and retain behavior much better by using cognitive aids they generate than by reinforced repetitive performance. Cognition has more influence than internal determinants on behavior (Bandura, 1977). In this theory, people are neither motivated by inner forces nor buffered by environmental influences. Psychological

functioning is a continuous reciprocal interaction of personal and environmental determinants. Symbolic, vicarious, and self-regulatory processes assume a prominent role in the social cognitive theory. Through self-regulatory processes, people are able to exercise some control over their own activities by thinking about consequences for their own actions (Bandura, 1977, 1986). Social cognitive models are widely used within the psychological and sociological disciplines. Such models are an appropriate framework for examining health and food behaviors because the models allow for the structuring and ordering of a range of variables known to influence behavior.

As a result of these basic developments, the social cognitive theory has received empirical support. Researchers have arranged the components of the social cognitive model into a causative pattern (Akers, Krohn, Lanza-Kaduce, & Rodosevich, 1979; Strickland, 1982). Within the model, the environment was structured as an initial source of influence and was termed “differential association.” Differential association refers to interaction and identity with different groups that provide social environments. Differential association leads to social reinforcement, the opportunity to model behaviors, and evaluative definitions, which are individual norms, attitudes, and orientations. These factors also act to influence behavior. There is an additional component, physiological need, a nonsocial reinforcement, that acts directly on the behavior in question.

Lewis, Sims, and Shannon (1989) used social cognitive theory to structure the relationships among measurable factors important to the consumption frequency of

certain foods, namely beverages. They developed a model that incorporated factors for social environment, reinforcement, commitment, behavior modeling, knowledge, and attitude regarding the consumption frequency of four beverages (whole milk, low-fat/skim milk, regular soda, and diet soda). Four-hundred fifty-seven middle-aged adults (mean age, 47 years; 58% female, 42% male) and 709 college students (mean age 21 years; 50% female, 50% male) responded to a written questionnaire designed as a self-report on the frequency of food/beverage consumption and measures for 10 social cognitive variables. For all four beverages, the model explained 35% or more of the variance in frequency of consumption, thus confirming its predictive nature. It was demonstrated that factors influencing the consumption varied between the two age groups. For example, nutrition knowledge was related to attitude in adult soda-drinking models but not in student soda-drinking models, and between forms of the beverages; that is, for student models, nutrition knowledge was related to taste enjoyment for low-fat/skim milk, but not for whole milk. It also was suggested that the variables of social reinforcement, behavior modeling, and nutrition knowledge may act to influence consumption indirectly through other factors such as attitude and behavior commitment.

Food choice as related to behavior

The study of health and food behaviors is an emerging field (Gochman, 1988). Few institutions, organizations, books, and journals are directed toward the study of

health behavior. To do so would strengthen the description of behavior. Such a study recognizes that personal attributes and behaviors reflect familial influences, peer group factors, and societal, institutional, and cultural influences (Gochman, 1988). A more specific area of health behavior, namely, nutrition-related behavior, has been developed by nutritional anthropologists and social psychologists.

Many anthropologists have studied the sociocultural factors influencing food intake and food choice. Obviously, there are many different studies relating to food intake, including ethnographic, ecological, economic, biocultural, nutritional, and ethnoscientific approaches. Such studies use a wide variety of research methods to examine different aspects of nutritional anthropology that typically reflect a global perspective. Interest about possible effects of people's food behavior in the United States has been substantial. Indeed, most human behavior, especially that concerned with nutrition, has multiple causes. No cause provides sufficient evidence to account for observed phenomena (Pelto, Pelto, & Messer, 1989). Basic research in nutrition and behavior may increase the effectiveness of interventions designed to alter behaviors as they relate to nutrition.

Cultural Factors Influencing Food Choices

The study of food choices relative to young adults, is important in several respects. A study such as this must address cultural explanations of food choices. This section of the review of literature focuses on the role of culture, Mead's Core Model,

Lewin's Channel Theory, materialist and idealist approaches to food choice, and food choice as related to culture.

Role of culture

Culture has a pervasive influence on food choices in the human diet. Food is a cultural object. Knowledge, beliefs, and customs about food shared by members of society are passed on to successive generations (Steelman, 1976). Theory and research strategies used to examine cultural factors influencing dietary patterns and food choices are derived from segments of several classical academic disciplines. The disciplines that have contributed in major ways are anthropology, sociology, epidemiology, ethnobiology, geography, psychology, and food and nutrition disciplines, including nutritional biology and nutrition education (Kuhnlein, 1989). Each discipline contributes to the objective of knowing how to evaluate, and then ultimately how to identify the important cultural factors contributing to the nutritional status of individuals and populations.

More specifically, the history of culture and food in anthropological studies is a history of divergent research strategies. Many interrelated terms associated with food choice and culture have been developed by researchers. Typically, nutritional anthropologists use the term "foodways" to discuss this topic. "Food ideologies" and "food events" are synonymous terms for food choice as it relates to culture. "Food habits" is the commonly used term in research. The use of "habit" is not intended

exclusively to refer to behavior that is merely habitual and typical, that is, somehow unthinking or accountable by reference to a notion of tradition. Food habits is used in nutrition and sociological research as a provisional shorthand term to fulfill the widest range of food choice, food preference, meal pattern and cuisine (Murcott, 1988).

Mead's Core Model

Much about food as a part of the analysis of domestic and local organization has been researched by anthropologists. Anthropological studies specifically focused on food received encouragement in the 1930s with Audrey Richards' and in the 1940s with Margaret Mead's pioneering research in this area. Richards (1932, 1939) studied food in its full relation to agriculture and political economy in Africa. Mead (1943, 1964, 1965) studied food habits and social change in the United States during World War II. During this time, immigrants and displaced persons having lost access to their habitual foods often rejected those foods offered to them. This situation was valuable for creating a theory that directed appropriate food supplies to threatened regions for feeding refugees as well as making the best use of existing resources in the homelands. Mead's theory was based upon a core and periphery model for the components of any distinct food system; the core elements (staple foods), identified by their greater frequency of use, were held to be less liable to change than the peripheral elements (infrequently used foods). The problem with this theory was the frequency count of foods appearing on household menus and/or shopping lists overlapped the actual

patterning of the food. When an immigrant population's core selection corresponded to what was cheap and available, unjustifiable impressions of their food habits were depicted.

Lewin's Channel Theory

Lewin (1943) combined the research approaches of cultural anthropology and quantitative methods of psychology to develop a classical theory in food habit research, namely, the Channel Theory. The term "channel theory" arose because Lewin theorized that all food moves step by step, through "channels," the nature and number of which vary from culture to culture. Each channel is controlled by a person(s) in the culture; this person is the "gatekeeper" of the food channel. Gatekeepers are defined as the individuals who purchase, grow, harvest, and/or prepare the food.

The first assumption of the channel theory is that food moves step by step through a channel. The number of steps varies for different channels. The number of steps varies for different foods within a channel. The time food can remain in one position varies. For example, food after home canning may remain for a considerable time in the same position, but food may just stay a few hours or days in the cupboard or in the refrigerator before it is consumed. The food does not move by its own impetus. The gatekeeper determines how a food enters and moves through a channel.

The second assumption of the theory is that there are various forces governing the food channels. The psychological forces influencing the movement of food may be

different for different channels. Each channel provides a certain amount of resistance to movement, and certain foods tend to prevent entrance into the channel. For example, the gatekeeper who considers buying an expensive cut of meat is acted upon by two opposing forces that create a conflicting situation. The force “cost” acts against the food’s entrance into the channel. Conversely, a second force, which corresponds to the appeal of the food tends to bring it into the channel. If the gatekeeper decides to purchase the meat, then the food passes the “gate.” In many societal groups, an adult in the family unit ultimately controls the majority of food channels. Data acquired using this model have provided considerable insight into the existing food practices of various groups. However, such data about present situations do not necessarily provide information about how to proceed to initiate change.

Materialist and idealist approaches to food choice

Classical studies in the literature also use the materialist and idealist approaches to study culture and food choice. Materialist approaches have emphasized the discovery of biopsychosocial and behavioral factors dominating foodways. Idealist approaches have emphasized the discovery of social and structural factors dominating foodways (Harris, 1985).

Cultural materialist strategies are based on biopsychosocial, demographic, economic, environmental, political, and technological factors. Such factors exert a powerful influence on the foods produced and consumed by any given human

population (Harris & Ross, 1987). From the study of history and ethnography, human diets have undergone a profound series of changes related to shifts in basic food production. Such a generalization appears obvious and interesting, but it serves as a beginning, not as an end to the materialist approach.

Cultural idealists explain variations in food choices as a result of cultural influence. This explanation has three propositions: (a) food choices are the result of history that regresses to an unknown beginning, (b) food choices are due to an arbitrary taste, chance, or whim, and (c) food choices are symbolic and/or behavioral expressions of a given system of values and beliefs. According to Lévi-Strauss (1963), a cultural idealist, studies the meaning of food to understand its mental, ideological, and symbolic functions. An explanation for food choice cannot be sought in the nature of the food items, rather it is sought in the system of signs and the fundamental semantic structures of people's underlying thought patterns (Soler, 1979).

Food choice as related to culture

According to Pelto et al. (1989), in any evaluation of food habits, an historical perspective should be included; this perspective should take into consideration possible changes in ecology, cultural influences, and disease patterns over time. In any study of sociocultural factors affecting intake, it is important to remember the biological and cultural interactions in human food selection. How people translate biological information about foods (safe versus dangerous) into culture-related food choices is a

topic researched from most anthropological perspectives. Similarly, the topic of formation and persistence of cultural cuisine has been studied extensively by anthropologists. Cultural cuisine describes the culturally transmitted food-related practices of any given culture: (a) selection of a set of basic (staple) foods, (b) frequent use of a characteristic set of flavorings, (c) characteristic processing of foods, and (d) adoption of a variety of rules dealing with acceptable foods and combinations, festival foods, the social context of eating, and symbolic uses of foods (Rozin & Rozin, 1981). The practices are commonly used to describe cultural food-related practices by both anthropologists, psychologists and sociologists in order to offer a standard outline for describing and comparing cuisine in a cultural manner (Harris & Ross, 1987; Pelto et al., 1989; Sanjur, 1982).

Today, the study of nutrition related to culture is a biocultural issue (Sanjur, 1982). The consequences of food intake and food choice are related to biological functioning that is directly affected by food intake and food choice over the course of a lifetime. The determinants of food intake and food choice, namely what people eat, how, when, where, and how much, are influenced by social, political, economic, and cultural factors.

There are certain attributes of culture to consider when examining culture relative to food choices (Sanjur, 1982). To reiterate, culture is a learned experience, not a biologically determined experience. Culture is the interaction among generations with modifications over time. Change is another attribute associated with culture, and

cultural processes change at different rates. In essence, cultural food choices are dynamic and process-oriented. Individuals within cultures resist change through self-generated modes that perpetuate traits and maintain cultural boundaries. Although far from fixed, an individual's food choices, like all other choices, are also resistant to change.

Further, cultural and biological factors interact in complex ways. Biological factors are specific for individuals and culture is created by individuals (Rozin, 1982). Each human being has certain biological needs that are met by the same nutrients as required by all other people. These needs include what plants and animals are used as food (determinants of what is and what is not edible), sources and forms of food, processes to prepare and distribute food, and eating patterns. For example, United States citizens would typically agree that insects are not culturally acceptable as food, regardless of their nutritional value and abundance. There are many known nutritious foods held in high esteem by members of other cultures that are considered to be inedible in the United States culture: horses, dogs, seaweed, and rattlesnakes, just to name a few (Foster & Anderson, 1978). Further, members of a cultural group also share many ideas about how foods should be prepared. To illustrate, most United States citizens believe meat should be both fresh and cooked. Yet, some societies prefer spoiled and/or raw meat. Although raw fish and meat such as Japanese sushi and Russian steak tartare are a part of the cuisine of the United States, they are a rarity at regular meal times.

It is evident that food choices are dynamic due to a variety of factors, culture is one factor. Culture enables researchers to investigate what is being consumed by humans and for what reasons through an understanding of the knowledge, traditions, beliefs, and values common to those individuals under study.

Social Factors Influencing Food Choices

Role of social factors

History gives meaning to the present, and one way to obtain an accurate historical perspective is to identify the social significance of the subject. For this research topic, this means examining the social factors influencing food choices. The study of social significance of food and eating is attributed to the work of social anthropologists, social historians, public health nutrition professionals, and other social commentators (Murcott, 1983). Because food is a vital necessity, it plays a major role in people's socialization. People eat to survive and to express themselves socially. Eating for survival is one idea, while social values relative to eating are quite another idea. People attach significant and familiar connotations to external objects, events, and circumstances. Social influence is the interpersonal process whereby people directly or indirectly influence the thoughts, feelings, and actions of others (Turner, 1991). This topic raises several questions: how can one persuade another individual or group to change their beliefs, opinions and attitudes; why do members of a social group, subculture, or society tend to hold similar beliefs and act in similar ways; why do

social groups have different social values and view the world differently? Social life is full of issues, questions, and controversy about what is socially acceptable and unacceptable—social norms. Typically, social norms convey an idea that arises more or less directly from social interactions and relationships of social uniformity among members of a social group.

Social interaction among people in society gives rise to social norms in relevant areas. To reiterate, social norms and values are basic to human social life in providing order, coherence, and stability at both the macro-level of society, history, and culture, and at the micro-level of interpersonal relations and individual conduct (Turner, 1985). There is evidence that people form and conform to social norms, and there are processes inherent in social relationships that imply pressures for agreement in explicit group membership. The study of social significance as related to food demonstrates the human ability to construct a world of ideas that fill the materialistic environment with meaning and also provide a research foundation.

Lévi-Strauss' cooking theory

Apart from the sustained research on applied problems, anthropological studies of food have taken several directions in the study of social factors influencing food choices. Lévi-Strauss' (1969) extensive structural anthropological research dealt with food and eating. Although much of his attention focused on cooking, his approach to the relationship of social factors and food is viewed as relevant to anthropology.

Cooking is a universal and distinct human activity. No matter how diverse food choices may be worldwide, all people transform much of what they eat by heating it. Unlike animals, who with rare exceptions eat their food in the state in which it is captured or discovered, humans not only wash, wipe, and/or peel their food, but also may preserve it in a variety of ways and cook it (Lévi-Strauss, 1969).

It was Lévi-Strauss' enduring concerns with universal features of the human species that led him to take such an interest in familiar facts of life. In essence, he determined the significance of cooking as a peculiarity of the human species. As a species, humans are like animals with parallel physiological functions and biological requirements for survival. At the same time, unlike animals, humans have language, intelligence, society and culture blended in a way that is unique. As a result, humans are creatures of nature, society, and culture simultaneously. This structural approach has its drawbacks. Such an approach concentrates on the symbolic codes and meanings attached to a realm of ideas. To some researchers, this philosophy is similar to "idealism," that is, viewing reality as though it were apprehended in thought processes.

Conversely, "social materialism," or simply "materialism" is an alternative philosophy to explaining social factors and food choice in a classical way. Materialism seeks to highlight the practical facts of life. Further, Harris and Ross (1987) elaborated on Lévi-Strauss' dictum of some foods as being "good to think," while others are "bad to think." Preferred food (good to think) are foods that have a more favorable balance of practical benefits over costs than avoided foods (bad to think).

For example, some foods are hardly worth the effort needed to produce and prepare them, some have cheaper and more nutritious substitutes, and some are eaten at the expense of giving up more advantageous items. Foods that are good or bad to think depend on whether people view them as good or bad to eat. Foods must nourish the collective stomach before they can feed the collective mind (Harris, 1985; Murcott, 1988). Explanations for food preferences and aversions are sought through individual underlying thought patterns rather than in the nature of the food items.

Differentiation Model

Studies of social factors influencing food choice have emphasized the importance of other people influencing a person's behavior. As previously noted, some researchers have suggested the appropriate unit of analysis for social influential factors is in the context of human relationships such as family life. The topic of family life is of interest to other research specialists as well as nutrition researchers. As a result of one set of collaborative efforts of nutrition researchers and sociologists, it has been suggested that a sociological dimension measured through food habits is termed, "differentiation," or the capacity to process information. The Differentiation Model refers to the understanding of visible symbols as artifacts of behavior (Young & Young, 1968). For example, families that have great diversity in their diets are considered capable of dealing with increasingly complex information, whereas families relying more on traditional foods and methods of food preparation may not be able to

handle such complex information; thus, the former are considered more differentiated than the latter.

Besides differentiation, this model involves two other ideas, namely, relative centrality and solidarity (Bavelas, 1950). The idea of relative centrality is used by researchers of small groups to study networks of influence. The data obtained are viewed as a measure of the family's participation in a symbolic structure or the degree to which the family culture overlaps all matters of life.

The idea of solidarity is enhanced during dramatic occasions through the reinforcement of group feeling. In certain situations, such as family celebrations, rituals and ceremonies, the family group is enhanced. The solidarity family unit exercises control over individual activities by providing more organization and a greater sense of direction. In this theoretical model, the three variables, differentiation, relative centrality, and solidarity, are used by researchers to highlight how food habits are related to the attributes of the family unit (Young, 1970; Young & Young, 1968).

Such developments indicate what many educators have learned through experience, that is, knowledge alone is not enough to study food habits (Mead, 1964). Knowledge level does not routinely cause an increase in ability to acquire and assimilate information (Cassel, 1957; Hertzler & Owen, 1976). Information must be provided to the family as a unit, so they will be involved as a group. Using the differentiation model, it was discovered that more than appropriate nutrition information is necessary to study food habits. For improved food choices, more must

be understood about the practical causes and consequences of changing foodways or food habits.

Food choice related to social factors

Social factors related to food and nutrition have been researched in numerous ways. Many studies examining social factors related to food choice have common themes summarized in the following areas: (a) humans are omnivores, (b) humans do not eat everything that is potentially nutritious, (c) explanations of such behavior are related to biological function; and (d) cultural and social bases influence people's food choices (Murcott, 1988). As previously discussed, anthropologists have designated this research as foodways, while nutrition researchers and sociologists have designated it as food habits. Research on foodways and food habits involves an in-depth investigation of the nonnutritional issues of food such as ethnic identity, culinary tradition, social structure, social status, and culture change.

It has been recognized that foods have social prestige values that are not necessarily related to their nutrient content. Status foods are usually consumed during special occasions and by wealthy members of the community. The social prestige value of foods depends on their availability. For example, large increases in meat and seafood prices give steak and lobster increased social prestige value. What constitutes a status food depends not only on what it is, where it comes from, and how and where it is prepared and served, but also when it is served.

Today, explicit and systematic discussion of food choices is a significant topic in social anthropology and sociology. In this review of social factors influencing food choices, emphasis on the literature from social anthropology and sociology was illustrated due to each discipline's commitment to the concern of food and eating as it relates to people in society.

Summary

This study was undertaken to identify the behavioral, cultural, and social factors influencing the food choices of young adults living in rural areas of Iowa. In order to gain a better understanding of this topic, a review of pertinent literature was performed. This review of literature focused on qualitative research, namely focus groups as a method of collecting data to identify factors influencing food choices; the food choices of young adults in urban and rural areas; and the effects of behavioral, cultural, and social factors influencing food choices.

CHAPTER III. METHODOLOGY

The qualitative research approach is based on naturalistic philosophy. Since the turn of the century, it has been the recognized research mode in anthropology, history, and political science (Bogdan & Taylor, 1975; Miles & Huberman, 1984). Events are observed naturally, and no attempt is made to artificially manipulate intervening variables. From a naturalistic perspective, reality exists in the human mind, and because people vary, there are multiple interpretations of reality. Hence, it is difficult to explain the social laws governing human behavior, and generalizations are possible only within a time- and context-bound framework (Lincoln & Guba, 1985).

Qualitative researchers must answer the question, “how can an inquirer persuade his or her audiences (including self) that inquiries are worth paying attention to?” (Lincoln & Guba, 1985, p. 290). The standard of trustworthiness answers this question. The issue of how trustworthiness was established in this research is discussed throughout this chapter.

Qualitative research is valued in formative evaluation and theory building for several reasons, to: (a) permit analysis beyond a “no significant difference” statistical result to explain why the research did or did not meet expectations, (b) preserve the natural variation exhibited in human behavior, (c) facilitate the development of a conceptual framework to guide future research efforts, and (d) enable researchers to

explore parts of human life, such as feelings and semantic meanings, that are not amenable to direct observation (Pelto, 1981).

Typically, qualitative data are gathered through words rather than numbers, and the words are often grouped into categories. By nature, such data cannot be reduced to quantifiable terms. Ethnography, case studies, in-depth interviews, participant observation, and focus groups are data collection methods commonly used for qualitative research purposes. For the purposes of this research, focus groups were used as the vehicle for collecting qualitative data. The purposes of this chapter are to describe:

1. Use of human subjects in research.
2. Establishing protocol for focus groups.
3. Selection of sample.
4. Methods used to recruit participants.
5. Methods of data collection.
6. Bases for data analyses.
7. Limitations of research design.

Use of Human Subjects in Research

The Iowa State University Committee on the Use of Human Subjects in Research reviewed this project and concluded that the rights and welfare of the human subjects were adequately protected, the risks were outweighed by the potential benefits and

expected value of the knowledge sought, that confidentiality of data was assured and that informed consent was obtained by appropriate procedures (Appendix A).

Establishing Protocol for Focus Groups

This section discusses the definition for focus groups and characteristics, moderator skills for conducting focus groups, interview development, demographic questionnaire development, and focus group pilot testing.

Focus group definition and characteristics

The focus group is a method used to obtain data about feelings and opinions of small groups of participants on a particular subject, experience, service or other phenomenon (Basch, 1987; Calder, 1977; Krueger, 1988; Morgan, 1988). Although a variety of focus group definitions exist in the literature, common elements of these definitions include a small, relatively homogeneous group that meets with a moderator who facilitates a 30 to 90 minute discussion in a neutral and relaxed environment (Stewart, Tinsley, Olson, & Voichick, 1991).

The group situation may encourage participants to disclose behaviors and attitudes they may not consciously reveal in an individual interview. This occurs because participants often feel more comfortable and secure in the company of people when they share similar opinions, ideas, and feelings. As a result of this dynamic interaction, participants are less protective of personal disclosures because the atmosphere is tolerant, friendly, and permissive even when egocentric, and aggressive opinions are expressed. For example, as a result of this dynamic intragroup

stimulation, a group discussion with ten participants may produce richer information than ten individual interviews (Folch-Lyon & Trost, 1981). Usually more than one focus group is conducted to ensure adequate participant representation and coverage of the discussion topic. A moderator accomplishes the task of conducting a focus group. The richness of information produced in a focus group depends primarily on the degree of skill possessed by the group moderator (human instrument).

Moderator skills for conducting focus groups

The moderator introduces and directs discussion of topics, and encourages participation in the discussion. The moderator should be capable of skillfully leading the group process. Additionally, the moderator should be a good listener, people-oriented, and promote a comfortable and relaxed environment for discussion. Skillful moderators use probing questions to elicit more in-depth of responses and are able to do so without reacting to, and thereby, influencing opinions of participants (Krueger, 1986; United States Department of Health and Human Services (USDHHS), 1980).

The moderator facilitates the discussion and invites the ideas, thoughts, and opinions of all group members without influences from domineering individuals. The moderator must also have a sense of timing to determine when to encourage more information from a participant's response, thus continue with the discussion (Krueger, 1988). The moderator needs to have an adequate background of the subject matter under discussion, but does not have to be an expert (Stewart et al., 1991). An

adequate background in the subject matter is essential for placing participants' responses within the proper context. A participant who is overwhelmed by the moderator's expertise and skills may provide information that he or she may think the moderator is seeking, rather than his or her true opinions on the topic. A moderator who focuses on the accuracy of the subject matter may cause participants to withhold their opinions and/or withdraw from the conversation (Krueger, 1988; USDHHS, 1980).

For this research, moderator skills were developed through the researcher's own dietetic interviewing experiences, a review of the literature on conducting focus groups, and prior to this research, a pilot focus group and five focus groups were conducted with college students at Iowa State University (ISU). The researcher refined moderator skills by developing rapport with the participants and using open-ended and probing questions. Rapport is the personal relationship established between the moderator and the participants (Holli & Calabrese, 1986). Rapport should be established early in the interview to obtain the participants' full cooperation. The following sequence of procedures was used to establish rapport: (a) explanation or purpose of the research, (b) identification of group conducting research, (c) description of the method of selecting subjects for the sample, (d) specification of the amount of time required of the participant, and (e) indication of the confidential nature of the interview (Touliatos & Compton, 1988). Building trust is important for developing rapport. After developing

rapport, one may begin with the interview. A discussion of using open-ended and probing questions follows.

Interview development

After the research objectives were defined and each of the issues identified, an outline for the interview was prepared to conduct the focus group discussion (Appendix B). Then, interview questions were developed (Appendix C).

Questions play a major role in conducting focus groups. The kinds of questions asked during the interview should enable the participants to talk 60 to 70% of the time (Holli & Calabrese, 1986). On the average, only six to eight interview questions are necessary to conduct a 30 to 90 minute discussion (Krueger, 1988; Morgan, 1988). Knowledge of the types of questions to use and skills in using them are important for a successful interview. Open-ended and probing questions are important in the interview process. Open-ended questions are broad and give the participant freedom in responding while giving the moderator an opportunity to listen and observe. The following statement is an example of an open-ended question: "Can you tell me something about yourself?" The goal of probing questions is to elicit as much information as possible from a participant (Krueger, 1988; Snetselaar, 1989). The most direct way to probe is to ask open-ended questions beginning with "what," "when," and "how," "where," "could," and "why." Such questions require more than

just “yes” or “no” responses. Examples of probing questions used for this research are found in Appendix D.

Closed-ended and leading questions are to be avoided to the degree possible.

Closed-ended questions are more restrictive and require less effort in response from the interviewee. The following statement is an example of a closed-ended question: “Who cooks your meals?” Leading questions direct the respondent to one answer in preference to another, an unintentional effect on the moderator’s part. Leading questions reveal the bias of the moderator, which he or she may not recognize. The following statement is an example of a leading question: “What do you eat for dinner?”

For this research, seven interview questions were developed based on the NC-200 regional research and reviewed by two experts to determine the clarity of questions (Appendix C). The questions were written so as to establish construct-related evidence of validity. Several changes were made to the interview questions based upon the experts’ recommendations. The following topics were included in the interview questions: determining what to eat, food procurement strategies, food preparation methods, meal and snack times, eating out decisions, childhood food choices, and other factors influencing food choices. The interview questions were not structured like a formal interview schedule. It was expected that some questions and issues not asked by the moderator would be raised spontaneously by the participants. Interviewing and asking questions are skills that take practice to develop. The focus group interview is

more than a question and answer session; it entails collecting valid data while facilitating a comfortable interpersonal environment.

Demographic questionnaire development

A brief demographic questionnaire was developed for the focus group interview (Appendix E). The purpose of this questionnaire was to validate the characteristics of the participants based on the previously stated selection criteria. Items for the questionnaire were developed by the researcher based on information gathered about demographic variables in the literature review. The items were reviewed by one expert to determine item clarity. The variable categories for the demographic questionnaire were: (a) sex, (b) place of residence, (c) highest level of education completed, (d) birth date, (e) occupation, and (f) description of the type of work performed.

Focus group pilot testing

The pilot testing of interview questions and data collection methods is always desirable, and is absolutely necessary if new questions and methods have been devised for a study, existing ones have been adapted, and/or the researcher is a novice. Pilot testing helps to uncover deficiencies and refine aspects of the research design. Ideally, pilot testing should be expanded into a pilot study encompassing the whole research process (Touliatos & Compton, 1988). In the “dress rehearsal” for the main investigation, a small, but similar sample is obtained; actual research methods are applied; data are collected, coded, and analyzed; tentative interpretations and analyses

are made; and a written report is outlined (Touliatos & Compton, 1988). In addition, pilot testing also permits the researcher to check the adequacy of the sample design, data collection techniques, data processing procedures, and methods of data analysis, some or all of which may require alteration before the main study is initiated (Babbie, 1986).

For the purposes of this research, a pilot focus group comprised of ISU undergraduate students ($n=7$; 4 males, 3 females) was conducted. All of the participants fulfilled the necessary sample selection criteria: 18-24 years of age and living away from the home of origin. The pilot focus group was audio taped using two cassette recorders and video taped. A video recording was made only in the pilot focus group to refine the researcher's verbal and nonverbal behaviors, and interviewing skills. After conducting the pilot focus group, two experts reviewed the audio and video tapes with the researcher and offered recommendations for improving the interview. Several changes in the researcher's interview style were made based upon the experts' recommendations.

Selection of Sample

The selection of individuals to recruit for focus groups depends on the research objectives. The importance of having people with specific qualities in a focus group interview cannot be underestimated; the entire outcome of the interview will not be worthwhile unless people who fulfill the selection criteria participate in the focus group

(Greenbaum, 1988). This section of the methodology focuses on selection criteria and recruitment methods used to obtain participants.

Selection criteria

Participants for this study were selected using purposive sampling (nonprobability sampling); participants were not selected by chance. Purposive sampling involves selecting participants who appear to be representative of the population under study. A subjective selection such as this is based on knowledge about a particular group of people which is consistent with research objectives. Purposive sampling is more appropriate for small rather than large samples (Touliatos & Compton, 1988). One disadvantage to purposive sampling is that experts differ on the best way to select representative samples.

Further, after deciding what type of sampling to use, the characteristics the sample must possess need to be determined. Many different factors and characteristics determine the most appropriate composition of a specific group. Composition refers to participant characteristics, such as age, sex, level of education, and occupation. The composition of a group is important, because the people who participate in a focus group provide opinions and ideas needed for research findings and conclusions.

Homogeneity is considered when selecting and establishing focus groups. Focus groups should include people of a reasonably close age—a span of approximately fifteen years is about the maximum range (Greenbaum, 1988; Morgan, 1988).

Heterogeneous groups (mixed groups) comprised of both males and females can provide an important comparison to homogeneous groups, and can demonstrate that interpersonal styles of males and females are different in homogeneous and heterogeneous settings (Aries, 1976).

The number of participants, known as group size, was also another consideration when planning focus groups. There are many different views as to the most effective size for focus groups. It is difficult to specify an ideal number of participants for qualitative research. Nevertheless, there are suggestions for the ideal size of a focus group. According to Greenbaum (1988), a focus group ideally is comprised of eight to ten people. Further, other researchers indicated that six to eight participants are needed to conduct a focus group. Four is considered the minimum number acceptable (Krueger, 1988; Morgan, 1988). The young adult population is difficult to recruit, so for the purposes of this research, focus groups with three or more participants were included (Stewart et al., 1991). It is best to select participants from the local population, however, if recruitment is difficult, another type of nonprobability sampling, snowball sampling or the use of tandem informants may be used to recruit additional participants. This method involves asking participants to identify others who fulfill the selection criteria and repeating the process until the desired number of participants for a focus group are achieved (Spradley, 1979; Touliatos & Compton, 1988). This type of sampling is used when populations are difficult to identify. For this particular research, snowball sampling was also used.

Based on research objectives, definitions in the literature, and parameters established by the NC-200 regional research, criteria were established for selecting rural young adults. In order to participate in focus groups, young adults had to fulfill the following selection criteria: (a) 18-24 years of age, (b) living away from the home of origin, and (c) residing in a rural area. Two male groups, two female groups, and one mixed group were recruited to participate in focus groups. The details about the focus group participants will be discussed later in this chapter.

Methods Used to Recruit Participants

One of the greatest challenges in conducting qualitative research is recruiting individuals to participate. For this research, it was difficult to recruit participants because of the low population density of young adults in the remote, rural areas of Iowa. Newspaper advertisements and networking were used to recruit potential participants for focus group.

At first, it was thought that recruiting potential participants from rural areas could be accomplished through newspaper advertisements. On two different occasions, advertisements were placed in two rural newspapers. This recruitment approach did not elicit any responses; therefore, it was necessary to use professional and personal networking as a way to recruit focus group participants for this research.

Networking included contacting numerous professionals who had contacts with rural young adults: two cooperative extension home economists, a professional from

the Center for Industrial Research and Services (CIRAS), three dietitians, three community college coordinators, nine manufacturing plant managers, and two secondary education teachers. (The secondary education teachers were contacted because they were young adults.) Networking was accomplished through telephone calls and correspondence (Appendix F). Approximately 95 telephone calls and 150 pieces of correspondence were generated to identify, contact, and recruit potential participants.

It generally is a good idea to over-recruit to ensure that enough people actually attend the focus groups. Typically, the researcher should invite approximately 20% more people than are needed (Greenbaum, 1988). Due to the low numbers in the rural young adult population, seven to ten individuals were invited to each focus group; yet, three to eight individuals actually participated in the focus groups. Additionally, when recruiting, potential participants should be told they will be participating in a special project. Participants should not be informed of the specific discussion topic so as not to become sensitized to the subject between the time they are recruited and the actual focus group session. However, the general topic of discussion should be made known to satisfy the participants' curiosity and to assure them they will not be discussing topics that are considered inappropriate (Folch-Lyon & Trost, 1981). Once the focus groups were established, the data collection process began.

Methods of Data Collection

Participants and their communities

Five focus group interviews (n=26) were conducted in five different rural communities in Iowa. The mean focus group size was five. Appendix G depicts the Iowa communities and their respective counties where focus groups were conducted. The economic bases of the various communities were agriculture and industry. For confidentiality purposes, each group and participants in each focus group were assigned a number. Two male focus groups, Rural Group 1 and Rural Group 3, were conducted (n=7; n=8, respectively). Two female focus groups, Rural Group 2 and Rural Group 4 were conducted (n=4; n=3, respectively). One mixed focus group, Rural Group 5 was conducted (n=4; 1 male and 3 females). Because there was only one male in Rural Group 5, the results from this focus group will not be discussed. However, it goes without saying, that mixed focus groups can produce unique group dynamics.

According to the United States Census Population and Housing Summary (United States Bureau of the Census, 1990), out of the total estimated population of Iowa (2,776,775), there are an estimated 283,713 young adults, aged 18 to 24 years, in Iowa. Young adult population size by community relative to the counties involved in this research were estimated as follows: Rural Groups 1 and 2, Iowa County, n=981; Rural Group 3, Dubuque County, n=9,315; Rural Group 4, Shelby County, n=833; and Rural Group 5, Clayton County, n=1,268. Additionally, young adult population by community was estimated as follows: Rural Group 1, n=38; Rural Group 2,

n=27; Rural Group 3, n=61; Rural Group 4, n=28; and Rural Group 5, n=67.

Based on this estimated young adult population, the sample for this research represented 18, 15, 14, 13, and 6% of the population from the above stated rural groups, respectively.

Focus group procedures

It was important to develop rapport with the participants in order to effectively facilitate the focus groups. A warm-up discussion was used at the beginning of each focus group. Respondents were asked to identify themselves to the moderator. Rapport was facilitated by the researcher introducing herself and identifying affiliation, explaining the purpose of the study and how the results would be used, and specifying the amount of time to conduct the interview. Additionally, rapport was also facilitated by informing the participants of the confidential nature of the interview, discussing how the data would be analyzed, indicating that data provided would be treated as a group and that no individual would be personally identified, and noting that audio tape recordings would be destroyed at the conclusion of the study. After the warm-up discussions, the focus groups were conducted.

For the focus groups, the seven predetermined questions were asked to elicit participants' ideas and opinions about food choices. The probing questions were asked only if more information was needed.

The focus groups were conducted in the early evening at participants' homes, in a hospital conference room, in a church meeting room, and in a machine shed lunch area. The length of time for the focus group interviews varied from 20 to 45 minutes. Using two tape recorders, the sessions were recorded to facilitate validity and trustworthy data when the transcriptions were made. The same moderator conducted all the focus groups to ensure consistency across the groups. Additionally, the moderator facilitated a discussion which attended to the topic of food choices; thus, promoting content-related evidence of validity.

Following the focus group, participants completed a self-administered demographic questionnaire, and an independent personal service form in order to receive an honorarium. Additionally, light refreshments of cheese, crackers, and lemonade were served to the participants following the focus group. Because the discussion focused on food, refreshments were hidden from view during the focus group. After all the groups were completed, the data were collected and analyzed.

Bases for Data Analyses

Although the methodology for conducting focus groups is well documented, there is a lack of information in the literature as to the methodology for analyzing the data obtained from focus groups (Krueger, 1988; Morgan, 1988). This section focuses on strategies used to analyze the large amount of data collected from each group.

Analyzing data from focus groups includes many steps: debriefing period, transcribing

and analyzing the tape recordings, developing code words, coding the data, determining reliability, and analyzing the data with a computer software program.

Debriefing period

A debriefing period immediately following the conclusion of the focus group was conducted. The purpose of the debriefing period was to record impressions and reactions of the researcher and noteworthy occurrences during the interviews. This was accomplished by tape recording impressions and transcribing them. A debriefing period is an activity which increases the trustworthiness and credibility of the research.

Transcribing and analyzing tape recordings

The audio tape recordings from the five focus groups were transcribed verbatim by the researcher using a personal computer word processing program. This process resulted in approximately four hours of recorded conversation and approximately 35 pages of transcribed text. To establish content-related evidence of validity as well as to establish confirmability and credibility, all transcripts were rechecked by the researcher and another expert for accuracy by listening to the tapes and following along using the transcripts. No major inaccuracies were found. The most difficult task was determining which respondent was responsible for each comment. There were problems with inaudible comments and people talking at the same time. Such comments were not retrievable. Following this procedure, the transcriptions were read for general discussion of themes; thus, the commencement of code word development.

Developing code words (themes)

The task of organizing transcriptions for analysis involved two conceptual activities: The determination of codes or themes for analysis and development of a coding system. Code words or themes, which are conceptual elements of theory, are used to categorize qualitative data. They serve as “retrieval and organizing devices” for clustering the data, making it ready for analysis and interpretation (Miles & Huberman, 1984, p. 56). However, one drawback to using words is they may have multiple meanings. Despite this disadvantage, words give meaning to occurrences that are rich in meaning (Geertz, 1973). The key to organizing qualitative data is generating code words that accurately represent the data.

The development of a coding system for naturalistic analysis is a process of determining the major themes contained in the transcriptions. There are two methods of developing a coding system: the coding system may be developed from prior material, such as a theoretical framework or the coding system may be constructed from the transcriptions themselves (inductive method). The latter method is accomplished by reading the transcriptions carefully and noting in the margins the topics that are discussed and/or described. This method, known as constant comparative analysis, was employed for this research.

Constant comparative analysis combines inductive categorical coding and a comparison of all social occurrences in a setting to assist in generating theory

(Glaser & Strauss, 1967). It serves to generate and suggest categories for the research situation.

Comparing occurrences to a category involves generating a code for each occurrence in a situation and placing data into as many categories of analysis as possible. Integrating categories and their characteristics evolves as coding continues; the code words change from occurrence to occurrence with characteristics of the code words emerging from the initial comparison of the occurrences. Delimiting theory occurs as the constant comparative method is more defined. It occurs as the theory and categories are clarified and as a result, the data coded and theories emerge; it is the discussion of these theories that becomes the writing process of constant comparative analysis.

When employing constant comparative analysis, the emphasis is placed on generating theory rather than verifying it; in other words, constant comparative data analysis is thought of as the discovery of theory from data systematically obtained from social research (Glaser & Strauss, 1967; Strauss & Corbin, 1990). The discovery of theory from data is known as “grounded theory.” The generation of grounded theory enables content-related evidence of validity to be established. Generating grounded theory is a way of arriving at a theory suited for its supposed uses; it is derived from data and then illustrated by a characteristic data example, namely code words or themes.

Using grounded theory for coding for the data and the NC-200 regional qualitative research manual (Stewart et al., 1991) as a model for establishing a code book, a list of code words and their descriptions were generated for this research (Appendix H). Code words were organized into an outline of general influences on food choices and more specific influences (subcodes) related to the general influence (Stewart et al., 1991). Each code word and subcode represented a factor influencing the food choices of young adults. Code words were given clear operational definitions so they were related to each other in a coherent way and were assigned an abbreviation that was closely related to the word it described. For example, the code word “shopping tactics” was shortened to “shoptac.” The rationale for this is “the researcher must be able to return to the original idea quickly without having to translate the code word into an idea” (Miles and Huberman, 1984, p. 60). Care was taken to ensure code words and descriptions were unique, relevant, and meaningful (Fern, 1982) and that they were internally consistent, yet distinct from each other (Marshall & Rossman, 1989). The generated code list was then used by the researcher to code the focus group transcripts. The code book, which includes general code words, subcode words, and their descriptions, is in Appendix H.

Coding data

Coding the data is the process of assigning code words to the transcriptions. Once meaningful abbreviations for the code words were developed, the following

coding process was used: (a) the entire text was read and reread again to obtain a sense of the whole and to determine the relevancy of each sentence to the question under discussion, (b) a code word, subcode word, and/or bracketed lines were assigned to the relevant text area, and (c) the text was reread again to determine whether all or parts of the text were relevant to the assigned code word and subcode word(s). The researcher and two experts participated in the coding process. The coding process established content-related evidence of validity because the code words which evolved were related to the questions posed during the focus group interviews.

Each piece of transcribed text was coded with the general and/or specific influence(s), or in combination with any other appropriate general and/or specific influence(s). Participants' comments were coded whether they indicated a positive or negative association with the influence. Besides the aforementioned coding process guidelines, a guideline to determine when not to code a passage was established.

Transcriptions were not coded when the following occurrences were observed: (a) the text was too vague to attribute to an influence on food choices without speculation on the part of the coder as to the intended meaning, (b) when participants discussed factors influencing food choices prior to age 18 which might be different from childhood food choices influencing current food choices, and (c) participants made comments about other people's food choices, unless it included how this influenced their own food choices.

During the coding process, care was taken to not overcode, so that a balance was maintained through careful coding of all meaningful and relevant statements. If there was more than one influence present, the transcribed text was coded with more than one code word. At the conclusion of the coding process, the reliability of the coding process on the data was determined and a computer software program, The Ethnograph was used to organize the data.

Determining reliability

Reliability, which reflects the dependability or consistency of analyzed data, depends on whether multiple observers agree with the conclusions drawn about the data. Consistent research conclusions are achieved using a reliability check on the coded transcripts (Kirk & Miller, 1986). For this research, it was necessary to establish intra-rater and inter-rater reliability on the coding to ensure unbiased conclusions.

The reliability of coding is affected by the competence of the coders. Training individuals how to code is accomplished using the following steps: (a) the various codes are explained and illustrated with examples from the data to be categorized, (b) coders practice coding the sample data; problems that arise are discussed with a supervisor to develop common procedures and definitions, (c) as a result of the practice coding, the code words and their descriptions are revised to make them clearer, (d) procedures and definitions that evolved during the preliminary process are written, and

(e) the individuals code the data without consulting one another or the supervisor (Selltiz, Wrightsman, & Cook, 1976). It is important that code words and definitions be clearly defined to achieve consistency among coders. Establishing a high intra-rater reliability achieves a higher inter-rater reliability; individuals must be consistent with their own coding before consistency with the coding of others can be achieved.

Reliability was calculated by dividing the number of agreements by the number of agreements plus disagreements (Hartman, 1977, p. 105; Miles & Huberman, 1984, p. 63; Scott & Hatfield, 1985, p. 211; Touliatos & Compton, 1988, p. 122). The following guidelines for agreements and disagreements were used in calculating intra-rater reliability and inter-rater reliability by influence. Agreements were considered to occur when coders assigned the same code to a response and one coder assigned both a general code and a subcode and the other coder only assigned a subcode. Disagreements were considered to occur when coders assigned different codes to a response, one coder assigned a code and the other did not, and/or one coder assigned only a general code and the other only assigned a subcode (Stewart et al., 1991, 1993). When disagreements occurred, the differences were negotiated. A reliability of at least 0.80 should be achieved for intra-rater reliability (Miles & Huberman, 1984). A reliability ranging from 0.70 to 0.80 should be achieved for determining inter-rater reliability (Fern, 1982; Miles & Huberman, 1984; Scott & Hatfield, 1985). An intra-rater reliability of 0.87 was achieved for the researcher. An inter-rater reliability of

0.73 and 0.72 was achieved between the researcher and each coder, respectively. The composite inter-rater reliability between the researcher and both coders was 0.77.

Analyzing the data with a computer software program

According to Seidel, Kjolseth, and Seymour (1988), there is a conceptual distinction between the interpretive or thinking tasks and the mechanical tasks of qualitative data analysis. The interpretive task involves the following “cutting and pasting” activities: (a) mentally organizing the data into categorical and conceptual groups, (b) coding, recoding, and organizing data into analytical groups for comparison, contrasting, and interpretation, and (c) revising the code words. Using the computer to perform the mechanical tasks of data analysis is an efficient way to organize the qualitative data so that it may be interpreted. Data for this study were analyzed using the computer software program, The Ethnograph. This computer program was developed by qualitative researchers as “an efficient alternative to the cumbersome task of managing field notes, transcripts, documents, and other types of data collected and analyzed in ethnographic research” (Seidel et al., 1988, p. 1-2). The Ethnograph is a group of interactive and menu-driven programs that assist the researcher with the mechanical aspects of data analyses. The following are the three most common functions of this program: (a) preparatory function entails importing files, numbering the lines of the transcriptions, and printing hard copies of the transcriptions with the line numbers attached, (b) main function involves attaching

codes to segments of text and searching the text segments according to the code and assembling them, and (c) an enhancement function which deals with retrieving text segments alphabetically according to their codes and counting the frequency of occurrences of codes in the transcriptions.

The Ethnograph facilitates the researcher in coding and recoding the data. The schematic framework for The Ethnograph is presented in Figure 1. Permission to reproduce this material is in Appendix I. The following is a brief explanation of this framework: step one involves collecting the data; step two entails transcribing the raw data verbatim into a computer word processor; step three is the conversion of the raw data into a manipulative form for The Ethnograph; and step four is the process whereby The Ethnograph numbers the lines of the raw data and prints it. These four steps are the preliminary steps for the analysis of qualitative data.

Once the raw data have been printed, step five allows the researchers to comment, code, and mentally analyze the data. Before proceeding with the next steps, it is important that the researcher reflects upon the data and notes all possible ideas about the text.

Step six requires entering code words into the computer. The Ethnograph allows for inserting, changing, modifying, and printing code words. Step seven entails searching the files for specific code words and printing the data. The printed data display representative segments of text relative to code words. In addition, code words may be alphabetized and counted to obtain code word frequencies.

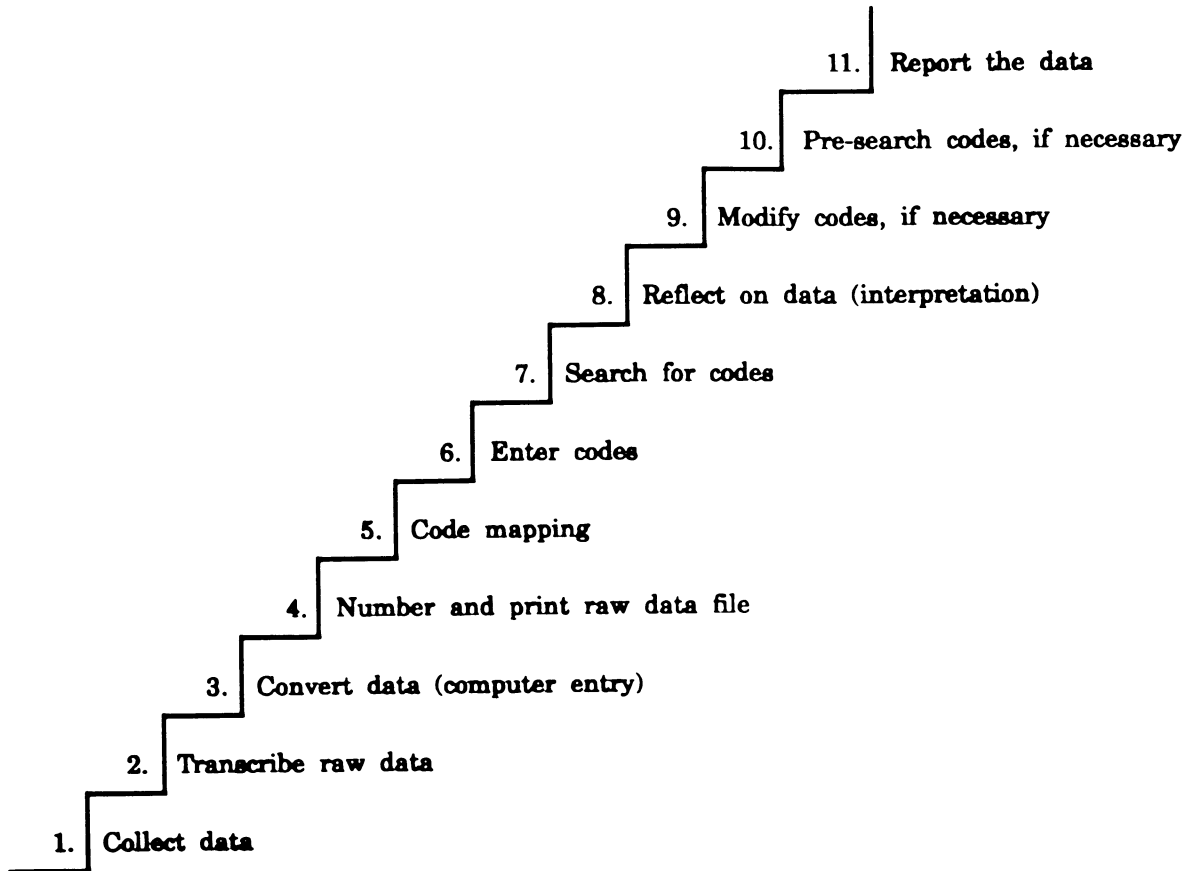


Figure 1. Schematic framework for The Ethnograph

Note. Reprinted with permission from The Ethnograph by J.V. Seidel, R. Kjolseth, and E. Seymour, Figure 3-11, p. 3-10, 1988. Qualis Research Associates, P.O. Box 2240, Corvallis, OR, 97339.

Steps eight through ten are repeated steps five through seven. These last steps allow the researcher to reflect upon coding, modify the codes, and re-search the data similar to the preliminary data search. Step eleven, apart from The Ethnograph procedures, is inevitably the report of the data. The program does not perform the actual analysis; it merely takes over the mechanical tasks that are part of organizing the data for later interpretation.

After the data were coded, reliability of coding was determined, and the computer-assisted analysis was performed, data interpretations were made in keeping with the research objectives. A discussion of data results and interpretations is forthcoming in this thesis.

Limitations of the Study

It is important to note the several factors that may limit this research design; these factors include researcher bias, namely level of experience and effects of the researcher on the situation and limitations inherent in the study itself. The purpose of this section is to discuss the factors limiting this research.

Researcher bias

“Objectivity is as elusive as pure righteousness; the researcher must try to suppress bias in his or her research” (Touliatos & Compton, 1988, p. 8). The researcher does not have an anthropological background; however, a study of qualitative research methods, attendance at a qualitative research workshop, and

previous experience in dietetic interviewing enabled the researcher to undertake this study. Further, the researcher lived in a rural area of Iowa for eighteen years and has approximately ten years of food and nutrition experience; these were advantages in terms of collecting data. However, such familiarity may have provided a bias for the researcher in the sense of predisposed ideas about the rural areas of Iowa relative to food and nutrition.

Another source of researcher bias was the effects of the researcher on the focus group participants. Bias was possible when the researcher disrupted the daily routine of participants and/or imposed on the ongoing, yet static social setting and relationships. Participants needed to determine who the researcher was, the purpose, and what might be done with the information collected. Additionally, participants may have assumed an on-stage-role or special persona, a presentation of self to the outsider (Miles & Huberman, 1984). To lessen such bias, it is best to interview participants in a neutral, congenial environment.

Limitations of study

Several factors limited this study. Due to the inaccessibility of the young adult population in the rural areas, the sample size was limited to five rural groups that varied in size. As a result, participants when recruited, were asked to bring along another person to participate in the focus groups. Thus, participants within groups were acquainted with each other. Acquaintanceship may have altered the results of this

study; therefore, comparisons between nonacquaintance and acquaintance groups would have to be examined to determine if such a condition exists. It is difficult to determine the amount of influence group members had on other individuals in the group. Nevertheless, focus group data should be analyzed and interpreted according to groups, not individuals, and within the context of the social situation.

Another limitation is related to the time of year the study was conducted. The focus groups were conducted from late February to early April during which winter conditions persisted. This may have influenced individuals willingness to attend and, therefore, introduced some bias in the sample. The groups were conducted on Tuesday, Thursday, and Sunday evenings. This schedule may have limited the number of respondents who were available and willing to attend. However, problems related to lack of participation are inherent in any focus group or research study involved with recruiting participants.

A final limitation of the present study is that it considered food choices. This topic is limiting because it cannot be generalized to the idea of food habits and food preferences. In another study, these variables may enhance the understanding of food choices.

Summary

The purpose of this chapter has been to describe the methodology used in this research. Five focus groups (n=26) in five rural communities comprised of two male

groups, two female groups, and one mixed group provided the research situation. Participants responded to questions about food choices posed by the focus group moderator. Data collected from the focus groups were analyzed by assigning code words to specific lines of text and using The Ethnograph, a computer software program, for organizing text relative to code words. There were limitations due to researcher bias and the nature of the study itself.

CHAPTER IV. RESULTS AND DISCUSSION

To answer questions posed in qualitative research, data analysis is critical and necessary. It is only through analysis that sense is made from data. Data do not answer research questions; the data must be carefully organized before they are subjected to interpretation. Methodological emphasis in qualitative research is generally on the method of data collection rather than data analysis. Most qualitative data analysis relies on the creative and imaginative reconstruction of events and observations in settings where data originated. Qualitative data analysis is blatantly open to interpretation; however, there are a number of procedures that allow for the rigorous investigation of such research. Qualitative data are analyzed primarily in nonstatistical ways. According to Dooley (1984), the objective in qualitative analysis is to:

Organize the numerous pages of transcriptions, and observational notes into a meaningful mode. The essence of this task is the interaction of discrete observations within a small number of conceptual categories. It is analogous to a jigsaw puzzle. The researcher fits and refits the pieces according to a variety of preliminary models until there are no or few pieces leftover and the fit seems subjectively and logically satisfying. (pp. 278-279)

The purpose of this chapter is to present the: (a) demographic characteristics of the focus group participants and descriptions of their communities, (b) occupations

of participants, (c) participants' responses to focus group questions, (d) code words and examples of representative responses from focus groups, (e) frequency of code words generated by focus groups and unique and common code words among focus groups and unique code words generated by female and male groups, and (f) intra-and inter-rater reliability results.

Demographic Characteristics of Focus Group Participants

The information obtained from participants who completed the demographic questionnaire resulted in usable data from 22 individuals (Table 1). Because there was only one male in Rural Group 5, the mixed group, the results from this focus group will not be discussed. Descriptive statistics were used to analyze data obtained from the demographic questionnaire. Descriptive statistics facilitated the comprehension and presentation of the mass of information collected. This was accomplished by organizing and presenting data in a summary form. In short, the report of descriptive statistics served as a tool to summarize variables and deduce relationships among variables for participants on whom data had been collected.

The number of participants varied between the sexes, male participation was greater than female participation. Fifteen males (68%) and seven females (32%) participated in this research study. Participants in each of the four groups varied in age (within the research parameters), but were quite similar in level of education and place of residence. All of the participants were between the ages of 19 to 24 years; no one was 18 years old. The majority of the participants were 19 and 23 years of age

Table 1. Demographic characteristics of focus group participants

Variable	Category	Group/Percentage											
		Rural Group 1 N=(7)	%	N	Rural Group 2 N=(4)	%	N	Rural Group 3 N=(8)	%	N	Rural Group 4 N=(3)	%	N
Sex	Female	0	0	4	100	0	0	0	0	3	100	7	31
	Male	7	100	0	0	8	100	0	0	0	0	15	68
Age	18	0	0	0	0	0	0	0	0	0	0	0	0
	19	1	14	1	25	4	50	0	0	6	27	27	
	20	1	14	1	25	0	0	0	0	2	9	9	
	21	1	14	0	0	0	0	0	0	1	4	4	
	22	2	28	1	25	0	0	0	0	3	13	13	
	23	1	14	1	25	2	25	2	25	2	66	6	27
	24	1	14	0	0	2	25	1	33	4	18	18	

Table 1. (continued)

Variable	Category	Group/Percentage														
		Rural Group 1 N=(7)	N	%	Rural Group 2 N=(4)	N	%	Rural Group 3 N=(8)	N	%	Rural Group 4 N=(3)	N	%	Total N=(22)	N	%
Highest level of education	Some high school	0	0	0	2	50	0	0	0	0	0	0	0	2	9	
	High school	6	85	1	25	37	3	37	0	0	0	0	0	10	45	
	Some college	0	0	0	0	0	2	25	2	25	0	0	0	2	9	
	College	1	14	1	25	37	3	37	3	37	3	100	8	36		
Place of residence	Farm	4	57	0	0	0	1	12	0	0	0	0	0	5	22	
	Nonfarm	0	0	2	50	0	0	0	0	0	0	0	0	2	9	
	Small town	3	42	2	50	87	7	87	3	100	3	100	15	68		

(n=6, 27% for both groups, respectively), followed by those who were 24 years of age (n=4, 18%), 22 years of age (n=3, 13%); 20 years of age (n=2, 9%); and 21 years of age (n=1, 4%). The mean age of the participants was 21.5 years and the median was 21 years. The majority of focus group participants had at least a high school education (n=10, 45%), closely followed by those having a college education (n=8, 36%). It was also reported that some participants had some high school education (n=2, 9%), and that some participants had some college or technical school education (n=2, 9%). In keeping with the research emphasis, rural young adults were sampled. Most of the focus group participants lived in small towns (n=15, 68%), followed by those who lived on farms and nonfarm residences in rural areas (n=5, 22%; n=2, 9%, respectively).

For the remaining part of this section, the communities where participants lived will be discussed. For confidentiality purposes, each focus group and all participants were assigned a number. The first focus group (male), Rural Group 1 (n=7), was conducted on February 25, 1992, in a southeastern Iowa town which has an estimated population of 367 (United States Bureau of the Census, 1990). This particular focus group was conducted in a machine shed. During the focus group interview, there was a lot of activity going on—there was someone on a forklift transporting iron fabrication materials from one place to another and the radio was playing. There was one person who wanted to participate, but was not within the age range of the study (he was 28).

Although all the participants were acquainted with each other, only three of the seven participants readily contributed to the conversation.

The second focus group (female), Rural Group 2 (n=4), was conducted on March 2, 1992, in a local church meeting room. Rural Group 2 was located in a southeastern Iowa town with an estimated population of 845 (United States Bureau of the Census, 1990). Three of the four participants for this group were a part of the young parents network, a support group for parents of children with special needs up to the age of three. Three of the four participants drove 10 to 15 miles to participate in the focus group; thus, demonstrating a commitment on their part. Because all participants were acquainted with each other, they readily contributed to the discussion. Two of the four participants of this group were engaged to be married, and the other two participants were living with their boyfriends. Three of the four participants had children. During the focus group, participants either sat on the couch, chairs, or in a beanbag chair. There was some apprehension expressed by the participants about being audio taped, but they did not indicate why they felt this way. The participants readily discussed the questions among themselves rather than responding directly to the moderator.

On April 7, 1992, the third focus group (male), Rural Group 3 (n=8), was conducted in a town located in east central Iowa that has an estimated population of 1,743 (United States Bureau of the Census, 1990). The focus group was conducted in a home in which four of the eight participants lived. All of the participants were acquaintances of each other so much so, that they were willing to call more of their male friends to participate in this project. All of the participants actively participated

by contributing their thoughts and opinions about their food choices. No one seemed to dominate the conversation; however, when one person stated an idea, the others tended to build upon it or provided another response which they thought was better. Again, the participants in this focus group discussed the questions among themselves rather than giving direct responses to the moderator.

The fourth and final focus group (female), Rural Group 4 (n=3), was conducted on April 12, 1992, in a town located in southwest Iowa that has an estimated population of 265 (United States Bureau of the Census, 1990). The focus group was conducted in an apartment of one of the participants. All three female participants, who were acquaintances of each other, actively participated in the discussion and did not seem apprehensive about being audio taped. During the first part of the interview, the participants tended to talk to the moderator rather than among themselves when responding to the questions. This might have been due to the fact that they were all elementary/secondary teachers and wanted to provide the researcher with "correct answers." A few times they asked, "Is that what you were looking for or what you wanted?" The moderator emphasized there was neither a correct or wrong answer to the questions asked, and as a result, the participants eventually discussed their thoughts with each other rather than the focus group moderator.

Occupations of Participants

The focus group participants had diverse occupations across and among the focus groups. Some of the participants had two occupations in order to earn extra

money. The occupations (both the primary and secondary) of the participants were categorized according to the 1991 Dictionary of Occupational Titles (United States Department of Labor, 1991) (Table 2).

Table 2. Occupations of participants^a

Occupational title category	Occupations of participants
Agricultural, fishery, and forestry	Animal farmer ^a Tree farmer ^a
Benchwork	Iron fabricator ^a Painter ^a
Clerical and sales	Sales clerk ^a
Machine trades	Autobody technician ^a Drill operator ^a Machinist ^a Mechanic ^a
Miscellaneous	Factory receiver ^a
Processing	Oil jobber ^a
Professional, technical, and managerial	Computer draftsman ^a Elementary school teacher ^a Secondary school athletic coach Secondary school teacher ^a
Service	Bartender Child caregiver ^a Maid ^a
Structural work	Welder ^a

^aPrimary occupation of participants.

The majority of participants were employed under the occupational title of machine trades (n=5), followed by professional, technical, and managerial occupations (n=4), service occupation (n=3), agricultural, fishery, and forestry and benchwork occupations (n=2 for each), and clerical and sales, miscellaneous, processing, and structural work occupations (n=1 for each).

Participants' Responses to Focus Group Questions

The questions used for the focus groups were a modified version of questions from the NC-200 manual for conducting focus group research. It was important not to introduce factors which might have been deemed to be important by the researcher, but once a participant suggested a factor, the rest of the group was asked to comment on the factor, too. In essence, participants stimulated each other to respond and contribute to the discussion. For this particular research, seven questions were asked during the focus group discussion which elicited a wide range of comments and responses. The questions ranged from general questions about what young adults eat to specific questions about food preparation, eating out, and childhood food practices. According to Krueger (1986), one way to analyze data from focus groups is to note the types of responses provided by participants to each question. The purpose of this section is to identify some examples of the range of comments elicited from each question through the illustration of meaningful quotations from participants, and to discuss whether each question was effective in determining what factors influence rural young adult food choices.

Question 1: How do you determine what to eat when you eat?

“Depends on what you’re doing and when it’s available.” (Rural Group 1, Participant #2, 3/5/92).

“Depends on what you’re hungry for.” (Rural Group 1, Participant #4, 2/25/92)

“Depends on how much time I have to make something.” (Rural Group 2, Participant #2, 3/5/92).

“Open the freezer door and pick something out. What is ever on top.” (Rural Group 2, Participant #3, 3/5/92).

“What’s in the cupboards.” (Rural Group 3, Participant #1, 4/7/92).

“Depends on what your roommates cook.” (Rural Group 3, Participant #7, 4/7/92).

“I guess it depends on what I have on hand at the time.” (Rural Group 4, Participant #1, 4/12/92).

“I would have to say something that’s quick, because as much as I’m home, it has to be fast.” (Rural Group 4, Participant #2, 4/12/92).

Across focus groups, availability and convenience of foods as related to time seemed to be the common response to this question. This question seemed to be a good one to start the focus groups because it was basic, and enabled the discussion to move to other themes, such as particular foods eaten, and the influence imposed by peers. And, this question served as a good lead-in question to the second question.

Question 2: When you go shopping for food, how do you determine what to buy?

“I don’t want to go when I’m hungry and how much cash I have. Let’s say if you’re hungry for steak or sausage, you can’t buy that steak.” (Rural Group 1, Participant #5, 2/25/92).

“I’ve kind of set myself on the way I pick my food. I find that I have to go to a certain store to buy my vegetables. I have to have store-brand vegetables from my store.” (Rural Group 2, Participant #2, 3/5/92).

“The cheapest.” (Rural Group 2, Participant #3, 3/5/92).

“I look for the fat and calorie content of what I like.” (Rural Group 2, Participant #4, 3/5/92).

“Go to discount stores like Hy-Vee and Fareway.” (Rural Group 3, Participant #1, 4/7/92).

“Cheap.” (Rural Group 3, Participant #4, 4/7/92).

“I guess I would buy the staple stuff first. Like milk and eggs. I always have that kind of stuff on hand. And, then I’m kind of unorganized when I go shopping. ‘Cause I go down every aisle. It usually costs a fortune that way. I don’t usually have it planned out, other than that, I don’t know. Kind of depends on what’s on sale at the grocery store too. Which one I go to.” (Rural Group 4, Participant #1, 4/12/92).

“I guess when I go shopping, whatever looks good, I’ll buy. Say I’m hungry for tacos, I’ll buy everything I need for tacos. Or spaghetti, I’ll buy what I need for spaghetti.” (Rural Group 4, Participant #2, 4/12/92).

Question two proved to elicit a wider range of responses than question one.

Across focus groups, participants noted price of food and available money as themes which determined what foods they would purchase when shopping for food. Because of this, one participant indicated that she shopped at certain stores that had sales on foods. Yet, this same participant indicated she was kind of unorganized when she went shopping for food and such a practice costs her a fortune. Other participants said they purchase food because it was something they preferred and/or were “hungry for.”

Another participant indicated she liked certain stores for particular brands of foods they sold. Additionally, one participant indicated the determining factor when buying food was its fat and calorie content.

Although question two did elicit a wide range of responses, it should be noted that some bias was imposed in the way the question was worded—it was assumed that everyone shopped for their food. In some of the later focus group discussions, some individuals hunted for their food, and for others their significant others shopped for particular food items. For this reason, a better question might have been, “What methods do you use to obtain your food?” A question such as this would have encompassed shopping, hunting, and gardening, etc. (gardening was not mentioned in any of the focus groups). When probing questions were used along with this particular question, the participants discussed particular meal times, the need for variety in the diet, and buying a large amount of food. This question was a good lead into question three, “How do you prepare the food you buy?”

“The fastest way.” (Rural Group 1, Participant #1, 2/25/92).

“Depends if it’s summer or winter.” (Rural Group 1, Participant #3, 2/25/92).

“I used the microwave twice today.” (Rural Group 2, Participant #2, 3/5/92).

“I like to fry my food.” (Rural Group 2, Participant #3, 3/5/92).

“Fry it.” (Rural Group 3, Participant #1, 4/7/92).

“Put it between two pieces of bread.” (Rural Group 3, Participant #3, 4/7/92).

“Sometimes I use the oven to bake a potato for a meal.” (Rural Group 4, Participant #3, 4/12/92).

“Package directions.” (Rural Group 4, Participant #1, 4/12/92).

This question elicited responses about what methods and appliances participants used to prepare their food. Participants did not respond as to why they used particular

methods and appliances. In retrospect, in order to elicit a more in-depth response, the moderator could have asked why they used the methods and appliances they did.

However, one participant indicated that a particular season influenced how he would prepare his food. For example, he liked to grill hamburgers and chicken in the summer. This question led to additional discussion about types of food prepared, eating leftovers, and what foods were good for grilling. Again, this particular question led to the next question which emphasized food choices and preparation methods at meal and snack times.

Question 4: How do your food choices and food preparation methods vary at each meal time and also at snack time?

“For breakfast I eat something quick.” (Rural Group 1, Participant #2, 2/25/92).

“Do you mean variety?” (Rural Group 2, Participant #3, 3/5/92).

“I’m never here for supper because I’m the only one who works.” (Rural Group 3, Participant #7, 4/7/92).

“Popcorn.” (Rural Group 3, Participant #8, 4/9/92).

“I find that where I don’t eat, I mean I have only toast in the morning, maybe once in awhile have a school lunch. But I don’t eat right, I will eat like a chicken patty or something.” (Rural Group 4, Participant #2, 4/12/92).

Question 4 elicited very few responses. The responses focused on the theme of time, specifically food choices and preparation methods at meal and snack times were dependent on participants’ schedules and quickness of food preparation. Again, some participants indicated what they ate and did not provide reasons for their behavior. In short, many themes did not emerge from this question; this may have been due to the

length of the question, and perhaps this question should have been asked as two questions.

Question 5 was different from the others because it focused on eating out. This question was asked because it was assumed that eating out would be a common practice among young adults.

Question 5: When eating out, how do you make your decisions of where and what to eat?

“What my budget is.” (Rural Group 1, Participant #1, 2/25/92).

“If I’m dirty, I might go to McDonald’s, but if I’m going out to eat and all cleaned up, I might go to a nice place.” (Rural Group 1, Participant #2, 2/25/92).

“Whatever I crave, I guess.” (Rural Group 2, Participant #1, 3/5/92).

“Depends where I’m at. I have certain things I like at certain places.” (Rural Group 2, Participant #2, 3/5/92).

“Depends if you’re going out on a weekend.” (Rural Group 3, Participant #3, 4/7/92).

“Whatever is closest.” (Rural Group 3, Participant #4, 4/7/92).

“How much time you’ve got.” (Rural Group 3, Participant #5, 4/7/92).

“How much money you’ve got.” (Rural Group 3, Participant #6, 4/7/92).

“I don’t know, when I go out, I don’t go to McDonald’s, that place is really greasy. I just don’t like greasy food like that and it’s usually...I guess usually, I’d rather go for something...I guess all these restaurants now have cut back on that and really watch it. But, I’ll order something like a turkey sandwich rather than a hamburger. Usually I look for places that are health-conscious.” (Rural Group 4, Participant #2, 4/12/92).

“I usually don’t ever go out to eat during the week. It would always be on the weekends. There’s just no place for that here. Well, they have the

Country Store where they have pizza and sandwiches. I just never do.”
(Rural Group 4, Participant #2, 4/12/92).

The question about eating out provided a variety of comments. Participants commented on time, money, and location when eating out; these particular ideas are addressed more in-depth later in this section. One participant commented on not wanting to eat at a particular fast food restaurant because of its greasy food, and would rather go some place where low-fat food items could be ordered from the menu. Another replied she ate at a particular place if she was craving a certain food that restaurant served. Due to the participants' rural locations, they sometimes did not eat out very often. For the most part, this question was basic, and provided insight as to what factors were influencing young adults when eating out. It also led to what particular foods participants liked to have when eating out. This question may have been somewhat leading because it was assumed that young adults eat out.

Question six, as well as question five, was unlike the other questions. It emphasized childhood food choices which might be practiced by young adults in the present. This question was asked for two reasons: first, in the literature, it has been noted that parents have an influence on children's food choices, which in turn affects food choices in later life, and second, because childhood is such an influential stage for developing food choices and habits, it is hypothesized, some practices have been continued into adulthood.

Question 6: What childhood food practices, if any, do you continue to practice?

“When I was a kid, after school I liked to go home and have a snack, and now I like to go home after work and have a snack.” (Rural Group 1, Participant #2, 2/25/92).

“I still eat animal crackers.” (Rural Group 1, Participant #3, 2/25/92).

“I don’t eat liver no more, and I don’t eat hot dogs and bologna no more.” (Rural Group 2, Participant #2, 3/5/92).

“Every Saturday night we used to have a pizza when I was growing up, and I still eat pizza.” (Rural Group 3, Participant #8, 4/7/92).

“I guess on, all we had on Sunday nights, we never had a meal, we always had popcorn, and sometimes, I still do that instead of having a meal.” (Rural Group 4, Participant #3, 4/12/92).

For this question regarding childhood food choices which are still practiced, it seemed participants discussed what foods they ate then, and continue to so now; they did not indicate why they continued to eat certain foods. Participants mainly discussed and reminisced about what they used to eat. Because this was retrospective information, it was not coded for themes. One participant discussed how snacking was a part of both his childhood and present life. It was remarkable to the researcher that more responses were not elicited from this question. This might have been due to fatigue on the part of the participants because this was the sixth of the seven questions which was asked. The last question enabled the participants to contribute other themes they had not previously mentioned during the discussion.

Question 7: What other factors do you think influence your food choice?

“What it looks like.” (Rural Group 1, Participant #2, 2/25/92).

“I look at fat and calories a lot.” (Rural Group 2, Participant #4, 3/5/92).

“If you’ve been drinking.” (Rural Group 3, Participant #1, 4/7/92).

“Weather. When it’s cold, I want some chili or soup or something. I never eat hot dogs in the winter time. Like during the summer when you go to a baseball game, you’ll eat them.” (Rural Group 3, Participant #2, 4/7/92).

“What you’ve been drinking.” (Rural Group 3, Participant #7, 4/7/92).

“Calorie content.” (Rural Group 4, Participant #2, 4/12/92).

This final question enabled respondents to verbalize other factors not previously mentioned that influenced their food choices. Again, a variety of responses was generated: weather (seasons), fat and caloric content of foods, and appearance of food. It was interesting to note both female groups, but not the male groups, discussed fat and calorie content of foods. This finding affirms the notion that females are typically more concerned about fat and caloric content of foods. A final question such as this ensured the inclusion of thoughts and ideas participants may have thought of during the discussion, but may not have felt comfortable contributing their ideas until such a question as this was asked.

Questions are an important part of focus groups because they elicit descriptive responses which serve as the basis for data analysis. For this particular research, most of the questions elicited responses which were highly descriptive, yet there were a few questions which elicited very few responses; thus, indicating a need for future evaluation and revision of the questions by the researcher. These questions elicited responses which in turn served as the basis for generating codes or themes. Such themes enabled the researcher to pose possible behavioral, cultural, and social factors influencing the food choices of rural young adults.

Code Words and Examples of Representative Responses from Focus Groups

From the transcribed interviews, code words or relevant themes were generated as related to food choices. Table 3 illustrates how The Ethnograph numbers the raw data (transcribed statements), and how the code words are applied to the raw data by the researcher.

Thirteen general code word categories and 51 subcode words (n=64) evolved. The categories of information (code words) and data collected (transcribed statements) were compared, contrasted, and cross-referenced by the researcher. This was accomplished by using The Ethnograph to organize code words and representative responses together. This procedure involved removing responses from their original

Table 3. Raw and coded data

NUMBERED VERSION OF FILE RURAL GROUP 4.ETH 5/6/1992 09:14	
+ Female Focus Group—Rural Group 4—4/12/92	1
M: How do you determine what to eat when you eat?	2
R1: Well, I guess it depends on what I have on hand at the time. We live so far away from stores and restaurants. It turns out that I have fresh food at beginning of the month, and like later, it's spaghettios.	3 availhom 4 storsel, eolocat 5 health 6 specfood
R2: I would have to say something that's quick and fast. Because I coach and I don't get home until 6.	8 conven 9 schedule

(Raw Data)	(Coded Data)
Documentation of Action	Documentation of Coding

context and placing them into a new context—the context of similar themes. The search procedure on The Ethnograph allowed the researcher to locate all occurrences of a particular code word (theme) in each focus group. The code words and representative responses from each focus group transcript were sorted and printed using The Ethnograph (Table 4). Then, the code words and responses were compared and contrasted.

Matrix displays are another approach to analyzing qualitative data. According to Miles and Huberman (1984), a matrix provides a simple, systematic, graphic way to

Table 4. An output example of a sorted code and representative responses from a focus group

SORTED OUTPUT FOR FILE RURAL GROUP 3	Page 7
SORT CODE: DINNER	

RURAL GROUP 3	+ Male Focus—Rural Group 3
SC: DINNER	
!-DINNER	!-SUPPER
:I'll get a big pack of sliced bologna, ham or something for dinner.	152!
:Supper is a different story.	153!
!-SUPPER	!-DINNER
:I don't eat as near as good...I eat a better supper than I do dinner.	192!
:Dinner is something that you can just throw in a box.	193!
:Supper is something you enjoy.	194!

compare and contrast data. The purpose of the matrix is to build a contextual structure of consolidated information that will provide clues to understanding the data. The benefits of displays are to: (a) show the data and analysis in one place, (b) allow the researcher to determine where further analyses are needed, (c) make it easier to compare different data sets, and (d) permit direct use of the results for a report (Miles & Huberman, 1984, p. 79). An example is to place coded text, which is relevant to how factors influence food choices into a matrix with code words (themes) on one axis and representative responses along with other variables (particular focus groups) on the other axis. This is a useful way to present data in a visual form.

When data are entered into a matrix, the researcher needs to be clear about the “thickness of description” of data (Miles & Huberman, 1984). The data need to be highly descriptive so as to comprehend the full meaning of participants’ responses. For this particular research, this was accomplished by using verbatim representative responses from participants; this process ensured content-related evidence of validity. However, the conclusions obtained from a matrix can never be substituted for the entire data set.

So as to gain a better understanding of the factors influencing rural young adult food choices, a matrix was developed to illustrate code words and representative responses from participants (Table 5). The code words were abbreviated like the ones in the code book (Appendix H). These code words and representative responses were obtained using processes as described for the results in Tables 3 and 4.

Table 5. Code words and examples of participants' representative responses^a

Code words	Representative responses
Appeal	"I get into these kicks where food doesn't appeal to me because I'm busy."
Craving	"Say I'm hungry for tacos, I'll buy everything I need for tacos."
Enj/soc	"I definitely eat slower when I'm with somebody else. I eat fast when I'm by myself."
Prefer	"Buy what you like to eat."
Quality	"There isn't a better steak than off the farm."
Quantity	"Breakfast for me is a bunch of eggs, and a cow."
Seasons	"Like during the summer, when you go to a baseball game, you'll eat hot dogs."
Senses	"I won't eat frog legs, they taste bad, and sheep nuts taste like chicken."
Treat	"We will go there for a meal and we feel like we're splurging."
Variety	"I probably make something different every day."
Avail	"Depends on what you're doing and what foods are available."
Availhom	"It just depends on what we have at home to eat."
Culture	"My family and I never have a meal on Sunday night."
Habit	"I end up eating dinner between 4 and 6."

^aGeneral code words are in boldface and subcode words are underneath in plain text.

Table 5. (continued)

Code words	Representative responses
Eatout	“If I were going out to eat with a girl, we’d go to a nice place.”
Eofastf	“We get a half an hour for lunch, so I usually go for fast food.”
Eolocat	“I don’t go out to eat very much because I live in the middle of nowhere.”
Eoprice	“I can’t afford to eat out much because often it’s out of my budget.”
Eotype	“I have certain foods I like at certain places.”
Facility	“My apartment doesn’t have enough facilities for food preparation.”
Applianc	“I used the microwave twice today.”
Storage	“What’s in the cupboards.”
Health	“No, not to stay skinny, but to stay healthy.”
Contra	“I know I don’t eat right, but I just don’t have the time or effort to put into cooking.”
Foodgrp	“A balanced meal with meat, vegetable, fruit, bread, and milk.”
Kcal	“I don’t drink milk because of the calories it has.”
Label	“When I shop for food, I read the labels for fat and calorie content.”
Nutrient	“I don’t like greasy or high fat foods.”
Preg	“It’s just my baby fat from having the little one.”
Sanitat	“Sometimes the meat in stores is brown-looking.”

Table 5. (continued)

Code words	Representative responses
Specfood	"Canned stuff, food from a box or bag."
Wtcontr	"I've probably lost twenty pounds or more on diet alone."
Meals	"I don't really have a normal meal time."
Breakfst	"I only eat breakfast if I've been boozing all night long."
Dinner	"Correctly speaking, dinner is the last meal of the day, but I'm from Iowa and I have supper."
Lunch	"I have only toast in the morning and maybe eat lunch once in awhile."
Snacks	"I like to go home after work and have a snack."
Supper	"Supper is a different story; it is the evening meal."
Weekend	"I don't go out to eat during the week, I go out only on weekends. "
Money	"I don't buy if I don't have enough cash."
Monavail	"What my budget is."
Price	"Two loaves for a buck, quarter beer, buck nineteen."
People	"Some people and I will get together and go out and eat a good meal."
Peers	"My boyfriend usually buys the meat."
Relativ	"I usually go to my mom's for lunch for a hot meal."
Physical	"I don't care what all them fitness experts say, chasing kids is physical. "
Exercise	"When I'm coaching, I do get some exercise."

Table 5. (continued)

Code words	Representative responses
Fatigue	"If I work late and am tired, I don't make anything to eat."
Hunger	"If you're hungry and in a hurry, you'll grab a piece of pizza or something."
Prepare	"Once in awhile I prepare my own meals."
Cookbake	"Well, there's times I just have to cook and bake."
Creativ	"I get a little creative by grinding up ham to make my own ham salad."
Lftovr	"I like to make enough spaghetti or rice to use for leftovers."
Procure	"When I shop for food, I buy the basic staples first."
Coupons	"When buying food, I use coupons or look for sales."
Hunt	"We like to hunt for deer and squirrel."
List	"I'm kind of unorganized when I go shopping, I don't use a list."
Storsel	"I find that I have to go to a certain store to buy my vegetables."
Time	"How much time you've got to eat."
Conven	"Just something quick and fast to make for dinner."
Planning	"I do that [make an entire meal] if I have more time."
Priority	"I don't always take time to eat because I get really busy."
Schedule	"Different because of work, I don't eat near as good of meals."
Urgency	"I eat really fast because usually I have someplace to go."

From this matrix, similar patterns of thought and behavior interwoven with cultural and social situations were identified. This was accomplished by describing the “what” and “why” of the research situation and placing emphasis on the quality of representative responses. Additionally, it was important to search for relationships among the representative responses. When analyzing these examples of representative responses, and other responses not listed here, numerous themes evolved which seemed to influence the food choices of young adults. The themes which evolved from the focus groups as a whole reflected relationships and interactions common to rural culture. Key themes which emerged were food groups, special foods, cooking/baking, quantity, craving, and relatives.

The food group theme, which is a subcode of the theme, health, was discussed many times by the focus groups. Participants discussed having a “balanced” diet or meal by using foods from all the food groups and eating foods that were “good” for them.

“If you’re not in a hurry, you’re usually hungry for something good like steak, and vegetables such as green beans and corn.” (Rural Group 1, Participant #4, 2/25/92).

“There’s only one kind of meal at our place—meat, potatoes, vegetable, and fruit.” (Rural Group 2, Participant #3, 3/5/92).

“Health food kind of stuff.” (Rural Group 3, Participant #5, 4/7/92).

“If you’ve been eating pizza for the past few days, you’d probably want to sit down and get a steak and corn. With bread, you know. A balanced meal.” (Rural Group 3, Participant #6, 4/7/92).

In the food group subcode, meat was a particular type of food which was discussed the most; a discussion of meat is forthcoming in this section. Participants discussed what foods they ate and the necessity of having a “balanced” meal. Participants did not discuss why they ate particular foods.

The special products/food fads, which is another subcode of the health theme, was discussed at length by participants. They discussed using special products, “junk” foods, and the discussion also included comments about the same foods sold different ways, for example, canned, fresh, frozen, or prepackaged. Many of the special foods were used for convenience and variety, thus the incorporation of other subcode words.

“Junk food.” (Rural Group 2, Participant #1, 3/5/92).

“I’d rather use the frozen kind, but he likes the canned.” (Rural Group 2, Participant #3, 3/5/92).

“You gotta have pop, Mountain Dew, it’s the only kind.” (Rural Group 2, Participant #4, 3/5/92).

“Soup, all kinds of goodies, canned stuff.” (Rural Group 3, Participant #1, 4/7/92).

“Like ravioli, lasagna, you know, Chef-Boyardee stuff.” (Rural Group 3, Participant #8, 4/7/92).

“It turns out that I have fresh food at the beginning of the month and like, later on it’s spaghettios.” (Rural Group 4, Participant #1, 4/12/92).

“I eat lunchables.” (Rural Group 4, Participant #3, 4/12/92).

Cooking/baking, a subcode word of the code word, preparation method, emphasized the specific methods participants used to prepare their food. Popular methods of food preparation included frying, grilling, and broiling. These methods

were used mainly for meat preparation. Participants indicated the reasons for which they were used, that is, health reasons, and the taste the particular method produced. Additionally, some participants indicated some methods are time consuming, and would use them when cooking for someone else. The subcode words health, senses, time, and people, were interwoven with cooking/baking.

“Hamburgers, they taste better on the grill or on the broiler rather than frying them. It tastes better because all the fat has dripped off, and I like the smoked taste.” (Rural Group 1, Participant #1, 2/25/92).

“Depends on what your roommates cook.” (Rural Group 3, Participant #7, 4/7/92).

“Every once in a while I’ll make something on top of the stove, like tonight we had fajitas. I usually do that if I have more time and it’s more than just me. I never cook like that unless I know I’m going to have somebody over, then I’ll make something elaborate.” (Rural Group 4, Participant #1, 4/12/92).

“I use a brownie mix or something. If I make something for a bake sale, it will be homemade, so then I’ll use the oven.” (Rural Group 4, Participant #3, 4,12/92).

Craving, a subcode word of the code word, appeal, emerged as participants indicated why they ate certain foods, that is, “craving” or “hungry for” particular foods, and eating what they “feel like” or “what they are in the mood for.” This particular theme indicated the “what” and “why” participants ate certain foods, and this theme led to the discussion of other factors influencing young adult food choices, such as special foods and/or foods from the food groups.

“Depends on what you’re hungry for.” (Rural Group 1, Participant #4, 2/25/92).

“Whatever I crave, I guess.” (Rural Group 2, Participant #1, 3/5/92).

“I’m always craving for McDonald’s. Because I always go by there when I go to work. I never stop, but when I do eat there, I like their cheeseburgers.” (Rural Group 2, Participant #2, 3/5/92).

“I crave fried foods a lot.” (Rural Group 2, Participant #4, 3/5/92).

“What you’re hungry for at the time.” (Rural Group 3, Participant #6, 4/7/92).

“I guess when I go shopping, whatever looks good, I’ll buy. Say I’m hungry for tacos, I’ll buy everything that I need for tacos. Or spaghetti, I’ll buy what I need for spaghetti.” (Rural Group 4, Participant #2, 4/12/92).

This subcode word was associated with other themes such as eating out, breakfast, enjoyable and social aspects of food, and money.

“Whatever is the easiest, I don’t like cooking big meals.” (Rural Group 2, Participant #1, 3/5/92).

“I think when you eat out, you tend to eat more.” (Rural Group 3, Participant #1, 4/7/92).

“I like those places where it’s all-you-can-eat, yeah a smorgasbord. Well, you have your soups, salads, by the time you get your meal, you’ve had a meal.” (Rural Group 3, Participant #3, 4/7/92).

“Three in the morning, you’ve been partying all night long, you’ll go out and have breakfast. I only eat breakfast if I’ve been out boozing all night long, a bunch of eggs and a cow.” (Rural Group 3, Participant #7, 4/7/92).

“Who you’re with. If you’re on a date or something, I mean, I think you eat differently. I don’t eat as much. You watch what you eat.” (Rural Group 4, Participant #2, 4/12/92).

Participants also discussed how other people, specifically relatives (subcode word of the code word, people) such as mothers and fathers influenced their food choices. It is important to note some participants lived near their parents and others had returned to their hometowns to live near their parents in rural areas after having been away at college. In some instances, participants in three of the four focus groups stated they

would go to their moms' house for meals, and she would give them leftovers to take home. Many focus group participants worked on the family farm and/or were a part of the family business, thus a possible explanation for the close living relationship between participants and their relatives. Another explanation may be that because these young adults are acquiring autonomy and independence, they perhaps had no other life experiences to draw from other than those involving their parents. This indeed supports the idea asserted by Baranowski and Nader (1986) that familial socialization may strongly influence the lifestyle of young adults. In another focus group, a participant discussed how her father used to hunt animals for family meals; the notion about hunting is forthcoming in this section.

“Well, when we were little, our mom used to feed us a lot of frozen stuff and there's a lot of frozen stuff I don't like now.” (Rural Group 2, Participant #1, 3/5/92).

“Broccoli has got to have cheese sauce and butter on it. Well, my dad raised us on fried potatoes, meat, and vegetables, just like what I'm doing. Nothing has changed.” (Rural Group 2, Participant #3, 3/5/92).

“Just everything is the same. It's whatever you grow up with, you keep it with you. If you were forced to eat something as a kid, you're not going to eat it now.” (Rural Group 2, Participant #4, 3/5/92).

“I usually eat better at lunch time. Because I usually eat at mom's and she has leftovers. I go down there when there's nothing in the cupboards.” (Rural Group 3, Participant #1, 4/7/92).

“It's just what I have on hand or whatever mom sends up. Like, she cooks a lot and will send me home with food on the weekends that I can use during the week so I don't have to worry about cooking.” (Rural Group 4, Participant #3, 4/12/92).

Although some themes from the representative responses were more dominant than others, there were still other themes that were relevant to this study. These particular themes were eating out, time, money, meat, hunting, and dinner and supper. The eating out theme included comments from participants about fast foods, location of restaurants, meal prices, and types of restaurants. Eating out for males and females in this particular study was interwoven with the social aspect of eating out with friends and significant others. The age group and stage of life may serve to explain the eating out theme because typically young adults are concerned with forming relationships with people outside the family unit. In addition, geographic location seemed to influence whether a rural young adult would go out to eat. Most participants across the focus groups said they would go out to eat on weekends because they had more time due to the fact they would have to drive a distance from the rural area to eat out in an urban area. Because of this constraint, money was also a factor because it was needed for transportation and to purchase a meal.

“Depends on if you have a certain female that you’re going to take out. If I were going out with a bunch of guys, we’d probably go to the bar and grill. Get a hamburger and fries and be done with it. But, if I were going out with my girlfriend, I’d just go to the club. It’s nothing too formal, you don’t need a tie or anything to get in.” (Rural Group 3, Participant #6, 4/7/92).

“I really can’t afford to go out to eat very much because we’re in the middle of nowhere and you have to drive where I live either to Town X, Town Y, or Town Z, and that’s 20 miles either way.” (Rural Group 4, Participant #3, 4/12/92).

The theme of time included comments about convenience, planning, priority, schedule, and urgency. With this particular theme and its subthemes, there was closeness of meaning among themes; many of the themes overlapped in meaning, and

this was reflected in the representative responses. Many male and female participants commented on always being in a hurry, “on-the-run,” and needing to make something quick to eat. Time was related to using the microwave for its convenience. A difference in what keeps rural young adults “on-the-run” may be different than for urban young adults. They might have been in a hurry to go home and watch television, go to their jobs, visit friends, drive around, go to the tavern, and simply living in a rural area may mean traveling a distance for social activities and/or entertainment.

“Depends on how big a hurry I’m in. Always on the run.” (Rural Group 1, Participant #2, 2/25/92).

“I only really have time to eat one meal a day or whatever. So, I’ll drink a glass of milk, coffee, juice or something. I don’t eat lunch because we only get 15 minutes for lunch and we have to monitor the lunchroom.” (Rural Group 4, Participant #3, 4/12/92).

Money was another theme which seemed to influence rural young adult food choices. The availability of money and prices of foods were the common subcode words which evolved from the theme of money. Again, the age and stage of life of the focus group participants may have caused concerns about not having enough money to go out to eat, to buy certain foods and basic staple items to prepare a meal. Young adults, who are gaining independence and autonomy from the family unit and have new responsibilities, typically do not have a lot of money. The money they do have may be spent on housing, insurance, utilities, loan repayments, furnishings, and automobiles. As a result, they may not have enough money left to buy food. Additionally, many of the participants in this research had occupations which are not associated with a high

level of income. In order to compensate for this, many participants had two jobs: machinist and bartender, farmer and bartender, art teacher and cheerleading coach, fourth grade teacher and track coach, and baby sitter and maid.

“I usually don’t have enough money to go in [to a restaurant].” (Rural Group 2, Participant #3, 3/5/92).

“It depends on if I’m in Town Z, I’ll go to the Hy-Vee store. Things are a little bit more expensive, so I don’t buy as much. Like the quick-type foods, like spaghetti and stuff. Let’s be honest, spaghetti is more expensive down there, than it is at the Hy-Vee in Town H. So, it just depends on what grocery store I go to.” (Rural Group 4, Participant #1, 4/12/92).

“Deciding on where to go to eat out depends on how much money I have.” (Rural Group 4, Participant #1, 4/12/92).

Eating out, time, and money are plausible themes which seem to be factors influencing the food choices of rural young adults. Age, geographic location/residence, and occupation all seem to affect these themes, and these particular themes seem to be interwoven with the others.

Meat was the food that evolved from the food group subcode word. Across the focus groups, this theme seemed to emerge in the form of having meat at every meal to slaughtering one’s own livestock for meat. In one of the focus groups, one participant commented that her fiancé slaughters all the meat they eat. Another participant indicated her boyfriend chooses all the meat from the meat counter in the grocery store. Conversely, another participant from another focus group stated that sometimes meat in the stores is brown-looking, so he does not buy it. One individual replied to this statement by saying a person cannot get a better steak than one from off the farm. From these responses, it was evident these rural young adults focused on what other

people were doing to obtain meat for them, and the sanitation and quality aspects of meat both in the stores and on the farm, respectively. Although it may have taken a considerable amount of time to slaughter an animal for meat, these young adults viewed it as a practice they and their families had done to save money by using their available resources. Slaughtering animals for food is typically a practice which is done in rural areas. Still another idea evolved from the meat theme, the method of preparation. Across focus groups, many commented on frying as the preferred method of preparing meat, followed by grilling and broiling. Again, the themes of time, money, and people are interwoven with the theme of meat.

“Sometimes meat in the stores is brown-looking and you don’t buy it.” (Rural Group 1, Participant #2, 2/25/92).

“There isn’t a better steak than off the farm.” (Rural Group 1, Participant #2, 2/25/92).

“I like to grill steak and chicken.” (Rural Group 1, Participant #5, 2/25/92).

“I don’t like to fry food. The only time I fry food is when I’m making chicken or turkey.” (Rural Group 2, Participant #2, 3/5/92).

“Usually he buys the meat” (Rural Group 2, Participant #3, 3/5/92).

“Before I moved in with my fiancé, for me, a meal would be a bowl of cereal. And now that I’m cooking for him, it’s like meat, meat, and more meat.” (Rural Group 2, Participant #4, 3/5/92).

“We don’t have to buy meat because he’s a farmer. So, that takes care of that. We have ribs, we have pork chops, hamburger, bacon, and sausage.” (Rural Group 2, Participant #4, 3/5/92).

“Grilled chicken.” (Rural Group 3, Participant #6, 4/7/92).

Hunting, another theme related to meat, evolved during three of the four focus group discussions. This theme emerged as participants discussed what they liked to eat. In two of the focus groups, one participant stated he liked anything that was red meat, especially deer. Others then indicated they liked to hunt and eat opossum and squirrel, particularly the squirrel's brains. In the particular focus groups, hunting was done to obtain meat that was readily available to save money on food, to make money by selling the animal pelts, and for recreational purposes. Such reasons indicated a concern for the environment and wildlife by taking what is only needed for food and not wasting the animal. In another focus group, participants reminisced how their fathers hunted various types of game which were served at meal time. Many indicated that due to lack of money, there were times when all they had to eat during their childhood was meat their fathers had obtained from hunting. These same participants stated they generally did not like the taste of these various game meats due to their lack of flavor.

“My dad hunted, you had to eat what he brought home. A turkey, it's up to him.” (Rural Group 2, Participant #2, 3/5/92).

“The only thing my dad ever fixed when I was a kid that I can remember is turtle. He made me turtle stew. Well, they say there are seven different kinds of meat in a turtle. To me, it tastes kind of blah.” (Rural Group 2, Participant #3, 3/5/92).

“Anything that's red meat. I like deer.” (Rural Group 3, Participant #3, 4/7/92).

Meals was another theme which evolved from the focus group discussions. It was the terminology that was applied to each meal by the rural young adults that was of interest to the researcher. Across the focus groups, the first meal of the day was

breakfast, followed by the noon meal, dinner, and the evening meal, supper.

Typically, urban and collegiate young adults term their meals breakfast, lunch, and dinner. The terminology applied may have been due to parental influence on rural young adults and/or the terms may be characteristic of rural culture. An explanation for this may be, as far back as biblical times, “supper” has referred to the “Last Supper,” which has been portrayed as being the last meal of the day and/or a meal which was in the evening. In past times, dinner in rural culture has referred to the biggest meal of the day, usually at noon, to provide farmers with an adequate amount of energy to work into the afternoon and evening.

“Dinner is at noon and supper is at five.” (Rural Group 3, Participant #6, 4/7/92).

“We always got up, went to church, had a huge dinner and then, we had popcorn to munch on in the evening with pop, iced tea, something like that. Correctly speaking, dinner is the last meal of the day. But, I’m from Iowa and I have supper.” (Rural Group 4, Participant #3, 4/12/92).

Again, the three themes of meat, hunting, and meals had other themes interwoven with them to strengthen the ideas. These interwoven themes included availability, time, money, and people. Meat, hunting, and meals were other relevant themes which provided valuable information about the behavioral, cultural, and social factors influencing the food choices of young adults.

As illustrated, the matrix comprised code word themes and representative responses generated a variety of ideas related to the factors influencing the food choices of rural young adults. However, a matrix did not serve as a substitute for the data set;

all of the data were thoroughly analyzed to gain a complete understanding of the perceptions of rural young adult food choices.

Frequency of Code Words Generated by Focus Groups

Another approach to analyzing focus group data is to tally responses across focus groups. The qualitative research process of generating frequencies of code words in focus groups was done in such a way as to ensure a high level of construct-related evidence of validity for the next step of analysis, the identification of unique and common code words among groups and unique code words between female and male groups. The Ethnograph was used to produce output for a frequency list of code words reported in the focus groups (Table 6). This procedure enabled the researcher to construct a larger display of the frequency of code words reported across all focus groups (Table 7).

Table 6. Frequency output for list of code words from The Ethnograph printout

Frequency List of Code Words Used in Coding RURAL GROUP 3.ETH 4/7/92

N	CODE WORD	N	CODE WORD	N	CODE WORD
---	-----	---	-----	---	-----
3	Appeal	1	Craving	1	Enj/soc
2	Prefer	1	Quality	6	Quantity
3	Seasons	3	Senses	2	Variety

Table 7. Frequency of code words used by focus groups

Code word	Males		Females	
	Rural Group 1	Rural Group 3	Rural Group 2	Rural Group 4
1. Appeal	0	3	1	1
Craving	2	1	5	3
Enj/soc	0	1	0	5
Prefer	1	1	2	3
Quality	1	1	1	1
Quantity	0	6	5	3
Seasons	1 ^b	2 ^b	0	0
Senses	3	0	5	2
Treat	0	0	0	1 ^a
Variety	1	2	8	2
2. Avail	1	0	1	0
Availhom	0	4	1	2
3. Culture	0	0	0	1 ^a
Habit	0	0	0	2 ^b
4. Eatout	0	1	1	0
Eofastf	1	4	3	1
Eolocat	0	2	3	3
Eoprice	0	1	1	2
Eotype	2	5	4	3
5. Facility	0	0	0	1 ^a
Applianc	1	1	2	5
Storage	0	1 ^a	0	0

^a= unique code word among focus groups.

^b= unique code word between male and female focus groups.

Table 7. (continued)

Code word	Males		Females	
	Rural Group 1	Rural Group 3	Rural Group 2	Rural Group 4
6. Health	1	2	3	0
Contra	0	0	0	1 ^a
Foodgrp	13	21	28	15
Kcal	0	0	3 ^b	1 ^b
Labels	0	1	1	0
Nutrient	1	0	3	3
Preg	0	0	1 ^a	0
Sanitat	1 ^a	0	0	0
Specfood	1	10	12	12
Wtcontr	0	0	3 ^a	0
7. Meals	1	1	2	5
Breakfast	1	2	1	1
Dinner	0	2	1	2
Lunch	0	1	2	1
Snacks	1 ^a	0	0	0
Supper	0	5	1	1
Weekend	0	1	0	1
8. Money	2	2	2	0
Monavail	2	1	0	2
Price	0	2	1	2
9. People	0	0	0	2 ^a
Peers	0	5	4	2
Relative	0	1	9	4

Table 7. (continued)

Code word	Males		Females	
	Rural Group 1	Rural Group 3	Rural Group 2	Rural Group 4
10. Physical	0	0	1 ^a	0
Exercise	0	0	2 ^b	1 ^b
Fatigue	0	1	0	1
Hunger	2 ^a	0	0	0
11. Prepare	1 ^b	1 ^b	0	0
Cookbake	3	7	10	4
Creativ	0	1	1	3
Lftovr	0	1	0	4
12. Procure	1	1	1	0
Coupon	0	1	0	1
Hunting	0	2	2	0
List	0	0	0	1 ^a
Storsel	1	1	2	1
13. Time	0	1	1	0
Conven	1	1	1	5
Planning	3	0	1	4
Priority	0	2	0	2
Schedule	1	6	0	3
Urgency	0	0	0	1 ^a
Total:	28	44	42	47

Some focus groups generated more unique code words than others; such an occurrence may have many explanations. For example, all Rural Group 4 participants had the same level of education, and had similar occupations. However, the participants of Rural Group 3 had varying levels of education and all had different occupations. Additionally, when some focus groups discussed the topic among themselves, rather than responding directly to the moderator, more themes were generated. Unique code words by gender were identified by placing Rural Groups 1 and 3 and Rural Groups 2 and 4 side by side on Table 7. However, it should be noted this particular analysis may be limited due to participant characteristics and group dynamics of the focus groups. Although the more talkative groups (Rural Groups 2, 3, and 4) generated a greater number of code word themes, some of the themes were repeated. The participants in Rural Group 4 had similar occupational backgrounds.

There were a number of unique code words generated among focus groups (n=15). Rural Groups 1 and 2 each generated three unique code words. The unique code words generated by Rural Group 1 included sanitation, snacks, and hunger. Sanitation was in relation to brown-looking meat in grocery stores, snacks was related to childhood food choices, and hunger was a theme which emerged when participants were asked what determined what they ate. The unique code words generated by Rural Group 2 were pregnancy, weight control, and physical. Pregnancy and weight control were related to each other because one participant indicated she was still fat from having a baby, and had lost twenty pounds by dieting. The physical code word was related to participants chasing kids around all day.

Rural Group 3 generated one unique code word, storage, which was related to looking in the cupboards to determine what to eat. Rural Group 4 generated eight unique code words: treat, culture, habit, facility, contradictory comments, people, list, and urgency. Treat was related to going out to eat and splurging on a meal. Culture, habit, and contradictory comments were interrelated because one participant indicated how she did not eat good foods most of the time and realized it was wrong for her health, but continued to eat those foods. Facility was in reference to not having adequate facilities for food preparation. People was a code word which seemed to be of importance in this particular focus group, participants commented on how peers and relatives influenced their food choices. List was related to shopping for food and how lack of a list caused the participant to be unorganized when shopping for food. Urgency was another unique code word generated by Rural Group 4; it was related to a participant's schedule and how she had to eat something immediately because she had to go back to school to advise extracurricular activities.

The geographic location of the focus groups also may serve as an explanation for differences. Three of the four focus groups were close to the Mississippi River; whereas, the other focus group was close to the Missouri River, thus imposing economic and industrial differences on the rural areas. Additionally, three of the four focus groups were located near urban areas, Rural Groups 1 and 2 are approximately 30 miles from Iowa City, Iowa; Rural Group 3 is approximately 20 miles from Dubuque, Iowa; whereas, Rural Group 4 is 50 miles from Council Bluffs, Iowa. Thus, they may or may not have had some urban influence imposed on their way of life.

These are just a few of the hypothesized explanations for the differences of the unique code words generated among focus groups.

Out of a composite of 64 different code words generated in the focus groups, 14 were common to all groups. These code words were: craving, prefer, quality, variety, eofastf, eotype, applianc, foodgrp, specfood, meals, breakfst, cookbake, storsel, and conven.

Individual groups generated a large number of code words. For example, Rural Groups 4, 3, and 2 generated 47, 44, and 42 code words, respectively, and Rural Group 1 generated 28 code words. This is not to say the generation of fewer code words was a problem, in fact, Rural Group 1 generated some code words the others did not.

Lastly, using the frequency of code words reported by the focus groups, it was noted that the female groups and the male groups generated unique code words ($n=2$; $n=2$, respectively). Each gender grouping generated two different code words. From the female groups the code words kcal and exercise emerged. These words were in reference to the caloric content of foods and exercising as a part of one's daily activity. It was not surprising these code words emerged, because females more than males are typically concerned with caloric content of foods and exercising. From the male groups, the code words seasons and prepare emerged. These themes were interrelated because participants discussed grilling chicken and/or hamburger during the summer.

The topic of gender-related factors influencing food choices is an interesting one and is an area in which little research has been done. The major professor for this

researcher, the researcher herself, and an undergraduate research intern prepared a manuscript entitled, “Gender-related factors influencing the food choices of young adults,” (Amos, Goody, & Whittaker, 1993).

This approach to analyzing the data by frequency of code words generated by focus groups helped the researcher to understand the ways in which participants in the settings under study made meaning of their experiences with food. The researcher attempted to use findings and make unbiased interpretations in order to achieve better understanding of the phenomena being studied. However, because a human instrument was used, it was inevitable that inquiry would be value-laden, rather than value-free. The researcher was influenced by the values of the naturalist inquiry paradigm and cultural context; the values affected what the researcher observed and the meanings of what was observed (Lincoln & Guba, 1985).

Reliability

Qualitative research presents an unusual situation for the researcher who wants to adhere to traditional standards of research consistency. The methods a qualitative researcher uses—seeking understanding, using a human instrument to study natural settings, and relying on interviews with participants—is sometimes subject to error. Achieving intra- and inter-rater reliability helps to establish consistency. Reliability serves to check the content-related evidence for validity of data. In addition, reliability is an important consideration in drawing conclusions (Kirk & Miller, 1986), and to ensure unbiased conclusions. Reliability of coding is affected by the competence of the

coders. Establishing a high intra-rater reliability helps to achieve a high inter-rater reliability; individuals must be consistent with their own coding before the coding consistency can be achieved with others. It is recommended that individual coders conduct an intra-rater reliability check until an agreement (reliability) of 0.80 is achieved (Miles & Huberman, 1984). Similarly, it is recommended that a reliability of 0.70-0.80 be achieved when assessing inter-rater reliability (Fern, 1982; Miles & Huberman, 1984; Scott & Hatfield, 1985).

For this particular research, intra-rater reliability as well as inter-rater reliability was evaluated. Intra- and inter-rater reliability for each focus group was calculated with the following results: intra-rater reliability (0.87); inter-rater reliability between the researcher and the other two coders (0.73 and 0.72, respectively); and composite inter-rater reliability between the researcher and both coders (0.77) (Table 8).

Table 8. Intra- and inter-rater reliability

Focus Group	Intra-rater	Inter-rater		Composite Coders 1,2,3
	Coder 1	Coder 2	Coder 3	
Rural Group 1	0.88	0.71	0.76	0.78
Rural Group 2	0.90	0.79	0.82	0.84
Rural Group 3	0.79	0.67	0.65	0.70
Rural Group 4	0.89	0.73	0.65	0.76
Average	0.87	0.73	0.72	0.77

Both the intra- and inter-rater reliability measurements for this research achieved the recommended reliability described in the literature. It would be expected that the intra-rater reliability would be high because the researcher conducted the focus groups, transcribed the audio tapes, and developed the code word list. And it was interesting that the inter-rater reliability with the other coders was on the lower end of the recommended reliability range. There are several possible explanations for this outcome. It is evident to the researcher there might have been ambiguity in choice of code words, in other words, some code words might have been confused with other code words. For example, the code words urgency and priority. These code words have similar meanings, and could be used in two ways, thus, having an overlap in meaning. In order to compensate for this phenomena, it might have been necessary to recheck reliability.

Summary

The purpose of this chapter has been to describe the results and generate discussion based on this research using various data analysis approaches. The demographic characteristics and occupations of focus group participants, and participants' responses to focus group questions were presented. This chapter also discussed code words and representative responses of code words, and frequency of code words reported by focus groups and the relevance code words had in relation to the factors influencing food choices through illustration of unique and common code words generated across and between focus groups, and unique code words generated by female and male groups.

Lastly, a method for determining consistency using special methods for checking intra- and inter-rater reliability was also discussed.

CHAPTER V. SUMMARY AND RECOMMENDATIONS

The present research was conducted to identify the behavioral, cultural, and social factors influencing the food choices of young adults living in rural areas of Iowa. The objectives of this research were to: (a) identify the food choices of young adults living in rural areas, (b) determine the sociodemographic, behavioral, cultural, and social factors influencing the food choices of young adults in rural areas, and (c) characterize the significant food choices of young adults in rural areas based on data collected from focus groups. The purpose of this chapter is to summarize this research and offer recommendations.

Summary

A review of the literature from an historical and contemporary perspective characterized the factors influencing food choices. The literature review emphasized the use of qualitative data, namely focus groups, as a vehicle for data collection. Additionally, the literature provided evidence about the food choices of young adults in both urban and collegiate areas and parental influence on children's food choices. There is little evidence cited in the literature as to the factors influencing the food choices of young adults living in rural areas.

The sociodemographic factors, specifically the behavioral, cultural, and social factors influencing the food choices of young adults also were reviewed. Behavioral research in the nutrition education area is about 35 years old, with the most noted research occurring in the last 20 years. The Fishbein-Ajzen model and the social

cognitive or social learning theory are used by nutrition educators to explain nutrition-related behavior. Most behavior as it relates to nutrition has multiple causes. Additional research in nutrition and behavior may increase the effectiveness of interventions designed to alter nutrition-related behavior.

Culture has a significant influence on food choices because food is a cultural object. Mead's core model, Lewin's channel theory, and the materialist and idealist approaches are documented in the literature as explaining how culture influences food choices. Culture allows researchers to examine what foods humans consume and for what reasons, thus enabling researchers to gain an understanding of the knowledge, traditions, beliefs, and values common to individuals.

People eat to survive and to express themselves socially. Eating to survive is one idea, while social values related to food is another idea. Food is an important component of human socialization. Lévi-Strauss' cooking theory and differentiation model explain how social factors influence food choice.

Because there are many factors influencing the food choices of young adults, it is important to combine the construct of food choice with sociodemographics to approach the research problem. This was accomplished by using qualitative research, specifically focus groups, to collect data for this research. Focus group participants were selected using purposive sampling. On the basis of the research objectives, definitions in the literature, and parameters established by the NC-200 regional research, criteria were established for selecting rural young adults. Young adults had to fulfill the following selection criteria: (a) 18-24 years of age, (b) living away from

the home of origin, and (c) residing in a rural area. Five focus groups (n=26) were conducted in five rural areas in Iowa from February 1992 to April 1992. Two separate groups of females (n=7), two groups of males (n=15) and one mixed group of both females and males (n=4) responded to common questions about food choices posed by the focus group moderator. (Due to lack of representation, the mixed focus group results were not used because the group was composed of three females and one male.) The seven questions asked were designed to elicit responses from young adults about what and when they eat, food shopping practices, food preparation methods at meal and snack times, childhood food practices, and eating out decisions.

A self-administered demographic questionnaire was completed by the participants following the focus group interviews. The purpose of the questionnaire was to validate the characteristics of the participants based on the stated selection criteria. The variables for the demographic questionnaire were: (a) sex, (b) place of residence, (c) highest level of education completed, (d) birth date, (e) occupation, and (f) description of the type of work performed. Once all the focus groups were completed and data were collected, data analyses were conducted.

Numerous strategies were used to analyze the sizable amount of data collected from each focus group. The following steps were used to analyze the data: debriefing period, transcribing and analyzing tape recordings from each group, developing code words which were comprised of 13 general themes and 51 subthemes, coding the data, determining reliability, and using The Ethnograph, a computer software program which

efficiently organizes qualitative data into a meaningful format. Following these steps, data interpretations were developed in keeping with the research objectives.

Data interpretations generated notable results which provided the basis for the discussion of the sociodemographic factors influencing the food choices of young adults living in rural areas of Iowa. The demographic characteristics of the focus group participants and their communities provided some explanation for the comments received about food choices from the questions asked during the focus group interviews. The qualitative research procedure of generating the frequency of code words from focus groups was done to ensure a high level of construct-related evidence of validity. This procedure provided the next step of the data analysis, the identification of unique code words generated by each group, common code words to all groups, and unique code words between female and male groups. The approach of analyzing the data in this way enabled the researcher to understand the ways in which the focus group participants articulated their meaning of experiences with food.

Qualitative research presents a unique situation in terms of adhering to standards of research consistency. The researcher was able to establish research consistency by achieving intra- and inter-rater reliability. Reliability served to: (a) check the content-related evidence of validity, (b) draw conclusions from results, and (c) ensure unbiased conclusions.

In summary, this research focused on identifying the factors influencing rural young adult food choices and developing insights on the value of qualitative research. As discussed in Chapter IV. Results and Discussion, the focus groups generated 14

code words common to all groups, 15 unique code words in the groups, and two unique code words (n=4) in the female and in the male groups, separately. A total of 64 code words were generated by the rural young adult focus groups. The nature of this research provides a base for future research. This study generated a significant amount of meaningful data related to the sociodemographic factors influencing food choices. As a result, several areas of interest for further research emerged.

Recommendations

On the basis of the results from this study, there is a worthy agenda for future research on the food choices of young adults. First, it may be beneficial to replicate this study by conducting additional focus groups in other rural areas of Iowa to determine if any area differences exist in young adult food choices. This study only focused on the east central, west central, northwest, and southeast areas of Iowa. Additionally, it is hypothesized that rural young adults who live near an urban area may be influenced by the urban area. Thus, conducting another study with additional focus groups from other parts of Iowa could serve to validate these findings.

Furthermore, additional code words related to food choice may evolve if additional focus groups, specifically separate male groups, separate female groups, and representative mixed groups are conducted. This inevitably would lead to other factors influencing the food choices of rural young adults.

Moreover, the scope of the research could be increased to examine the differences, if any, between the food choices of female, male, and mixed focus groups in rural

areas. Additionally, differences, if any, between urban and rural young adult food choices could be examined. Further insight could be gained by comparing and contrasting such groups. Lastly, the investigation of this research could be expanded by developing a quantitative instrument from qualitative data that could be used to measure a larger sample of the food choices of rural, young adults.

In summary, this research identified some of the factors influencing the food choices of young adults living in rural areas of Iowa. Future research should be directed towards understanding the factors influencing food choice as being interactive and interdependent. More investigations are needed to increase the scope of this research, and to draw more conclusions about the food choices of rural, young adults.

REFERENCES

- Achterberg, C. (1988). Qualitative methods in nutrition education evaluation research. Journal of Nutrition Education, 20, 244-250.
- Adams, R.N. (1959). Nutrition, anthropology, and the study of man. Nutrition Reviews, 17, 97-99.
- Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting behavior. Englewood Cliffs, NJ: Prentice-Hall.
- Akers, R.L., Krohn, M.D., Lanza-Kaduce, L., & Rodosevich, M. (1979). Social learning and deviant behavior: A specific test of a general theory. American Sociological Reviews, 44, 636-655.
- Allport, G.W. (1967). Attitudes. In M. Fishbein (Ed.), Attitude, theory, and measurement (pp. 13-15). New York: Wiley.
- Amos, R.J., Goody, C.M., & Whittaker, J.D. (1993). Gender-related factors influencing the food choices of young adults. Unpublished manuscript, Iowa State University, Ames, IA.
- Aries, E. (1976). Interaction patterns and themes of male, female, and mixed groups. Small Group Behavior, 7, 7-18.
- Axelrod, M. (1976). The dynamics of the group interview. In B.B. Anderson (Ed.), Advances in consumer research (pp. 437-441). Chicago: Association for Consumer Research.
- Axelson, M.L., Brinberg, D., & Allen, C. (1986). Robustness of Fishbein's theory of reasoned action in predicting food-related behavior. Home Economics Research Journal, 15, 52-56.
- Babbie, E.R. (1986). The practice of social research (4th ed.). Belmont, CA: Wadsworth.
- Bandura, A. (1977). Social learning theory. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1986). Foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.

- Baranowski, T., & Nader, P. (1986). Family health behavior. In D.C. Turk & R.D. Kerns (Eds.), Health, illness, and families: A life-span perspective (pp. 51-80). New York: Wiley.
- Basch, C.E. (1987). Focus group interviews: An underutilized research technique for improving theory and practice in health education. Health Education Quarterly, 14, 411-447.
- Bavelas, A. (1950). Communication patterns in task-oriented groups. Journal of the Acoustical Society of America, 22, 725-730.
- Beerman, K.A., Jennings, G., & Crawford, S. (1990). The effect of students' residence on food selection. American Journal of College Health, 38, 215-220.
- Birch, L.L. (1980). The relationship between children's food preferences and those of their parents. Journal of Nutrition Education, 12, 14-18.
- Birch, L.L., Billman, J., & Richards, S.S. (1984). Time of day influences food acceptability. Appetite, 5, 109-116.
- Bogardus, E.S. (1926). The group interview. Journal of Applied Sociology, 10, 372-382.
- Bogdan, R., & Taylor, S.J. (1975). Introduction to qualitative research methods. New York: John Wiley and Sons.
- Brodzinsky, D.M., Gormly, A.V., & Ambron, S.R. (1986). Life-span human development. New York: Holt, Rinehart, and Winston.
- Brown, J.E., Tharp, T.M., McKay, C., Richardson, S.L., Hall, N.J., Finnegan, J.R., & Splett, P.L. (1992). Development of a prenatal weight gain intervention program using social marketing methods. Journal of Nutrition Education, 24, 21-27.
- Bryan, M.S., & Lowenberg, M.E. (1958). The father's influence on young children's food preferences. Journal of the American Dietetic Association, 34, 30-35.
- Bultena, G., Lasley, P., & Geller, J. (1986). The farm crisis: Patterns and impacts of financial distress among Iowa families. Rural Sociology, 51, 436-448.
- Burt, J.V., & Hertzler, A.A. (1978). Parental influence on the child's food preference. Journal of Nutrition Education, 10, 127-128.

- Calder, B.J. (1977). Focus groups and the nature of qualitative marketing research. Journal of Marketing Research, 3, 353-364.
- Carter, P.I., & Moss, R.A. (1984). Screening for anorexia and bulimia nervosa in a college population: Problems and limitations. Addictive Behavior, 9, 417-419.
- Cassel, J. (1957). Social and cultural implications of food and food habits. American Journal of Public Health, 47, 732-740.
- Cosper, B.A., & Wakefield, L.M. (1975). Food choice of women. Journal of the American Dietetic Association, 66, 152-155.
- Crockett, S.J., Heller, K.E., Merkel, J.M., & Peterson, J.M. (1990). Assessing beliefs of older rural Americans about nutrition education: Use of the focus group approach. Journal of the American Dietetic Association, 90, 563-567.
- Crockett, S.J., & Littrell, J.M. (1985). Comparison of eating patterns between dietetic and other college students. Journal of Nutrition Education, 17, 47-50.
- Daniel, W.A. (1975). An approach to the adolescent patient. Medical Clinics of North America, 59, 1281-1287.
- Dooley, D. (1984). Social research methods. Englewood Cliffs, NJ: Prentice-Hall.
- Edwards, P.K., Mullis, R.M., & Clarke, B. (1986). A comprehensive model for evaluating innovative nutrition education programs. Journal of Nutrition Education, 18, 10-15.
- Einstein, M.A., & Hornstein, I. (1970). Food preferences of students and nutritional implications. Journal of Food Science, 35, 429-436.
- Eliot, T.S. (1949). Notes towards the definition of culture. New York: Harcourt, Brace, and Company.
- Elkin, F., & Handel, G. (1978). The child and society: The process of socialization (3rd ed.). New York: Random House.
- Fern, E. (1982). The use of focus groups for idea generation: The effects of group size, acquaintanceship, and moderator on response quantity and quality. Journal of Marketing Research, 19, 1-13.
- Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention, and behavior: An introduction to theory and research. Reading, MA: Addison-Wesley.

- Folch-Lyon, E., & Trost, J. (1981). Conducting focus group sessions. Studies in Family Planning, 12, 443-449.
- Foster, G.M. (1962). Traditional cultures and the impact of technological change. New York: Harper and Row.
- Foster, G.M., & Anderson, B.G. (1978). Medical anthropology. New York: John Wiley and Sons.
- Freedman, R.L. (1976). Nutritional anthropology: An overview. In T.K. Fitzgerald (Ed.), Nutrition and anthropology in action (pp. 1-5). Assen, Netherlands: Van Gorcum.
- Geertz, C. (1973). Thick description: Toward and interpretive theory of culture. In C. Geertz (Ed.), The interpretations of cultures: Selected essays (pp. 3-32). New York: Basic Books.
- Glaser, B., & Strauss, A. (1967). The discovery of grounded theory. Chicago: Aldine.
- Gochman, D.S. (Ed.). (1988). Health behavior: Emerging research perspectives. New York: Plenum.
- Greenbaum, T.L. (1988). The practical handbook and guide to focus group research. Lexington, MA: D.C. Heath.
- Grunewald, K.K. (1985). Weight control in young college women: Who are the dieters? Journal of the American Dietetic Association, 85, 1445-1450.
- Guthrie, H.A. (1984). Selection and quantification of typical food portions by young adults. Journal of the American Dietetic Association, 84, 1440-1444.
- Halmi, K.A., Falk, J.R., & Schwartz, E. (1981). Binge-eating and vomiting: A survey of a college population. Psychological Medicine, 11, 697-706.
- Harris, M. (1985). Good to eat. New York: Simon and Schuster.
- Harris, M., & Ross, E.B. (Eds.). (1987). Food and evolution. Philadelphia: Temple University.
- Hartman, D.P. (1977). Considerations in the choice of interobserver reliability estimates. Journal of Applied Behavior Analysis, 10, 103-116.

- Helmick, S.A. (1978). Family living patterns: Projections for the future. Journal of Nutrition Education, 10, 155-157.
- Hemon, J.F., Skinner, J.D., Andrews, F.E., & Penfield, M.P. (1986). Nutrient intakes and foods selected by college students: Comparisons among subgroups divided by energy intake. Journal of the American Dietetic Association, 86, 217-221.
- Hertzler, A.A. (1983). Recipes and nutrition education. Journal of the American Dietetic Association, 83, 466-471.
- Hertzler, A.A., & Frary, R.B. (1989). Food behavior of college students. Adolescence, 24, 349-356.
- Hertzler, A.A., & Owen, C. (1976). Sociologic study of food habits--a review. Journal of the American Dietetic Association, 69, 381-384.
- Holden, P.M. (1971). How advertising affects food habits. Food and Nutrition Notes Review, 38, 102.
- Holli, B.B., & Calabrese, R.J. (1986). Communication and education skills: The dietitian's guide. Philadelphia: Lea and Febiger.
- Jakobovits, C., Halstead, P., Kelley, L., Roe, D.A., & Young, C.M. (1977). Eating habits and nutrient intakes of college women over a thirty-year period. Journal of the American Dietetic Association, 71, 405-411.
- Kaplan, C.P., & VanValey, T.L. (1980). Census '80: Continuing the factfinder tradition. Washington, D.C.: United States Government Printing Office.
- Khan, M.A., & Lipke, L.D. (1982). Snacking and its contribution to food and nutrient intake of college students. Journal of the American Dietetic Association, 81, 583-587.
- Kirk, J., & Miller, M.L. (1986). Reliability and validity in qualitative research. Newbury Park, CA: Sage.
- Krueger, R.A. (1986). Focus group interviewing: Information for decision making. St. Paul, MN: Cooperative Extension Service.
- Krueger, R.A. (1988). Focus groups: A practical guide for applied research. Newbury Park, CA: Sage.

- Kuhnlein, N. (1989). Culture and ecology in dietetics and nutrition. Journal of the American Dietetic Association, 89, 1059-1060.
- Kuper, A., & Kuper, J. (1985). The social science encyclopedia. Boston: Routledge and Kegan Paul.
- Lau, R.R., Quandrel, M.J., & Hartman, K.A. (1990). Development and change of young adults' preventive beliefs and behaviors influence from parents and peers. Journal of Health and Social Behavior, 31, 240-259.
- Larson, W.L., Saltiel, J., Jobes, P.C., Faulkner, L., & Gilchrist, C.J. (1988). Effects of farm crisis on small towns. Bozeman, MT: Montana Agricultural Experiment Station.
- Lévi-Strauss, C. (1963). Totemism. Boston: Beacon.
- Lévi-Strauss, C. (1969). The raw and the cooked: Introduction to a science of mythology. Chicago: University of Chicago.
- Lewin, K. (1943). Forces behind food habits and methods of change: The problem of changing habits. Washington, D.C.: National Academy of Sciences, National Research Council, Committee on Food Habits.
- Lewis, C.J., Sims, L.S., & Shannon, B. (1989). Examination of specific nutrition/health behaviors using a social cognitive model. Journal of the American of Dietetic Association, 89, 194-202.
- Lincoln, Y.S., & Guba, E.G. (1985). Naturalistic inquiry. Beverly Hills, CA: Sage.
- Litman, T.J. (1974). The family as a basic unit in health and medical care: A social-behavioral overview. Social Science and Medicine, 8, 495-519.
- Logue, A.W. (1991). The psychobiology of eating and drinking (2nd ed.). New York: W.H. Freeman.
- Maccoby, E.E., Newcomb, T.M., & Hartley, E.L. (Eds.). (1958). Readings in social psychology (3rd ed.). New York: Holt, Rinehart, and Winston.
- McDaniel, C. (1979). Focus groups: Their role in the marketing research process. Akron Business and Economic Review, 10, 14-19.
- Marralle, J.C., Shipman, J.H., & Rhodes, M.L. (1986). What some college students eat. Nutrition Today, 21 (1), 16-21.

- Marshall, C., & Rossman, G.B. (1989). Designing qualitative research. Newbury Park, CA: Sage.
- Mazzeo-Caputo, S.E., Danish, S.J., & Kris-Etherton, P.M. (1985). Dietary change: Prescription vs. goal setting. Journal of the American Dietetic Association, 85, 555-556.
- Mead, M. (1943). The factor of food habits. Annals of the American Academy of Political and Social Sciences, 225, 136-141.
- Mead, M. (1964). Food habits research: Problems of the 1960s. Washington, D.C.: National Academy of Sciences.
- Mead, M. (1965). Manual for the study of food habits: Report for the committee on food habits (Bulletin No. 111). Washington, D.C.: National Academy of Sciences.
- Melby, C.L., Femea, P.L., & Sciacca, J.P. (1986). Reported dietary and exercise behaviors, beliefs, and knowledge among university undergraduates. Nutrition Research, 6, 799-808.
- Miles, M.B., & Huberman, M. (1984). Qualitative data analysis: A sourcebook of new methods. Beverly Hills: Sage.
- Miller, T.M., Coffman, J.G., & Linke, R.A. (1980). Survey on body image, weight, and diet of college students. Journal of the American Dietetic Association, 77, 561-566.
- Mintz, S.W. (1979). Choice and occasion: Sweet moments. In L.M. Barker (Ed.), The psychobiology of human food selection (pp. 157-169). Westport, CT: AVI.
- Mitchell, S.J. (1990). Changes after taking a college basic nutrition course. Journal of the American Dietetic Association, 90, 955-961.
- Moore, M.C., Beasley, C.D., & Moore, E.M. (1970). Why the boys? Journal of Home Economics, 62, 338-341.
- Morgan, D.L. (1988). Focus groups as qualitative research. Newbury Park, CA: Sage.
- Mullen, P.D., & Iverson, D. (1982). Qualitative methods for evaluative research in health education programs. Health Education, 13, 11-18.

- Murcott, A. (Ed.). (1983). The sociology of food and eating: Essays on the sociological significance. Aldershot, Hampshire, Great Britain: Gower.
- Murcott, A. (1988). Sociological and social anthropological approaches to food and eating. In G.H. Bourne (Ed.), Sociological medical aspects of nutrition, world review of nutrition and dietetics (pp. 1-40). Basel, Switzerland: Karger.
- Newcomb, T.M. (1943). Personality and social change. New York: Holt, Rinehart, and Winston.
- O'Leary, L., & Lee, M. (1975). Nutrient intakes of university students. Journal of the Canadian Dietetic Association, 36, 53-58.
- Patton, M.Q. (1990). Qualitative evaluation and research methods (2nd ed.). Newbury Park, CA: Sage.
- Pearce, J.H., Amos, R.J., & Terry, R.D. (1987). Attitudes towards eating and reported dieting practices of adolescent girls in relation to body-image. Journal of the New Zealand Dietetic Association, 41, 22-23.
- Pelto, G.H. (1981). Anthropological contributions to nutrition education research. Journal of Nutrition Education, 13 (Suppl. 1) 2-8.
- Pelto, G.H., Pelto, P.J., & Messer, E. (Eds.). (1989). Research methods in nutritional anthropology. Tokyo, Japan: The United Nations University.
- Perron, M., & Endres, J. (1985). Knowledge, attitudes, and dietary practices of female athletes. Journal of the American Dietetic Association, 85, 573-576.
- Pumpian-Mindin, E. (1954). The meanings of food. Journal of the American Dietetic Association, 30, 576-580.
- Richards, A. (1932). Hunger and work in a savage tribe. London: G. Routledge and Sons.
- Richards, A. (1939). Land, labor, and diet in North Rhodesia. Oxford, England: Oxford University.
- Rozin, E., & Rozin, P. (1981). Some surprisingly unique characteristics of human food preferences. In A. Fenton, & T. Owens (Eds.), Food preferences in perspective. Proceedings of the 34th International Conference on Ethnological Food Research (pp. 243-252). Cardiff, Wales, Great Britain: Bristol.

- Rozin, P. (1982). Human food selection: The interaction of biology, culture, and individual experiences. In L.M. Barker (Ed.), The psychobiology of human food selection (pp. 225-254). Westport, CT: AVI.
- Rozin, P. (1990). Acquisition of stable food preferences. Nutrition Reviews, 48, 106-113.
- Rozin, P., & Fallon, A. (1988). Body image, attitudes to weight and misperceptions of figure preferences of the opposite sex: A comparison of men and women in two generations. Journal of Abnormal Psychology, 97, 342-345.
- Ryan, T.A. (1970). Intentional behavior: An approach to human motivation. New York: Ronald.
- Sanjur, D. (1982). Social and cultural perspectives in nutrition. Englewood Cliffs, NJ: Prentice-Hall.
- Sanjur, D., & Scoma, A.D. (1971). Food habits of low-income children in northern New York. Journal of Nutrition Education, 2, 85-95.
- Schafer, E. (1986). A nutrition home study course for food and health professionals. Journal of Nutrition Education, 18, 6-9.
- Schafer, R.B. (1978). Factors affecting food behavior and quality of husbands' and wives' diets. Journal of the American Dietetic Association, 72, 138-143.
- Schafer, R.B., & Keith, P.M. (1981). Influences on food choices across the family life cycle. Journal of the American Dietetic Association, 78, 144-148.
- Schank, M.J., Thomas, B., & Young, M. (1987). Health behavioral changes among adult women attending a course in women's health. Family and Community Health, 10 (2), 66-71.
- Schwaller, M.B., & Shepherd, S.K. (1992). Use of focus groups to explore employee reactions to a proposed worksite cafeteria nutrition program. Journal of Nutrition Education, 24, 33-36.
- Schwartz, N.E. (1975). Nutritional knowledge, attitudes, and practices of high school graduates. Journal of the American Dietetic Association, 66, 28-31.
- Scott, M.M., & Hatfield, J.G. (1985). Problems of analyst and observer agreement in naturalistic narrative data. Journal of Educational Measurement, 22, 207-218.

- Searles, R.H., Terry, R.D., & Amos, R.J. (1986). Nutrition knowledge and body-image satisfaction of female adolescents. Journal of Nutrition Education, 18, 123-127.
- Seidel, J.V., Kjolseth, R., & Seymour, E. (1988). The Ethnograph: A user's guide. Corvallis, OR: Qualis Research Associates.
- Selltiz, C., Wrightsman, L.S., & Cook, S.W. (1976). Research methods in social relations (3rd ed.). New York: Holt, Rinehart, and Winston.
- Sexton, D.E. (1974). Differences in food shopping habits by area residence, role, and income. Journal of Retailing, 50, 37-48.
- Shapiro, H.L. (Ed.). (1960). Man, culture, and society. New York: Oxford University.
- Shepherd, S.K., Sims, L.S., Cronin, F.J., Shaw, A., & Davis, C.A. (1989). Use of focus groups to explore consumers' preferences of content and graphic design of nutrition publications. Journal of the American Dietetic Association, 89, 1612-1614.
- Shepherd, R., & Stockley, L. (1987). Nutrition knowledge, attitudes, and fat consumption. Journal of the American Dietetic Association, 87, 615-619.
- Sims, L.S. (1981). Toward an understanding of attitude assessment in nutrition research. Journal of the American Dietetic Association, 78, 460-466.
- Soler, J. (1979). The semiotics of food in the Bible. In R. Foster and O. Ranum (Eds.), Food and drink in history (pp. 126-138). Baltimore: Penguin.
- Snetselaar, L. (1989). Nutrition counseling skills (2nd ed.). Rockville, MD: Aspen.
- Spradley, J. (1979). The ethnographic interview. New York: Holt.
- Squires, R.L., & Kogan, D.M. (1985). Sex-role and eating behaviors among college women. International Journal of Eating Disorders, 4, 539-548.
- Steelman, V.P. (1976). Attitudes toward food as indicators of subcultural value systems. Home Economics Research Journal, 5, 21-32.
- Stewart, B., Olson, D., Goody, C., Tinsley, A., Amos, R., Betts, N., Georgiou, C., Hoerr, S., Ivaturi, R., & Voichick, J. (1993). Qualitative methodology for examining the food choices of young adults. Manuscript submitted for publication.

- Stewart, B., Tinsley, A., Olson, D., & Voichick, J. (1991). A manual for conducting focus group research. A working document for NC-200 regional research. Tucson, AZ: University of Arizona.
- Stoto, M.A., Behrens, R., & Rosemont, C. (Eds.). (1990). Healthy people 2000: Citizens chart the course. Washington, D.C.: National Academy Press.
- Strauss, A., & Corbin, J. (1990). Basics of qualitative research: Grounded theory procedures and techniques. Newbury Park, CA: Sage.
- Strickland, D.E. (1982). Social learning and deviant behavior: A specific test of a general theory--a comment and critique. American Sociological Review, *47*, 162-167.
- Talmage, H., Hughes, M., & Eash, M.J. (1978). The role of evaluation research in nutrition education. Journal of Nutrition Education, *10*, 169-172.
- Theodorson, G.A., & Theodorson, A.G. (1969). A modern dictionary of sociology. New York: Thomas Y. Crowell.
- Trenkner, L.L., & Achterberg, C.L. (1991). Use of focus groups in evaluating nutrition education materials. Journal of the American Dietetic Association, *91*, 1577-1581.
- Triandis, H.C. (1971). Attitude and attitude change. New York: Wiley.
- Triandis, H.C. (1977). Interpersonal behavior. Monterey, CA: Wadsworth.
- Touliatos, J., & Compton, N. (1988). Research methods in human ecology/home economics. Ames, IA: Iowa State University.
- Tuorila, H. (1990). The role of attitudes and preferences in food choice. In J.C. Somogyi & E.H. Koskinen (Eds.), Nutritional adaptations to new lifestyles (pp. 108-116). Basel, Switzerland: Karger.
- Turner, C.E. (1964). Community health educators' compendium of knowledge. International Journal of Health Education, *45*, 143-148.
- Turner, J.C. (1985). Social categorization and the self-concept: A social cognitive theory of group behavior. In E.J. Lawler (Ed.), Advances in group processes (pp. 77-122). Greenwich, CT: JAI.
- Turner, J.C. (1991). Social influence. Bristol, PA: Open University.

- United States Bureau of the Census (1990). 1990 census of population and housing: Summary population and housing characteristics. Washington, D.C.: United States Government Printing Office.
- United States Department of Health and Human Services, National Cancer Institute. (1980). Pretesting in health communications. (NIH Publication No. 81-1493). Washington, D.C.: Author.
- United States Department of Labor (1991). Dictionary of occupational titles. (4th ed.). Washington, D.C.: Author.
- Van Hook, M.P. (1990). The Iowa farm crisis: Perceptions, interpretations, and family patterns. New Directions for Child Development, 46, 71-86.
- Wakefield, L.M., & Miller, M.C. (1971). Several factors affecting college coeds' food preferences, habits, and intake. Journal of Home Economics, 63, 45-52.
- Young, F.W. (1970). Reactive subsystems. American Sociological Review, 35, 297-307.
- Young, F.W., & Young, R. (1968). The differentiation of family structure in rural Mexico. Journal of Marriage and the Family, 30, 154-161.

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APPENDIX A. USE OF HUMAN SUBJECTS IN RESEARCH

Checklist for Attachments and Time Schedule

The following are attached (please check):

12. Letter or written statement to subjects indicating clearly:
- purpose of the research
 - the use of any identifier codes (names, #'s), how they will be used, and when they will be removed (see Item 17)
 - an estimate of time needed for participation in the research and the place
 - if applicable, location of the research activity
 - how you will ensure confidentiality
 - in a longitudinal study, note when and how you will contact subjects later
 - participation is voluntary; nonparticipation will not affect evaluations of the subject
13. Consent form (if applicable)
14. Letter of approval for research from cooperating organizations or institutions (if applicable)
15. Data-gathering instruments Sample used in previous regional research

16. Anticipated dates for contact with subjects:

First Contact

April 1, 1991

Month / Day / Year

Last Contact

April 1, 1994

Month / Day / Year

17. If applicable: anticipated date that identifiers will be removed from completed survey instruments and/or audio or visual tapes will be erased:

Month / Day / Year

18. Signature of Departmental Executive Officer

Date

Department or Administrative Unit

_____ 8-9-90 Family and Consumer Sciences Education

19. Decision of the University Human Subjects Review Committee:

- Project Approved** with the understanding that the cover letter and questionnaire will be submitted when developed.

Patricia M. Keith
Name of Committee Chairperson

Date

8-16-90

Signature of Committee Chairperson

APPENDIX B. OUTLINE FOR INTERVIEW

OUTLINE FOR INTERVIEW

- I. Explain project
 - A. Outline the activity for subjects
 - B. Title and purposes of the research
 - C. Explain reason for audio-cassette recorders
 - D. Explain why subjects were selected

- II. Ice Breaker
 - A. Researcher and subjects will introduce themselves

- III. Focus Group Testing
 - A. Explain to the subjects that there will be a series of questions asked relating to food choices
 - B. Proceed to interview subjects
 - C. Intersperse probing questions in order to obtain more information from subjects

- IV. Wrap Up and Thank You
 - A. Subjects will complete independent personal service form and demographic questionnaire

APPENDIX C. INTERVIEW QUESTIONS

INTERVIEW QUESTIONS

1. How do you determine what to eat when you eat?
2. When you go shopping for food, how do you determine what to buy?
3. How do you prepare the food you buy?
4. How do your food choices and food preparation methods change at each meal time and also at snack time?
5. When eating out, how do you make your decisions of where and what to eat?
6. What childhood food choices, if any, do you continue to practice?
7. What other factors do you think influence your food choices?

APPENDIX D. PROBING QUESTIONS

PROBING QUESTIONS

1. Would you explain further?
2. Would you give me an example of what you mean?
3. Would you say more?
4. Is there anything else?
5. Please describe what you mean.
6. I don't understand.
7. Does anyone else have anything to say about this topic?
8. Can you think of anything else about this topic?

APPENDIX E. DEMOGRAPHIC QUESTIONNAIRE

DEMOGRAPHIC QUESTIONNAIRE

CODE NO. ____

Thank you for participating in the focus group. We would like to ask the following questions in order to provide background information for the project.

Directions: Please circle the appropriate answer.

1. What is your sex?
 - a) Male
 - b) Female
2. Which best describes where you live?
 - a) Farm in a rural area (in the country)
 - b) Nonfarm in a rural area (in the country)
 - c) Small town (less than 2,500 people)
3. What is the highest level of education you have completed?
 - a) Elementary school
 - b) Some high school
 - c) High school graduate
 - d) Some college or technical school
 - e) College or technical school graduate

Directions: Please write in your response.

4. When were you born?
Month _____ Date _____ Year _____
 5. What is your occupation? _____
 6. Describe the work you do. _____
-
-
-

APPENDIX F. TELEPHONE PROTOCOL AND CORRESPONDENCE

TELEPHONE PROTOCOL

Hello, _____. My name is Cindy Goody and I am a student in the College of Family and Consumer Sciences at Iowa State University in Ames. I received your name from _____. I would like to invite you to participate in a project I am doing in cooperation with the United States Department of Agriculture. The purpose of this project is to determine the food choices of young adults in rural areas. If you are 18 to 24 years of age and living away from your parent(s)/guardian(s) home, you are eligible to participate in this project.

Participation in this project would involve one hour of your time in a confidential, informal group interview and answering approximately seven questions about your food choices. In addition, you will receive compensation for your time and effort. Would you be interested in participating in this project?

If yes: Great! The group interview will be held on _____ at _____ p.m. in (location). Thank you for your time. I look forward to meeting you soon!

If no: Thank you for your time. Good-bye.

February 21, 1992

Dear :

We contacted you this past week requesting your participation in a project on the food choices of young adults. When we spoke with you, you agreed to participate in a small group discussion. Refreshments will be provided.

In order for you to receive monetary compensation, we will need your social security number. Please return the enclosed self-addressed postcard for confirmation of your participation with this project. If for any reason, you cannot attend on the above date, please call collect to either Dr. Rosalie Amos, (515) 294-6446, or Cynthia Goody, (515) 292-0372. Thank you for your cooperation. We look forward to seeing you.

Sincerely,

Rosalie Amos, Ph.D.
Associate Professor

—
Cynthia Goody, R.D., L.D.
Graduate Assistant

PARTICIPANT CONFIRMATION POSTCARD

Please check one:

Yes, I will be able to participate in the small group discussion about food choices on (month) (day), 1992.

No, I will not be able to participate in the small group discussion about food choices on (month) (day), 1992.

Signature: _____

(Name)

(Address)

(city, state, zip code)

February 27, 1992

Dear :

We wish to thank you for participating in the group interview for the research project this past week. Your contribution to the small group discussion about food choices was greatly appreciated. Thank you again for your time and cooperation.

Sincerely,

Rosalie Amos, Ph.D.
Associate Professor

Cynthia Goody, R.D., L.D.
Graduate Assistant

February 27, 1992

Dear :

We wish to thank you for making the necessary arrangements and allowing us to conduct a focus group interview with the young men employed with your company. They certainly provided us with valuable information about their food choices. Your kind assistance was greatly appreciated. Thank you again.

Sincerely,

Rosalie Amos, Ph.D.
Associate Professor

Cynthia Goody, R.D., L.D.
Graduate Assistant

March 5, 1992

Dear :

We wish to thank you for agreeing to assist with the research project on the food choices of young adults living in rural areas. As we discussed, this regional research project is being conducted in cooperation with the United States Department of Agriculture. Currently, we are accessing a rural young adult population, aged 18 to 24 years. We ask that students not be residing with parents. Students who live on a farm, on non-farm in the country are eligible to participate in the project. During a group interview which will last approximately one hour, students will be asked seven questions about their food choices. After the interview, we will ask the students to complete a short demographic questionnaire. Please refer to enclosed copy. Students will be awarded compensation for their time and effort. Enclosed please find 100 copies of the letter to distribute to the students.

Please feel free to contact Dr. Rosalie Amos (515) 294-6446 or Cynthia Goody (515) 294-6446/(515) 292-0372 with questions. Thank you again for your time and cooperation.

Sincerely,

Rosalie Amos, Ph.D.
Associate Professor

Cynthia Goody, R.D., L.D.
Graduate Assistant

March 16, 1992

Dear Student:

We would like to invite you to participate in a regional project that we are doing in cooperation with the United States Department of Agriculture. The purpose of this project is to determine the food choices of young adults living in rural areas. If you are 18 to 24 years of age and living away from your parent's home, you are eligible to participate in this project.

Participation in this project would involve one hour of your time in a group interview and answering approximately seven questions about your food choices. In addition, you will receive monetary compensation for your time and effort.

If you are interested in participating, contact the departmental office. Thank you for your time and cooperation. We look forward to hearing from you.

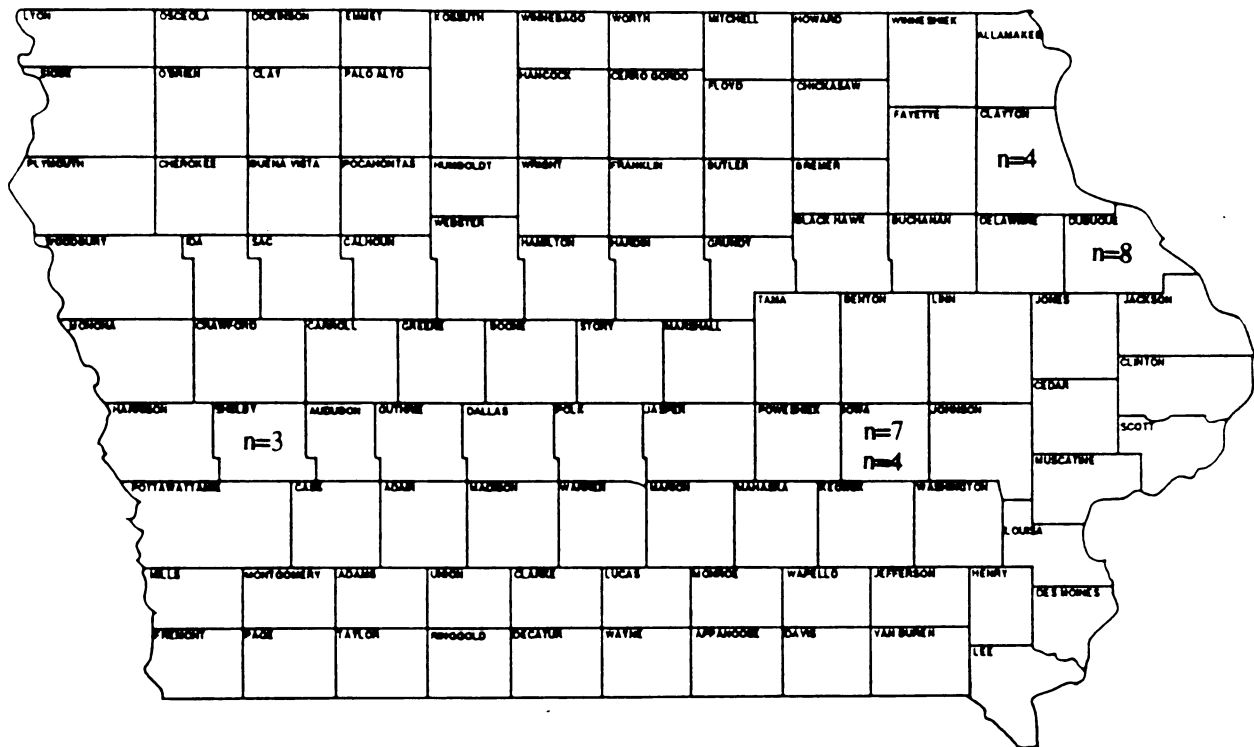
Sincerely,

Rosalie Amos, Ph.D.
Associate Professor

Cynthia Goody, R.D., L.D.
Graduate Assistant

APPENDIX G. MAP DEPICTING FOCUS GROUP LOCATIONS

MAP DEPICTING FOCUS GROUP LOCATIONS



APPENDIX H. CODE BOOK FOR CODING FOCUS GROUP DATA

LIST OF CODE WORDS

- | | |
|--|--|
| <p>1. Appeal
 Craving
 Enj/soc
 Prefer
 Quality
 Quantity
 Seasons
 Senses
 Treat
 Variety</p> | <p>8. Money
 Monavail
 Price</p> |
| <p>2. Avail
 Availhom</p> | <p>9. People
 Peer
 Relativ</p> |
| <p>3. Culture
 Habit</p> | <p>10. Physical
 Exercise
 Fatigue
 Hunger</p> |
| <p>4. Eatout
 Eofastf
 Eolocat
 Eoprice
 Eotype</p> | <p>11. Prepare
 Cookbake
 Creativ
 Lftovr</p> |
| <p>5. Facility
 Applianc
 Storage</p> | <p>12. Procure
 Coupons
 Hunt
 List
 Storsel</p> |
| <p>6. Health
 Contra
 Foodgrp
 Kcal
 Label
 Nutrient
 Preg
 Sanitat
 Specfood
 Wtcontr</p> | <p>13. Time
 Conven
 Planning
 Priority
 Schedule
 Urgency</p> |
| <p>7. Meals
 Breakfast
 Dinner
 Lunch
 Snacks
 Supper
 Weekend</p> | |

DESCRIPTIONS OF CODE WORDS**1. Appeal (appeal)**

Appeal/attraction for food.

Related codes:

Cravings(craving)

"Craving/being hungry for" particular foods, eating what they (respondents) "feel like" eating and/or "what they are in the mood for."

Enjoyment/sociability of food (enj/soc)

Food as pleasure, food in social settings, nostalgic feelings about food/eating, eating alone, and/or eating with people. Also includes social rules, etiquette, and/or clothing/dress as related to food choices. For example, avoiding certain foods in social settings because they are likely to splatter clothing and/or because one may not know if eating with fingers is acceptable.

Preferences (prefer)

Liking and/or disliking particular foods, and/or preferring some foods over others.

Quality (quality)

Quality of food as it relates to brands (including generics), specific foods, expiration dates, and/or food spoilage. Also includes comments about origins of food such as from farm.

Quantity (quantity)

Large or small amounts of food, needing to be filled up, comments about wasting food, eating a large amount of food to get one's money worth, "pigging out" and/or having a "munch fest."

Seasons/Climate (seasons)

Eating certain foods because it is hot or cold outside, and/or foods that are appealing in only certain seasons or climates.

Senses (senses)

How foods smell, feel, taste, and/or how texture affects eating; includes comments about expectations how foods may smell, feel, and/or taste.

Treat (treat)

Food as a treat, being only able to get food under special circumstances, food as a self-reward, and/or foods served at special events/places.

Variety (variety)

Desire for variety, inability to consider variety, and/or lack of variety relating to food choices.

2. Availability (avail)

Availability of food, as well as geographic aspects of availability of foods.

Related codes:

Home (availhom)

Food in the home, dormitory, sorority, fraternity, etc., and/or what is in the cupboards, refrigerator, freezer, or on hand.

3. Culture/Ethnicity (culture)

How personal and/or ethnic background influences food choices.

Related codes:

Habit (habit)

Eating habits, eating routines/patterns, and/or “not thinking, just doing” as related to food choices. This is different from comments about eating as related to one’s daily routine which would be coded as schedule.

4. Eating out (eatout)

Comments about going out to eat.

Related codes:

Fast foods (eofastf)

Fast food restaurant dining.

Restaurant location (eolocat)

Geographic location of restaurants, and/or availability of restaurants in the area where respondent lives.

Restaurant price range (eoprice)

Price ranges of menu items at different restaurants.

Restaurant type (eotype)

Restaurants other than fast food, ethnicity of restaurants, atmosphere of restaurants, and/or type of food or service available (sit-down, buffet, all-you-can-eat, take-out, delivery, and/or vending).

5. Facility (facility)

Availability of facilities and appliances and how this affects food choices. Includes an area facilitating food and eating activity.

Related codes:**Appliances (applianc)**

Specific appliances used prepare and/or store foods and how this affects food choices. For example, stove, oven, toaster, grill, crock pot, microwave, refrigerator, freezer, etc.

Storage/Space (storage)

Size of kitchen facilities, space available for food storage/preparation, and/or condition or cleanliness of kitchen facilities.

Health concerns (health)

Health concerns and knowledge, illness, and disease as related to food choices.

Related codes:**Contradictory comments (contra)**

Comments about how health should be a factor or is a factor, but is ignored or “eating it anyway,” and/or feelings of guilt about eating.

Food groups (foodgrp)

A “balanced” diet by using foods from all areas: dairy, grain, meat, fruit and vegetable and other. Includes “eating something that is good for them.”

Calories (kcal)

Food intake and food preparation related to caloric intake.

Labels (label)

Using label information and/or reading labels.

Nutrients/Supplements (nutrient)

Awareness of disease and its link to specific nutrients in the diet. Nutrients include carbohydrate, cholesterol, fat, protein, salt, sugar, and water. Includes comments about choosing foods for micro- or macro-nutrients, practicing carbohydrate loading, using supplements in the form of pills or powders, etc., and choosing foods based on their fortification.

Pregnancy (preg)

Pregnancy (past or present) influencing food choices.

Sanitation (sanitat)

Clean or unclean practices of food consumption, food preparation, etc.

Special products/food fads (specfood)

Special products, responding to food fads, and foods being “real” or “junk” foods. Comments about the same foods sold different ways. For example, canned foods, fresh foods, frozen foods, and/or prepackaged foods.

Weight control (wtcontr)

Weight gain or loss, and/or weight status as related to food choices.

7. Meals/meal pattern (meals)

The definition of a meal or meals for the day, how many meals are eaten, and/or requirements for meals.

Related codes:**Breakfast (breakfst)**

Breakfast as it relates to food choices.

Dinner (dinner)

Dinner as it relates to food choices; it refers to a noon meal rather than an evening meal in some regions of Iowa.

Lunch (lunch)

Lunch as it relates to food choices.

Snacks (snacks)

Snacking as it relates to food choices.

Supper (supper)

Supper as it relates to food choices; it refers to the evening meal in some regions of Iowa.

Weekends (weekend)

Food choices being different during the weekend than the week due to activities and lifestyle.

8. Money (money)

Money and budgeting one's money as it relates to food choices.

Related codes:**Money available (monavail)**

How much money respondent has in determining what and/or if he or she will or will not eat.

Price (price)

Sales, the costs of foods, price differences between brands, and/or cost of foods that are in or out of season.

9. People (people)

How people influence respondent's food choices other than those specifically listed.

Related codes:**Peers/friends (peer)**

Guests, roommates, and/or significant others influencing food choices.

Relatives (relativ)

Children, dad, family, grandparents, mom, siblings, etc. who either in the present do influence, or in the past influenced food choices.

10. Physical factors (physical)

Physical factors and conditions influencing food choices, preventing eating, and/or prompting eating.

Related codes:**Exercise/activity (exercise)**

The influence of exercise or activity on food choices.

Fatigue (fatigue)

How being tired or fatigued influences food choices.

Hunger/Satiety (hunger)

Hunger and/or satiety influencing food choices and/or comments about “how much they eat” making them feel physically.

11. Preparation methods (prepare)

Preparing food, having or not having skills or knowledge to prepare food, comments about the drudgery of preparing food, and/or cleaning up.

Related codes:**Cooking and baking (cookbake)**

Specific methods used to prepare foods such as the stove top, oven, i.e., boiling, frying, roasting, broiling, and grilling.

Creativity (creativ)

Preparing food to fulfill a need for creativity and/or inability to be creative when preparing food. Includes comments about preparing different types of cuisine.

Leftover (lftovr)

Preparing an abundance of food for future meals/snacks.

12. Procurement (procure)

Strategies for obtaining food such as shopping tactics and other methods than those specifically listed.

Related codes:**Coupons/sales (coupons)**

Using coupons, saving money with coupons/sales, tactics for using/acquiring coupons, coupons being related to quality (brands), prices, and watching for sale advertisements from newspapers that contain coupons.

Hunting (hunt)

Hunting wild game/animals for food.

Shopping list (list)

Making a shopping list, adhering to a list, or lack of need for a list when shopping for food.

Selection of store (storsel)

Location of stores, selection of stores in geographic area, needs for transportation to stores, quality of stores, atmosphere in stores, and/or selection within stores.

13. Time (time)

How time influences food choices.

Related codes:**Convenience (conven)**

Needing food/food preparation to be convenient, quick, or easy.

Planning (planning)

Planning to eat, planning meals, and thinking in advance about food choices.

Priority (priority)

Food choices being a priority, and motivation in terms of eating.

Schedule (schedule)

Time constraints, job/class schedules, lifestyle, and daily routines influencing food choices.

Urgency (urgency)

Needing to eat immediately.

**APPENDIX I. PERMISSION TO QUOTE/REPRODUCE COPYRIGHTED
MATERIAL**

October 28, 1992

Qualis Research Associates
c/o John Seidel, Rolf Kjolseth, and Elaine Seymour
P.O. Box 2240
Corvallis, OR 97339

Dear Qualis Research Associates:

This letter follows the conversation Cynthia Goody had with one of your associates on Friday, October 23, 1992, regarding the reproduction of material from The Ethnograph. From the conversation, we understood Ms. Goody could use material from this computer text book.

We wish to request your permission to reproduce figure 3-11, page 3-10 from The Ethnograph to use as supporting material for Ms. Goody's master's thesis at Iowa State University, Ames, IA.

Please sign the enclosed form and return to the above address. Thank you for your support and time.

Sincerely,

Rosalie Amos, Ph.D.
Associate Professor

✓
Cynthia Goody, R.D., L.D.
Graduate Student

Enclosure

QUALIS RESEARCH ASSOCIATES

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P.O. Box 2240
Corvallis, OR 97339
503-754-1559

November 2, 1992

Cynthia Goody
227 Raphael #16
Ames, IA 50010

Dear Cynthia,

Enclosed is the signed permission slip to use figure 3-11 from the manual for The Ethnograph.

I am interested in the kind of research that you did, and how you used The Ethnograph in your work. Could you send me a copy of your data analysis and/or methodology chapter?

In general I am interested in how people develop and use coding schemes. I am interested in the process that unfolds when a person reads a data file, thinks about it, and starts "noticing interesting things" (i.e., codes it). I am interested in what happens when a person starts reading and thinking about the segments that have been coded and retrieved? This is an area that has received little attention in the qualitative research literature, yet it is central to the work that we all do. You may, or may not, have written explicitly about this. I would be interested in any thoughts or observations you might have on this topic.

Sincerely,



John Seidel

November 20, 1992

Qualis Research Associates
c/o John Seidel, Rolf Kjolseth, & Elaine Seymour
P.O. Box 2240
Corvallis, OR 97339

Dear Qualis Research Associates:

We wish to thank you for your prompt response in granting permission to Cynthia Goody, graduate student at Iowa State University, to reprint figure 3-11, page 3-10, from The Ethnograph for her master's thesis.

We truly appreciate your time and support with this endeavor. Thank you again.

Sincerely,

Rosalie Amos, Ph.D.
Associate Professor

Cynthia Goody, R.D., L.D.
Graduate Student

Permission to Quote/Reproduce Copyrighted Material


I (We), Qualis Research Associates, owner(s) of
the copyright to the work known as The Ethnograph

hereby authorize Cynthia M. Goody
to use the following material as part of his / her ~~doctoral dissertation~~ ^{master's thesis} to be submitted to
Iowa State University.

<u>Page</u>	<u>Inclusive Line Numbers</u>	<u>Beginning and ending words or other identification</u>
3-10	n/a	Figure 3-11

I (We) further extend this authorization to University Microfilms International, Ann Arbor, Michigan, for the purposes of reproducing and distributing single microformed copies of the dissertation on demand for scholarly uses.

Signature



10-31-92
Date

116-402