ROLE AND JOB SATISFACTION AMONG REGISTERED DIETITIANS EMPLOYED IN RURAL AND URBAN MINNESOTA

By

AILEEN VIRGINIA (SNELL) EICK

Bachelor of Science
Michigan State University
East Lansing, Michigan
1950

Master of Science
Mankato State University
Mankato, Minnesota
1971

Submitted to the Faculty of the
Graduate College of the
Oklahoma State Unviersity
in partial fulfillment of
the requirements for
the Degree of
DOCTOR OF PHILOSOPHY
December, 1987

ROLE AND JOB SATISFACTION AMONG REGISTERED DIETITIANS EMPLOYED IN RURAL AND URBAN MINNESOTA

THESIS APPROVED:

Esther Winterfeldt
Thesis Advisor

Elaine Jorgenson

Lea Ehrs

[signature]

Norman N. Durham
DEAN OF THE GRADUATE COLLEGE

PREFACE

As the profession of dietitics moves toward specialization it was appropriate to determine whether a rural practitioner performed a more generalist and traditional role than an urban practitioner. Using six designated areas of responsibilities tasks were assessed. Also job satisfaction and constraints of the job were studied. There were few differences found. Demographic information revealed differences in age range, salary, and level of education, comparing urban to rural dietitians within Minnesota.

I wish to express my sincere graditude to Dr. Esther Winterfeldt for her guidance, encouragement, wisdom, and forbearance throughout my graduate work. My thanks also goes to Dr. Lea Erbo who helped me establish the research method and then served on my committee. I am grateful to Dr. Wm. Warde who gave support and encouragement with the statistics used. Dr. Elaine Jorgenson has my graditude for joining my committee at the final stage.

In addition, Dr. Beverly Crabtree, my colleagues at Mankato State University and my children, Gerald, Christine and Louise, have my graditude for believing that I could complete this project.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

From its inception in 1917, the American Dietetics Association has emphasized both the practice of dietetics and the education of future dietitians. In the 70 years of its existence the profession of dietetics has made important contributions to the health of the American people. The Report of the 1984 Study Commission on Dietetics, a New Look at the Profession of Dietetics, was based on the findings of a national-level task force which examined the organization and consulted with practitioners to determine the long-term effects of the 1972 Millis report. The review led to the conclusion that dietetics was an honored and respected profession and dietitians had become an integral part of the care team for hospitalized patients. Further, there has been a steady increase in the use of dietitians in schools, industry and private professional practice, and consulting. Current dietetic practice has been changing rapidly as jobs move away from acute care for patients to a more preventive health care approach.

In the 1980 Census it was shown that twenty-five percent of the population of the United States resides in communities of under 25,000 and it was therefore appropriate to study dietetic practice in the rural area. Since rural dietitians served a minority of the population, it follows that they would be a minority of the profession. This study

examined and compared the role function, job satisfaction in general, satisfaction with supervision received, and the constraints on practice among Registered Dietitians working in Minnesota with the intent of defining the influence of place, rural or urban, on practice.

Purpose of the Study

There was a perceived need for the definition of the role and function and job satisfaction among Registered Dietitians working in rural areas as compared to dietitians working in urban areas of the same region. There were no specific studies of this group found during a review of the literature. Questions were raised about what specific responsibility these dietitians carry and whether they were satisfied with their jobs. This research was a step in defining future educational needs with the goal of developing a Master's level program with a pre-professional experience component for training dietitians to work in rural areas.

> The 1984 Study Commission (ADA) concluded that any discussion of specialized practice must include the role of the generalist dietitian. ...This person must be sufficiently competent in all areas of practice to deal with average problems. The generalist's wide range of expertise provides a particular type of competence not available to the specialist. The specialist must have a high level of competence in a narrow field of activity. The two professionals should complement one another, even if functioning in totally different environments.

The question of the breadth of role or function for the rural practitioner compared to their urban counterparts was the main focus of this study. In addition, the study examined the general job satisfaction. The level of satisfaction with their immediate supervisor

was studied to compare Registered Dietitian supervisors with non-Registered Dietitian supervisors. A measure of the constraints was applied and compared to areas of responsibilities for rural and urban practitioners. Another purpose was to establish a profile of these practitioners regarding their education and training, salary, and length of service while working in either a rural or an urban setting.

Like all professions, the field of dietetics has been constantly changing and emerging while holding to a traditional base for the services it provides. Today, for example, many more dietitians are engaged in private practice. Practitioners are working in wellness programs and weight clinics, not only related to hospitals but with industrial wellness efforts. They are employed in sports medicine clinics; cardiac rehabilitation programs are using their expertise. In all these cases dietitians are called upon to improve their nutrition intervention and counseling skills (Watson, 1984). As was the case when the consultant dietitian was being defined and established in the 1950s and 1960s, this major shift in emphasis for nutrition care and services has the potential for expanding and improving career opportunities within the profession.

The educational base for the modern dietitian has allowed dietitians to adapt to practice in a variety of settings. This education has been based on having all dietitians share a general knowledge and understanding of foods and nutrition with the ability to apply it as needed (ADA, 1984). This generalist nature of training applied to both undergraduate work and to the majority of post-graduate internships and advanced degree programs. The needs of practice and an increased movement toward specialization has led to the replacement of the Plan IV

undergraduate curriculum in favor with Plan V or Standards of Education.

A current concern of the American Dietetic Association has been how to define and allow for the needs of specific specialization with the broad categories which are represented in the Role Delineation Studies. Role delineation studies have been completed for entry level dietitians for Clinical Dietetics, Foodservice Management, and Community Nutrition. As resources diminished and consumer demand for better health services increased, dietetic education programs have needed to modify and adapt to meet these circumstances. When 400 Pennsylvania dietitians were asked whether there will be a greater need to train generalists, as compared to specialists in the 1980s, 46% of the respondents agreed to the generalist, 41% disagreed and 13% had no opinion (Park & Kris-Etherton, 1982).

Statewide or regional needs may be served best by locally developed and monitored programs for the specialties of the geographical area. This could include the generalist as a specialist. In the ADA Manpower Study (1980) only 12.8 percent of the dietitians contacted listed the Generalist as their specialty.

Many studies about the work of consultant dietitians have been completed. These usually focus on a specific geographical area. Among the work reviewed for this study are Brenner (1971), Spear (1978), Gilbride (1981), Faye (1982), Fisher (1984), and Taylor (1984).

Objectives of the Study

The six objectives for this study were:

1. To develop a profile of Registered Dietitians working in Minnesota considering such factors as age range, marital status,

years as a Registered Dietitian, years in practice, salary range, and employment status for rural and urban practitioners.

2. To determine the level of professional education of R.D.s working in rural and urban areas.
3. To determine the role or function for each area of responsibility for dietitians working in rural compared to urban settings.
4. To assess the level of job satisfaction in general among dietitians comparing rural and urban practitioners.
5. To determine job satisfaction related to supervision on the present job for rural and urban dietitians supervised by a Registered Dietitian compared to those with a non-Registered Dietitian supervisor.
6. To define performance constraints by areas of responsibility between rural and urban dietitians.

The Operational Hypotheses

The hypotheses for this research were as follows:

H_1: There will be no significant difference in personal factors; such as, age range, marital status, R.D. status, employment status, and salary range for dietitians working in rural or urban settings in Minnesota.

H_2: There will be no significant difference in educational degree earned for rural or urban practitioners.

H_3: There will be no significant difference for rural or urban dietitians when comparing each of the thirty-two functions with each of the nine areas of responsibility including director, assistant director, clinical, foodservice

manager, generalist, teaching, research, community dietetics and others.

H_4: There will be no significant difference for job satisfaction in general among dietitians working in rural or urban areas.

H_5: There will be no significant difference between rural and urban dietitians concerning supervision on the present job whether they work for a Registered Dietitian or a non-Registered Dietitian supervisor.

H_6: There will be no significant difference between rural and urban dietitians when comparing performance constraints with each area of responsibility.

Assumptions of the Study

This study was limited to Registered Dietitians employed in Minnesota who are members of the Minnesota Dietetic Association and whose names appeared on the Fall 1984 mailing list. The results of this study were applied only to this group. It was assumed that the randomly selected group was representative of Registered Dietitians working in Minnesota. It was assumed that the instruments used for this study were reliable and valid for this study.

Definitions used throughout this study include the following:

Administrative dietitian: A Registered Dietitian, R.D., who is a member of the management team and affects the nutritional care of groups through the management of foodservice systems that provide optimal nutrition and quality food. This area of

responsibility includes foodservice directors, assistant directors and foodservice managers.

Clinical dietitian: A Registered Dietitian who is a member of the health care team and affects the nutritional care of individuals and groups for health maintenance. The clinical dietitian assesses nutritional needs, develops and implements nutritional care plans, and evaluates and reports these results appropriately. When functioning in an organization that provides foodservice, the clinical dietitian cooperates and coordinates activities with those of the department's management team.

Community dietitian: A Registered Dietitian with specialized community dietetic preparation, who functions as a member of the community health team in assessing nutritional needs of individuals and groups. The community dietitian plans, organizes, coordinates, and evaluates the nutritional component of health care services for an organization.

Consultant dietitian: A Registered Dietitian with experience in administration or clinical practice, affects the management of human effort and facilitating resources by advice or services in nutritional care (Arkwright et al, 1974).

Generalist: A Registered Dietitian whose practice combines clinical and/or management and/or community dietitics.

Research dietitian: A Registered Dietitian with advanced preparation in dietetics and research techniques, plans, investigates, interprets, evaluates, applies, and expands knowledge in one or more phases of dietetics and communicates

findings through reports and publications.

Teaching dietitian: A Registered Dietitian with advanced preparation in dietetics or education who plans, conducts, and evaluates educational programs in one or more dietetic subject matter areas.

Director/Associate director: A Registered Dietitian with advanced degree and/or successful experience who assumes/assists with full responsibility for the management of a department and serves as a member of the management team. The director is responsible to the designated administrator.

Dietetic practice: Performance of activities in a professional position in nutritional care.

Nutritional care: The application of the science and art of human nutrition in helping people select and obtain food for the primary purpose of nourishing their bodies in health or disease throughout the life cycle.

Professional education: A prescribed program of study and experience to develop competence in the practice of a profession, social understanding, ethical behavior, and scholarly concern.

Specialization in dietetics: Three basic branches of dietetic practice: clinical, management of foodservice systems, or community dietetics, each requiring defined competencies (Arkwright, 1974).

Rural: An area of residence outside of the Standard Metropolitan Statistical Area.

Urban: An area of residence inside of the Standard Metropolitan

Area. Standard Metropolitan Statistical Area: An urbanized area with more than 50,000 inhabitants (Bureau of Census, 1983).

SUMMARY

This study will help the profession to define the generalist area of specialization. It will further be helpful in defining the training necessary for dietitians to work in rural areas.

The remainder of this dissertation consists of a review of the pertinent literature in the next chapter. The method used in this study is explained in the third chapter. The other chapters describe the data acquired and its analysis, followed by conclusions with recommendations.

CHAPTER II

REVIEW OF LITERATURE

Literature pertinent to this study was reviewed in the following order: the historical role of dietitians, trends in the health care system, trends in dietetics, and role or job satisfaction studies.

Since 1917, critical inquiry into the scope of the work of dietitians has been an ongoing concern of the profession. At no time in its history has there been more change than at the present time. It will be shown that since the 1917 beginning, there has been a trend toward specialization of role or function for dietitians with corresponding emphasis on training for those special functions. At the same time that changes have been proliferating, the goals of the profession remain very stable. This quote by Florence H. Smith (1927), a former president of the American Dietetic Association, could have been written today:

> The object of this association is to bring closer cooperation between dietitians and those in allied fields in order that more effective work may be done in improving the standards of dietetic work and the training of dietitians.

The Historical Role of Dietitians

The question of what dietitians do on the job has been constantly studied throughout the history of the profession because the need for dietitian's services depends in great part on the perceived and actual societal changes. Since the purpose of this research was the study of role or function of dietitians working in rural areas as a basis for the

development of a training program to provide those role or functions, it was necessary to review the historical perspective on practice and education for practice.

The titles and locations of work of dietitians were traced to show the diversity and specialization of practice. The period from 1917 to 1950 were considered as the growth period. The 1960s and the 1970s were periods influenced by legislation and major changes in education.

The Growth Years

From the beginning in 1917, the American Dietetic Association (ADA) recognized that standards of practice and standards of education were two sides of the same coin. Early dietitians practiced in many settings and under many titles. The need to organize dietitians grew out of the need to feed the public at the time of World War I and the expanding research concerning nutrients. Among the original fifty-nine founders were dietitians in public and military hospitals, in school lunchrooms, with the Red Cross and YWCA, and associated with government or educational programs. The first four sections of the Association were Dieto-therapy, Teaching, Social Welfare, and Administration. In 1920, these became the Diet Therapy, Education, Community Nutrition, and Administration sections. So the diversity and specialization of role function was recognized from the start (Barber, 1959). From 1917 to 1933 the practice of dietetics was expanding and varied opportunities for service were presented. An ADA editorial (1933) pointed to the need for trained persons to work on behalf of the unemployed and their suffering families through the Red Cross Dietitians' Reserve Corp. This group was a reserve for disasters and the Army. Hospitals were developing food clinics to

serve ambulatory patients. The needs by schools and industry for trained persons was recognized.

When World War II started dietitians were in government service primarily through Red Cross. Wickliffe and Boykin (1940) remarked

> Dietitians seem to have been catapulted into government service in the era when war made it necessary for the government to secure a maximum of efficiency from a minimum of personnel and supplies.

Dietitians served military hospitals in the United States and abroad, the Public Health Service, the Department of Justice, the Indians Service, the Veterans Administration, the Panama Canal Zone Service, and the Department of Interior in the District of Columbia Hospital for Civil Service employees. The industrial cafeteria was recognized as a valuable site for service by Quindara Dodge (1943) who considered the cafeteria as the most important single means available for readily improving the nutritional health of the workers.

By 1944 there were over 6,000 members of the ADA and in 1950 there were 9,000 (Prall et al, 1951). Still the Placement Bureau reported a gap between supply and demand. In mid-1944, there were some 900 graduates from baccalaureate programs and many went into the Army. Dietitians were proving their importance both inside and outside hospitals with their careful training in maintaining standards of food quality while being cost-efficient (Hall, 1944).

By the end of World War II there were outstanding and expanding opportunities; some still have an impact today. For example, disease prevention activities increased with the elderly and as cardiovascular disease and its role in aging was better understood. Some other health related problems needing attention were osteoporosis, dental problems,

psychosomatic conditions such as anorexia, and "kaffeeklatsch" obesity (Tuohy, 1945). Alcoholism was also noted as a problem associated with vitamin deficiency (Rotman, 1945). At this time, Margaret Mead (1945) said of the therapeutic team

> With increasingly good working relationships between other therapists and the dietitian, the physician, and the case worker also comes to appreciate the importance of giving the dietitian clues about the personality of the patient... the dietetic interview will get off to a quicker start, the team will be better oriented in what to expect, and the dietitian already alert to some of the patient's most conspicuous characteristics.

The physician and the nurse had knowledge of nutrition, but it was the job of the dietitian to translate that knowledge into everyday practice with regard to need, intelligence, the emotional attitudes and the environment for each patient.

At the end of the 1940s more persons were attending schools and colleges. There were more persons being hospitalized. There were more people being imprisoned. More people were eating away from home. There was an increasing interest in health. Most important was the growing economy. All of these factors increased the need for professionals who could administer institutional feeding operations. Beside the rapidly expanding hospital work in food administration, there were new opportunities in commercial food service and in school lunch program (MacFarland et al, 1949).

The concept of the consultant up to this time was a person with a Master's degree in Public Health who generally worked for the government. Expansion of that idea started with an Advisory Service Center in Bridgeport, Connecticut, sponsored by the Dairy & Food Council, Inc. where veterans and their families were helped with cooking, budget, and

diet therapy problems one or two hours per week (Kline, 1946). The Pillsbury Home Service Center was divided into test kitchen division to develop new ideas using the company's products and the editorial divisions to disseminate the information to the general public (Combs, 1946). Feeding healthy children in the nursery school setting became another professional opportunity (Lowenberg, 1946). When the School Lunch Act was passed, dietitians were ready. The state nutritionist was familiar with the needs of every school district and accepted the responsiblity for standards and coverage (West, 1946).

As the 1940s drew to a close there was greater recognition of the dietitian as an educator. Teaching student nurses was an original function of dietitians. Now they were encouraged to improve their skills as teachers and their interpersonal relationships so that they would know how to change behavior in the wide variety of situations in which they were employed (Houle, 1948). Teaching roles in dental and medical schools were expanded as it was recognized that

> Nutrition, or the science of food and its relation to health, is a comparatively new field. The investigator in the laboratory with his knowledge of how to better nutrition and the physician and health worker with his knowledge of human needs have been far apart. If the information obtained by the investigator is to be applied, this distance must be bridged (Stare, 1949).

The decade of the 1950s was a time of expansion for the profession through concerns over supply and demand, hence, the need for auxiliary workers. Continuing education also began to develop. It was clear that there could be no compromise on undergraduate training or membership requirements that might dilute the profession but there was a continuing problem of more demand than supply of dietitians. It was the smaller, less than 100 bed size, hospitals that had less professional help. A

solution to this situation was seen in the proper training of auxiliary workers to assist with supervision, clerical, purchasing, and accounting tasks. Other solutions were to recruit retired or married home economists and dietitians and to begin to recruit more men. Career guidance activities were developed also to take to high school students and their parents (Smith, 1952).

Another means of meeting the demand for dietitians was to encourage consulting or shared dietitians. With the passage of the Hill-Burton Act, Public Law 725, there was increased hospital construction and more community health centers. The U.S. Public Health Service, knowing that 15 to 30 percent of operating costs are for food service, encouraged the use of these shared dietitians. It was through state health departments that studies were done to determine what consultants were doing and what kinds of institutions they were servicing. The term "shared dietitian" was used to denote the dietitian who visited several small hospitals and nursing homes on a part-time basis. In addition to the traditional knowledge and skills, this work called for the ability to negotiate a contract and then to train and advise a food service supervisor rather than direct administration of the unit. It was suggested that a dietitian have five years of experience before undertaking this shared role (Pollen, 1954).

Practicing dietitians were able to find expanding opportunities within the traditional settings of hospitals, government, and industry. Different worksites were developed for therapeutic services. For example, a mental health team in a Veteran's Hospital used a dietitian to work with the patient, the family, the community, the volunteers, and employees. In this instance duties included not only food procurement

and supervision of food preparation, but some innovative approaches to food service for all concerned including using picnics as a means of involving families. Finally patients needed to be trained as foodservice workers (O'Brien, 1956).

As the 1950s came to a close, the work of dietitians included a circuit-riding dietitian shared by institutions in a northeastern Wisconsin county (Hall, 1959). A super-market chain dietitian in San Diego who answered 400 requests per month in eight store locations (Walters, 1959). The decade of expansion in numbers and roles closed. New membership requirements with revised academic requirements were in place. Continuing Education had a Services Director in Bessie Brooks West with a study in hand and plans for workshops and conferences (ADA, 1959).

Leglislative Influences

The decades of the 1960s and the 1970s were marked by several interrelated influences on the field of dietetics. There was a strong influence from health care legislation which caused a proliferation of roles and functions for dietitians which led to the delegation of some responsibilities. With the field of dietetics changing so rapidly there was a need for lifelong learning as an adjunct to registration.

The need for more health care services led to a series of legislation with increasing opportunities for dietitians in the planning process, services rendered, and the development of health prevention and health promotion activities. Several new avenues of work opened for dietitians beginning with the Hill-Burton Act of 1946 which expanded the number of hospitals. The 1954 Medical Facilities and Construction Act

increased nursing homes. After these sites of work were established, both Medicaid and Medicare legislation of 1966 call for dietetic services (Kocher, 1981). The Allied Health Professions Personnel Training Act of 1966 led to the increase in Coordinated Undergraduate Programs. Dietitians became more a part of policy making and advisory boards and helped to establish localized goals and activities for health care (Piper & Youland, 1968). These acts were incorporated into the National Health Planning and Resources Development Act of 1974. Through this act, there resulted an increase of work for consultant dietitians and trained food service supervisors (Kocher, 1981).

Although the Social Security Act of 1935 had provided public health consultants in increasing numbers, another expansion came with the Maternal and Child Health Amendments of 1963. These called for screening, diagnosis, and preventive treatment for nutrition problems, as well as other defects (Phillips, 1969).

The Older Americans Act of 1965 established both the congregate meal and the home-delivered meal programs. Dietitians were asked to help conduct research for the demonstration projects which were the foundations for the current community-based programs where dietitians are planners, educators, coordinators, marketers, and evaluators (Pelcovits, 1971). After the 1971 White House Conference on Aging, a tremendous network of nutrition sites was developed across the country providing nutritionally sound meals to persons 60 years of age and over. Then the Ten-State Nutrition Survey was followed by the WIC program in 1974. By 1980, there were almost 20,000 long-term care facilities participating in Medicare and Medicaid programs. These facilities had dietitians, dietetic technicians, and/or dietetic assistants on their staffs (Kocher,

1981).

Beeuwkes (1962) reported on the continuing pressure to find qualified dietitians to serve in the "myriad" of speciality areas brought about by explosive growth of science, rapid rise in population, and mounting consumer demand for the products of science. The branching of roles for dietitians was graphically shown by Johnson (1960) using the tree concept. This showed that the main teaching branch which originally included community contacts had branched into welfare and extension work to reach clinic patients, college students including public health, nursing, medical and dental students, and employees; research; and communication was through newspapers, magazines, radio and TV. The Therapeutics area of specialization included research, working with medical and dental students within clinics, and as part of the hospital and medical team. The Foodservice administration was being done in restaurants, as industrial consultants, in clubs as dietary consultants, college foodservice, school lunch, industry, and hospital. The work of all was more competitive and executive in nature. Miller (1960) reported that while hospitals were employing food and nutrition (dietetics) graduates, an equal number of institutional administration graduates were employed by hospitals, college residence halls, and restaurants. Most respondents had not participated in higher level planning, control, and appraising decisions. So that more training in personnel problems, labor relations, insurance, and equipment purchasing was indicated for undergraduates.

In this time period, the consultant dietitian came to maturity in serving nursing homes and small hospitals on a regular but not daily basis. In 1954, the ADA did a survey to determine the relationship of

hospital size to the levels of responsibilities and staffing. Not surprisingly in hospitals under 100 beds, the dietitian was part-time or shared. In hospitals of over 100 beds, 67.2 percent were headed by professionally qualified dietitians. This survey was used to promote in-service and basic training for food service supervisors (Pollen, 1954).

Robinson (1967) found that extended care facilities were expanding in size as well as number. These institutions called for mature judgment and adaptablity of the professional consultant. There needed to be adequate time alloted to accomplish the work and familiarity with the specific regulations for each facility. The dietitian needed to be ready and able to negotiate with the administrator and to do the initial evaluation well and quickly. Twenty-eight responsibilities were listed related to the analysis of food intake for patients and the menu plans, the modified diets, the meal pattern with at least three meals with no more than fourteen hours between a substantial evening meal and breakfast, the procedures for food purchasing, preparation with emphasis on sanitation acceptability, appearance, temperature and serving size, work schedules and duties, and the adequacy and use of equipment. There were also to be evaluation of patient food acceptance, and counseling of patients as well as communication and training of food service workers.

Self-employment became more advantageous. The pioneers who started in the 1950s moved to helping others get started. Williams (1967) was able to state that nursing homes and hospitals between 50 to 100 beds needed at least 3 to 4 hours per week of service to complete the routine responsibilities of conferring with the food service supervisor and the nursing supervisor. Other projects in reorganization of the food service

or conversion of menus needed special time allotments. Woodward (1967) reported on a group practice or legal partnership which improved the dietitian's effectiveness to small hospitals, convalescent hospitals and nursing homes. The group practice was organized carefully with flexible work schedules for the dietitians while maintaining the quality of service to facilities. The disadvantage to this type of practice was the extra time and money spent in operating the business itself. The business increased in its scope over time and proved satisfying to those interested in serving nursing homes. In this same context, Marshall (1967) described the development of a "package plan" which was presented to administrators. This included a six-week cycle menu for general and modified diets, a purchasing guide for each week, 325 standardized quantity recipes, a diet manual, and a training guide. The package was sold to an administrator with plans for adaptation to their site and weekly supervision of the process. Although the initial time and costs for development and implementation were high, it saved more time and money with earlier control of dietary activities than did the more conventional plans.

Oliver (1967) reiterated her experiences working for three nursing homes owned by the same organization. Being thus employed allowed for more flexible time schedules with extra hours going to the problem areas. It also allowed for group-wide purchasing, budget control, and personnel administration. It also increased the time dietitians were in contact with patients, nurses, and physicians. Management contact and communication were also facilitated.

Educational Influences

As these job opportunities and responsibilities expanded throughout the 1960-1970 period, the American Dietetic Association responded with major changes. One was a careful look at the educational requirements. Another was the institution of registration combined with a lifelong learning process. A third concern was peer review and quality assurance within the profession.

There were three concurrent concerns on the education scene. First was the need to train a secondary level of supervision for the dietetic field. Second, was a need to review and upgrade the minimum academic requirements for dietitians. The third was the lifelong learning concept.

Van Horne (1960) reviewed the status of training for foodservice supervisors and announced a Kellogg Grant was received to develop a curriculum for this training. The ADA was encouraged to become very active in the education of foodservice supervisors who could handle the food production and clerical responsibilities. This left dietitians to concentrate on more professional responsibilities (Robinson, 1965). By 1969 the ADA had in place the requirements and standards for the education of the Dietetic Technician (ADA, 1969-1970). This combination of classroom and working experiences were developed in technical schools, as well as, junior or community colleges.

Training and education has been one of the first considerations of the profession of dietetics. Several of the founders were engaged in educational work, usually teaching "dieto-therapy" to patients, doctors, nurses, and dietitians. By 1924 it was apparent to Dr. Ruth Wheeler that

the profession needed to organize and set standards for its future participants, so she promoted the idea of the four year college level coursework followed by six months of "hospital training" (Barber, 1959). By December of 1927 the "Standardization of Courses for Student Dietitians in Hospitals" was printed in the Journal of the Association (ADA, 1927). Mary De Garmo-Bryan (1931) reported her personal inspection of each hospital on the approved list of training courses for student dietitians. A list of approved colleges offering adequate academic preparation of dietitians was formulated. In 1940 the ADA published the first listing of "Requirements for Active Membership" in the American Dietetic Association. This listing required designated semester hours in chemistry, physiology, bacteriology, psychology, sociology, economics, education, food selection, food preparation, food service, nutrition, diet in disease, and child nutrition. There was provision for either food and nutrition or an institution management major (ADA, 1940). Another revision of the "Academic Requirements for ADA Membership" or Plan III was adopted and went into effect in November of 1958. These requirements allowed for core subjects, to be followed by an emphases in foodservice management, or education, or foods-experimental and developmental. At least one of these emphases was followed by a concentration in therapeutic or administrative dietetics, or business administration, or science-food and nutrition (Hunscher, 1959).

Under the direction of the Dietetic Internship Liasion Director for the American Dietetic Association, the profession reviewed its educational history in the 1961 and 1965 time span. Internship components in hospitals, foodservice administration and nutrition clinics were studied with emphasis on the need to retain this vital segment of

training. Changes were suggested for diet therapy to include more drug information. More community wide educational experiences were needed. Budgeting became a major need for foodservice management. Innovations and adaptability to meet the changing roles were encouraged (Robinson, 1961, 1964). A new "Guide to Curriculum Planning in Dietetic Internships" appeared in 1961 (Payne, 1961). Ohio State University established an experimental coordinated undergraduate program in 1961. This approach along with the more traditional graduate degree route and internships were discussed thoroughly. A need for advanced business management training was foreseen. The value of the broad generalist training was recognized along with the need for more specific continuing education (Robinson, 1965). The Dietetic Internship Council was formed in 1965 with the responsiblities of approving internship programs, setting selection procedures, and setting the standards and goals of education (Ingerson, 1968).

The academic requirements for undergraduates and the dietetic internships underwent a fourth review and revision during the 1970s. In 1972 the Study Commission of Dietetics, with John S. Millis as chairman, addressed both the desired expertise of the dietitian and the educational approaches conducive to the development of dietitians (Millis, 1972). The Millis Commission also suggested open membership in the American Dietetic Association and the separation of membership from registration. Registration as a warranty of competence was upheld by this commission. Another recommendation concerned accreditation of undergraduate training and internships. The direct accreditation of undergraduate programs was discouraged. The final recommendation was for the Association to be organized into four councils: The Council on Dietetic Practice, the

Council on Dietetic Education, The Council on Dietetic Research, and the Council of Communication (Millis, 1972). In the meantime, an ADA position paper (1971) defined the four speciality areas for dietetic education of professionals. These were the general practitioner with emphasis on work in extended care facilities or small hospitals, the administrator of dietetic services, the clinical specialist, and the nutrition educator/community counselor. These definitions became the basis of the competency-based curriculum or Plan IV. This type of academic work emphasized the learners objectives and accomplishments (Hart 1976). In 1977 the interrelationship of the outcome of a competent practitioner to competency-based education was put into a specific model listing competency statements which were validated by practitioners (Howard & Schiller, 1977). Focus was on the entry-level dietitian and the needed competencies were tested by Loyd and Vaden (1977). During the 1960s and 1970s, the number of Coordinated Undergraduate Programs which combined the last two years of dietetic learning with introductory clinical experiences was expanded to 57 (Lewis & Beaudette, 1977). This coordinated approach was deemed a necessary means of meeting the increases and variety in practice settings.

Closely tied to these activities was the extension of the educational requirements through the Registration Examination. The Psychological Corporation assisted American Dietetic Association committees in outlining the content of the examination and in developing administration and processing procedures (Henry, 1975).

While these changes were taking place in relation to expanded job responsibilities and while education was responding to those needs, there were three other important concepts that concerned the professional

competence. These were lifelong learning, peer review, and quality assurance. The explosive growth of science and the demands of society gave rise to the concern for continuing education. A survey in 1958 indicated that dietitians wanted assistance in administration, diet therapy, and teaching techniques. It was proposed that these needs be met through conferences and workshops (ADA, 1958).

Hunscher (1963) recognized the need for lifelong learning when she said

> There are three classes of individuals who must be influenced for continuing excellence in the dietetic profession. Dietitians have various terms of carrying work responsibilities:
>
> (a) continuous from entrance into the profession to retirement,
> (b) from entrance to family life responsibilities and later return, and
> (c) from partial completion of preparation in dietetics.

It was noted that each of these groups had different lengths of working experiences and different educational needs. The challenge was to design a continuing education plan that would allow for the individual, as well as the profession, to reach their goals. With the rise of the shared dietitian or consultant role, it became obvious that specialized business management skills were needed by these practitioners (Horton, 1962). As hospitals merged into large medical centers, specialization of dietetic functions developed. In all areas of foodservice opportunities seemed endless, but this meant an expanded and updated education to assure competence of members on these latest developments (Jones, 1962). Donaldson (1965) pointed to the expanding future in foodservice administration. There were technologic, changes with new food products, equipment, automation, electronic data processing and teaching machines representing the future. Electronic developments

called for management planning and control of operations, communications management, group effectiveness, and management by objectives. Social changes called for a look to the future and to train for the fresh ideas, new approaches, new techniques, and coping with change through continuous education.

Historically, the ADA had insisted on a bachelor's degree as mandatory for admission to an internship. Patterson (1964) foresaw a time when a Master's degree would be that entrance ticket. In the meantime, she suggested the balance between professional and liberal arts phases of undergraduate dietetic education be continued knowing that

> The adult education movement is proving that continuing study can be a source of satisfaction and joy, not only by improving work competence but also by enriching the additional twenty to twenty-five years of life allotted to us who live in the last half of the twentieth century.

The American Dietetic Association was a pioneer among professions in registering its members and establishment of continuing education. The registration of dietitians was implemented in 1969. Continuing education requirements were tied to the maintenance of that registered status (Bogle, 1974).

Although the competence of practitioners had been a concern of the profession from its beginning, defining this competence became imperative in the 1970s. The ethics of professional responsibility became important with the recognition of the increased intelligence of patients, their demands for rights and information, and the increased value of health care expressed as a cost of service. Each member of a profession was seen as being ethically obliged to attend to the values of the patient in decision making. A health professional's ability to make ethical judgements were seen as based on knowledge and skills. These included

analyzing values, ranking those values, and offering reasons for the ranking. Thomasma (1979) argued that simply following a professional code does not automatically lead to ethical decision making.

The House of Delegates adopted a Code of Professional Practice with Guidelines for Professional Conduct (Hallahan, 1976). Peer review was a measure suggested as a means to judge professional conduct within the profession. This was of particular importance with the emergence of the free-lance consultant dietitian who was without the established policy and stratified organization of one institution to use as a guide to practice and performance. Peer review guidelines were developed in Oklahoma which included a means of handling grievances by a committee of dietitians from within that state (Winterfeldt, 1973).

The Joint Commission of Accreditation of Hospitals (JCAH) mandated that dietetic services be evaluated to comply with a set of standards. This Professional Standards Review Organization was designed as a measure of control in the Medicare and Medicaid programs. The American Dietetic Association took steps to develop voluntary guidelines for the audit of patient nutritional care and for problems and improvements. This means of monitoring service was viewed as essential to quality control and standards of practice (Schiller & Behm, 1979).

Hart (1976) engaged in a study of entry level competence of dietitians with emphasis on client centered care which depended upon the continuous assessment of changes occuring within the system served and the clients needs. Fruin and Campbell (1977) developed an objective means of assessing dietitian's behavior on the job. Performance appraisal was based on the contribution to the goals of the organization. Effectiveness called for a summary index of organizational outcome by

some measure, such as food cost per person per day. The JCAH standards were met by carefully and completely defining the roles, functions, and outcomes of a dietetic team in a small hospital. For each of the six standards the work of the dietetic assistant, the dietetic technician, and the consultant Registered Dietitian were described and the outcomes were reported (Konhauser, 1979). The Council on Practice of the ADA in its first year completed the book "Patient Care Audit - A Quality Assurance Procedure Manual for Dietitians" (Walters & Crumley, 1978). Now the concern for standards of practice has been more specialized with a distinction of ethical problems for the Nutrition Support Team (Task Force of American Society of Clinical Nutrition, 1985).

Trends in the Health Care System

The most powerful trend in the health care system which impacts on the field of dietetics has been the Diagnosis Related Group (DRG) prospective payment plan which the federal government required as of October 1, 1983. This amendment to the Social Security System was promoted as one way of keeping the system solvent through the year 2058. Also it was seen as a first step toward controlling the rising costs of health care by creating financial incentives to provide more efficient care. This new plan was to be accomplished through a three-year transition from the cost-plus reimbursement system to a total prospective payment system, based on the 467 DRGs. Forty percent of hospital revenue nationwide depends on Medicare. The impact of the DRGs for dietitians was seen as increased record keeping and proving that their services are cost effective (Mathieu, 1983). Some general effects of the use of DRGs were reported as lowered annual expense of hospitalization from 18.7%

of the GNP in 1981 to 10.2% in 1983. These results came through fewer admissions with shorter hospital stays and greater emphasis on outpatient care. By 1984 it was apparent that six of the top ten Diagnosis Related Groups, involving 28.6% of patients, used nutrition intervention. These categories included heart failure, G.I. tract failure, atherosclerosis and other cardiovascular disorders, chronic obstructive pulmonary disease, and diabetes (Mathieu, 1984).

In mid-1987 the total effect on dietary departments was far from clear; however a broad range of cost saving procedures had been introduced. Some specific actions to save dollars were noted. For example, at Pennsylvania Hospital, Philadelphia, consolidation of food preparation areas where three older kitchens were closed and a single new one developed, took advantage of robotics and provided energy efficiency. At many hospitals better management of labor produced less overtime costs and purchasing dollars were scrutinized for savings. Nationwide smaller institutions were joining group contracts or co-ops or becoming satellites. Hospital cafeterias engaged in marketing for customers among staff, doctors, and outpatients. Nutrition services included year round revenue producing nutrition education and counseling for individuals and groups. The programs with the greatest appeal among the general public were weight control and wellness/fitness programs. Frozen special-diet meals were being offered for sale by hospital kitchens (Gullickson, 1984a).

At New England Deaconess Hospital a policy of no layoffs of employees caused dietitians to find other cost savings. Some measures used were to change china, buy less expensive paper goods, set up competitive bidding among vendors and purveyors for food and cleaning

supplies, and also to set up constant monitoring and metering of dish and pot washing machines.

Clark County Memorial Hospital in Jefferson, Indiana, "marketed" its new menu with more fresh fruits and vegetables to doctors and patients at less cost. The dietitians saw patients sooner so that education and supplemental feedings began earlier. Doctors saw the benefits and the hospital saved dollars. Outpatient instruction was increased. A television talk show was developed. Better use was made of government commodities.

Ochsner Hospital in New Orleans changed its cafeteria to more self-service and increased revenue from its catering services. Mostly, each service area was costed to establish it's source of revenue (Riggs, 1984).

In the United States, it was difficult to predict the long term effects of this DRG trend. Schwartz and Aaron (1984) showed that the British rationing of medical services and hospital care due to the socialized system for medical care put pressure on physicians as gatekeepers who must reconcile the economic limitations with their personal and professional values. On the other hand, British citizens understood that everyone could not have all forms of treatment and that they must defer to the physician's decision without excessive threat of malpractice suits. Under this arrangement everyone became eligible for a similar measure of medical care but not all types of services.

In addition to the DRGs, there were societal changes in the economy and the population which could have an impact on the dietetic profession of the future. In the last decade there was a decentralization trend in the economy. Manufacturing went from large units in one locale to

many smaller units connected by computers. Another impact came from the trend of growth in rural areas shown by the 1980 Census. Some speculative reasons for this was the growth in the service economy, especially in recreation, retirement, and education. All of these activities were benefited by the lower cost of living in less urban areas (Witkin, 1985).

Since corporations carried about 22% of the health care costs in 1983, there were economic advantages to reduction of preventable morbidity and mortality among their employees. Health promotion in the workplace was seen as a means of boosting morale, productivity, and the company image. Within the workplace cafeterias and vending machines were seen as sites for nutrition education programming. Exercise facilitites were developed when viewed as cost effective. Wellness programs spread in range and number. Adult nutrition education programs were created or adapted. Most educational efforts included weight control programs and efforts toward reduction of consumption of cholesterol, sugar, salt, fats and highly refined foods. Programs at the Campbell Soup Company, Kimberly-Clark Corporation, Johnson & Johnson, and Southern New England Telephone included individual health screening followed by nutrition education. Most of these have proven successful by such measurement as weight loss and reduced serum cholesterols levels. In the twenty three workplaces studied by Glanz and Seewald-Klein (1986), programs ranged from five to sixteen weeks with follow-ups to one year. Continuing education was promoted through cafeteria staff training, and development of heart healthy recipes and menus. Goals for reductions of calories, sodium, and fat were found acceptable. Although long-term benefits were not proved, the potential was great as the art and the science of these

programs is advancing.

Finally the means of handling health care costs were changing although third-party payer systems have represented the largest means of payment. Competition among these providers increased, so that efficiency depended on a strict review of quantity of service, and case-mix risk within a geographic area. Health maintenance organizations took an increasing share of the market. New reimbursement for services based on basis of costs and customary prices of a peer group have been suggested (Herzlinger, 1985).

There were two important concepts in the health care system which impacted on the fields of dietetics. These were preventive health care and wellness. Both of these concepts moved the ultimate responsibility for health to the individual. In so doing, these concepts changed but did not eliminate the need for institutions and professionals to help individuals with decisions about their health.

The 1979 report, Healthy People, Julius Richmond, the Surgeon General stated that:

> ...further improvements in the health of the American people can and will be achieved, not alone through increased medical care and greater health expenditures, but through a renewed national commitment to efforts designed to prevent disease and to promote health (Richmond, 1979).

By 1979, the need was diminished greatly from the 1900 level of treatment for such conditions as tuberculosis, gastroenteritis, diphtheria, pneumonia, typhoid fever, smallpox, and poliomyelitis. This was due to improvement in sanitation, housing, nutrition, and immunizations. Instead death resulted more from the degenerative diseases, such as circulatory problems and cancer. Life expectancy was

set at 73 years in 1979 compared with 47 years in 1900. Another factor was that in 1960 less than six percent of the GNP was spent on health care but by 1979 it was almost eleven percent.

Lifestyles were examined and changes promoted. The most notable were elimination of smoking, reduction of alcohol, dietary changes to reduce calories, fat, salt, and sugar, increased exercise, periodic screening, and lower speed limits with the use of seat belts (Richmond, 1979). The idea of wellness came to mean a concern about fitness and eating healthful foods to promote physical health and prevent the degenerative diseases (Douglas, 1986). These concepts of preventive care and wellness has been moving the site of dietitian's professional practice from institutions into the broader community, either totally or partially. The 1984 Study Commission Report, A New Look at the Profession of Dietetics, makes a strong recommendation that the ADA give greater consideration to its purpose "to promote optimal health and nutritional status of the population" (ADA, 1984).

By 1978, a Dietetic Practice Group was established called "Consulting Nutritionists - Private Practice." This group grew from a clinically oriented base to membership from professionals within any clinic, feeding site, nursing home, government agency, or community program. For dietitians, the ideas of preventive care was considered on three levels. The primary level involved providing nutritious food through school lunch and promotion of the dietary guideline for prevention of high blood pressure, atherosclerosis and cancer. The secondary level included screening programs which detect symptoms and the follow through with treatment and encouragement to change habits. The third level considered that the individual had displayed some

disease symptoms but future health complications could be minimized by preventive care (Obert, 1986, Trithart & Noel, 1978).

Dietitians worked to become a multicompetent health professional. To succeed in certain areas such as health and fitness, dietitians needed additional training in exercise testing, athletic training, health risk analysis, stress management and corporate fitness (Douglas, 1986). In the traditional practice areas, heart disease and cancer became recognized for its multifactorial nature. These factors needed to be totally defined. For instance, more research was needed on genetic influences, the role of various fatty acids, fibers, minerals, and hormones. Another changed perspective was that ideally science would provide answers as a basis for public policy but today public policy and dietary guidelines appeared to be ahead of research efforts (White, 1986).

Hospitals responded to the preventive care and wellness concepts and moved into community service and community-based programming. Some developed nutrition programs for senior citizen meals or provided those meals. Some developed nutrition education programs for school districts during National Nutrition Month. Weight reduction classes were provided to the public. Home visits were done to follow-up on diet instructions (Say, 1984). This concept of wellness was most effective when using team approach with doctors, nurses, exercise physiologists, psychologists, and dietitians were a part of the well organized program (Gullickson, 1984b).

Hospitals changed rapidly in the past five years since DRGs were started. There was a decrease in bed occupancy; cost effectiveness became the guiding principle for all services; more specialized services

were developed and marketed; out patient revenues increased (Coddington et al, 1985).

Rural Health Care

The trends in rural health care that have influenced the work of dietitians were essentially the same as those of the whole health care system. Preventive and wellness foci have tended to move practice out of institutions and into the community. Rural health care was affected more by cultural background and sense of community than its urban counterpart. Another problem was that there is no single definition of rural, so there was little agreement on characteristics.

Mynko (1974) attempted to establish a theoretical framework for medical care utilization in rural America through an exhaustive review of literature. Utilization of both professional and non-professional care was found to be based on individual perceptions of health, their health status and the availability of health care. This study used areas of less than 2,500 population. It was found that chronic conditions were related to age and that general morbidity was the same as the general population. Rural and urban areas had similar rates of hospitalization and surgery but rural persons had shorter hospital stays. Rural accidents were increased both from farming and male blue collar employment.

In a nation-wide study of rural, suburban and urban health care systems where the results were adjusted for age, rural deaths from arterioscherosis were the lowest. Accidental deaths were higher, as was infant mortality. Size of the medical care systems was related to population size and socioeconomic conditions in terms of type of

manpower and size of payroll (Miller, Voth, & Danforth, 1982). It was found that there was a larger population over age 65 in rural areas starting in 1960, but there has been a lowering of the rate in 1975 (Clifford, et al, 1983). In the Baxter study (1973) using three similar rural communities of less than 2,500 residents, it was found that each had a 23-34 bed hospital, a 50-bed long term care facility, and two to four medical doctors. Average age, income, and educational level were similar. Persons 35 years of age or less sought referrals more often than older persons who waited for the doctors to suggest referrals. General satisfaction with the local health care system was expressed by 80% of the respondents.

The availability of medical doctors in rural areas was seen to be improving. As of 1970 in a 16 state study only 13 of 100 rural residents in areas under 25,000 lived more than ten miles as the crow flies and only two in 100 lived more than 20 miles from a practicing physician. By 1979, 80 of 100 had 20 mile access to specialists in internal medicine, general surgery, obstetrics/gynecology, and pediatrics (Williams et al, 1983). In 1970, there were 152 physicians for each 100,000. By 1978 there were 171. The estimate has been made that the need will be 215 in 1990 and 240 in 2000 (Tarlov, 1983).

Other health professions have shown little interest in rural practices. Only ten percent of professional hospital administrators were willing to work in hospitals smaller than 100 beds, although this size represents half of U.S. hospitals (Boessoneau, 1984). In 1951 it was known that the work within hospitals from 150 to 250 beds could support one full-time dietitian. At that time 60 percent of American hospitals had no dietitian (Prall et al, 1951). In 1981, 67 percent of

dietitians studied were not interested in management or clinical positions in rural areas (Dowling, 1981). A 1980 study showed that over half of consultant dietitians were serving hospitals or health care institutions with less than 100 beds. General dietetics was listed as the predominant role for 74.5 percent of these dietitians, with 16.5 percent listing a clinical role and 7.7 percent engaging in administrative dietetics (Hekeler, 1980).

Rural health care was put under pressure by two recent problems. Many of the nation's 2,700 rural hospitals were receiving lower DRG related payments than their urban counterparts. These fixed rates for hospital payments were based on average cost per beneficiary. These payments show a long history of lower wages for personnel and shorter hospital occupancy (Wallace, 1984).

The other problem was related to the "farm crisis" which increased the stress level of farm families and increased stress related cardiovascular and gastrointestinal problems (Kriel, 1985). So while there was increasing pressure to cut costs, there was more need for services. The surplus of doctors in the future may help to reduce this pressure (Coddington, 1985). Rural hospitals also have responded by offering health promotion programs. A 1986 study of twenty-five rural hospitals showed that 88% were offering 3.7 programs ranging from hypertension screening to health clubs. Some 60% of these hospitals had added a new program in the last year. Farm families whose limited incomes came from selling pork, beef, milk and eggs, resisted following the U.S. Dietary Guidelines for reduction of cholesterol and saturated fat intakes (McCormick, 1986). This made health promotion in this setting very challenging.

The rural health system had not accepted health-maintenance organizations (HMO) but with savings that can be effected, a study of rural or branch service were being investigated (Iglehart, 1984). In eastern Kentucky a regional community ambulatory center had been developed to use a physician to monitor health care with actual service provided by a management team (Stumbo, 1977). North Dakota had taken this concept a step further and put a van on the road to circulate through the vast rural areas of that state (Fickenscher, 1984).

Trends in Dietetics

From mid-1970 to mid-1987 the American Dietetic Association was involved in formalizing the process for the specialization of roles within the profession. Several reports were generated which included the role delineation and manpower studies, a task force on education, and the Study Commission Report. There was an overlapping in timing of these activities. They were undertaken at a time of very rapid growth in membership from 38,000 members in 1979 to 51,000 in 1984 (Winterfeldt, 1979, ADA, 1984). An overview of the development of dietetics as a profession showed that there was always a variety in sites of practice with some specialized responsibilities at each. Until the mid-1970's the assumption was that public health, research, and teaching at the college and university levels called for advanced degree training. Then as continuing education became a critical need and large hospital settings called for more specialized dietetic practice combined with the general explosion of knowledge, dietetics needed to define the requirements for the specialization of individual efforts to insure quality of practice.

Role delineation studies were started within allied health professions as formal methods to identify professional responsibilities or competence thereby ensuring accountability for quality patient care (D'Costa, 1984). These studies involved a scientific process used to describe a group of jobs based on functions and responsibilities. They were futuristic in orientation, and aimed to meet expected societal needs and to optimize professional efficiencies. Within the American Dietetic Association role delineation studies were started in the 1970s and were published in 1981 and 1983. These studies began by investigating the "actual" entry role, skill/knowledge and responsiblity within first clinical and then community dietetics. In addition, physicians and nurses were asked to suggest "appropriate" and specific responsibilities for clinical dietitians. These findings were used by a Working Committee to delineate the number of practice levels "appropriate" to the entry role. A cluster analysis and a responsibility to skill/knowledge was done to establish the roles of the professional dietitian and the dietetic technician (Baird, 1980). To date, role delineation studies have been completed for the entry level dietitian in foodservice systems management, community dietetics, and clinical practice (Armstrong, 1981). These three categories plus the traditional generalist role represented the broad types of current specialties in practice. In 1977 the Council on Practice was organized and by 1987 there were 22 separate Dietetic Practice Groups (DPG) in five divisions: community dietetics, clinical dietetics, consultation and private practice, management practices, and education and research. This Council has evolved to carry responsibilities for quality assurance, continuing education and specialization (ADA Courier 1987).

The Academy of Advanced Dietetic Practice was defined and criteria for credentialing was formalized.

Beginning in 1979 the American Dietetic Association conducted the Dietetic Manpower Demand Study (DMDS). This study was designed to provide qualitative and quantitative estimates for dietetic practitioners from 1985-1990. This study was also to identify areas of potential development for the profession. A panel was developed to review technical papers about population trends, technological and biochemical advances, and reimbursement patterns, for example. Then this technical panel developed suboptimal, probable, and optimal scenarios for the type and place of employment for future dietitians (Fitz & Baldyga, 1983). This type of study estimated trends for the profession, and indicated there would be a slow steady increase in the total number of dietitians needed. Positions would be both inside and outside of institutions. There would be a decreased number of generalist positions. No increase was seen in the number of teaching dietitians at the college or university level. An increased number of members would be needed in research, commercial setting, and in self-employment. Hospitals would continue to be the major employer (ADA, 1984).

A Task Force on Education reported in July of 1983. The four major recommendations were: the need for a common body of knowledge for all entry level dietitians; the need for a system for recognition of specialties; the continuation of accreditation and approval of programs; and the need for one functional unit of the Association concerned with educational activities (Haschke & Maize, 1984).

In 1983 a Study Commission, headed by C. H. William Ruhe, began its

work with the resulting report "A New Look at the Profession of Dietetics" in late 1984. In addition to a historical review of the profession, this commission looked at the present and future status of the profession (ADA, 1984). As with Millis' work in 1972, one of the important contributions of this commission was a close look at dietetic education. The disparity of recommendations between these two reports dealt with the accreditation process. The study commission was able to point out that about one-half of current R.D.s were entering either from the three-year preplanned experience route or the advanced degree with qualifying experience route; neither of these routes were accredited. There was no objective evidence that persons entering by these non-accredited routes were not functioning effectively within the profession. The Study Commission recommended a formal study of the routes for entry and of consortial accreditation of educational programs. Another set of recommendations suggested that advanced and specialized training to include field experience be targeted through continuing education.

All of these reports and studies were used to finalize, in early 1987, the Standards of Education or Plan V which consisted of knowledge and performance requirements to be applied to baccalaureate training, internships, CUP, and Approved Pre-professional Practice Programs (ADA Council on Education 1987). An accreditation or approval process was revised to become effective in 1989.

Role and Job Satisfaction Studies

The completed studies pertinent to this project will be reviewed in three categories and in chronological order. The first category of

studies were related to the role or function of dietitians.

Bloetjes, Couch, & Gottlieb (1962) developed a 143 item analysis of production, service, maintenance and education/training functions of dietary departments within 118 hospitals in New York State. The purpose was to designate duties performed now and in the future by the administrative head as compared to those that could be done by other professional dietitians or by non-professional dietary employees. While no consideration of hospital size was given, the results showed that many duties could be delegated with about one-fourth of food production going to non-professional dietary employees.

Brenner (1971) studied the working activities and functions of 25 consultant dietitians in the Albany, New York, area to determine the line and/or staff nature of a variety of responsibilities. It was found that these consultants were acting as advisors with little authority or responsiblity for the operation of the dietary department. Half of these dietitians assumed direct or line responsibility for menu planning and therapeutics. In addition, education and training of personnel was not seen as a function of the on-site foodservice supervisor. Lack of knowledge and skills were seen as the blocks to the foodservice supervisor taking on these responsibilities. Both knowledge and skills increased with length of association between foodservice supervisor and consultant. Increased continuing education was seen as a way of improving quality of foodservice.

Spear (1978) investigated the perceptions of the role of the consultant dietitian with those of the administrator of the nursing home in 12 north central states. Nine categories of specific functions were checked for frequency of completion by either the foodservice supervisor

or the dietitian. The same listing was checked by the consultant dietitian and the administrator. The consultants saw their independent roles in the areas of planning and writing menus, in-service training, nutritional assessment, and discussing diets with the physician. Administrators perceived the consultants role as very important in the areas of menu planning, modified diets, organization and management, and education and training.

Goers, Verstraete, Fruin, and Held (1980) studied the utilization and demand for dietetic personnel in Minnesota in licensed health care facilities. This study revealed that 75 percent of dietitians and dietetic technicians were employed in the Twin Cities, Rochester, and Duluth areas. These areas contained 71 percent of the hospital beds, as well. The conclusion was that non-urban areas were underserved either because opportunities were not identified or trained persons were not available. Non-urban areas were served primarily by dietetic technicians, dietetic assistants or foodservice managers. Approximately 70 percent of these persons had either a bachelor's degree or were graduates of a program approved by the Minnesota Department of Health. There were job possibilities for dietitians but the need appeared to be greatest for dietetic technicians.

Gilbride (1981) completed a study of role or function of dietitians in New York State Nursing Homes. This study showed that 99 percent of these dietitians had at least a bachelor's degree. Registered dietitian status was reported by 84 percent of part-time and 48 percent of full-time dietitians. The full-time practitioners used the title consultant dietitian 95.2 percent of the time. Other titles such as foodservice director, chief dietitian, clinical dietitian, or general

dietitian were also used. When distinguishing the functions performed by the part-time dietitian alone, one-half or more of the time from those done by the full-time dietitian, it was found that the part-time dietitians spent one-half or more of their work time performing several functions alone: document recommendations, review/evaluate menus, take nutritional histories, identify high-risk cases, institute diet manual, teach facility staff. There were only two such functions for full-time dietitians: review charts and take nutritional histories. No significant difference was found with the functions of initiate diet prescriptions, establish monitoring system, inspect for sanitation, inspect trays, and plan therapeutic menus. Full-time dietitians were less involved in analyzing cost records and preparing yearly budgets. Part-time consultant dietitians were found to advise and to delegate responsibilities more than their full-time counterparts.

Faye (1982) did a functional analysis and needs assessment among consultant dietitians in health care facilities in Oklahoma. This study revealed that among the 70 functional activities, those performed by 50 percent or more of the consultant dietitians were: calculate modified diets, adjust modified diets, assess drug-nutrient interrelationships, discuss diet with physicians, develop and maintain a summary of consultant visitation accomplishments, conduct in-service training for foodservice employees, conduct nutrition education for patients and their families and conduct nutrition education for professionals. Those functions shared by 50% or more of the consultant dietitians in combination with a foodservice supervisor were plan and write resident menus, test menu items for taste and appearance, supervise the dishing-up of menu items, maintain portion control, supervise service

and distribution of meals, check plate waste, establishe sanitation standards, check dishwashing temperatures, check refrigerator temperatures, establish cleaning schedules and procedures, maintain standards, assess nutritional status of residents, plan menu for modified diets, confer with patient regarding modified diets, develop department organization, develop department policies, prepare job description, communicate with other departments, set overall standards for quality assurance and within existing limitations, plan for use of space and equipment for maximum efficiency. In this study 83 percent of the 42 respondents were in private practice. They worked in such varied settings as hospitals, skilled nursing facilities, mental retardation and psychiatric centers, community health and retirement centers, public cafeterias, medical complexes, children's facilities, and the Public Health Department.

Meredith, Lucas, Dickey and Carey (1982) surveyed practitioner competencies among dietitians compared to dietetic technicians in foodservice management at the entry level. Management, clinical, and community functions considered the following question - "The entry-level dietitian will be able to: ?" This list of 165 items for dietitians and 129 for dietetic technicians was sent nationwide for consideration by practitioners and educators. The overall results were shared with the ADA Role Delineation Study to help in establishing role definitions.

Fisher (1984) followed up on the Faye study by comparing the functional analysis and continuing education needs of Ohio consultant dietitians with those of Oklahoma. The results showed that Ohio consultant dietitians alone were engaged in conducting nutrition education for professionals, planning menus for modified diets,

assessing nutritional status of patients, and developing dietary progress rates for patient medical records. However the Ohio consultant dietitians alone did not solely confer with patients regarding modified diets.

Schiller (1984) used number of beds to compare many aspects of clinical practice in hospitals. In hospitals of more than 300 beds as compared to those of less than 300 beds, organizational factors that were found significant were that the clinical dietitians office was less likely to be located in the kitchen area, a computer was more available to calculate nutrient intakes and clinical dietitians were less likely to view themselves as managers. In the larger hospitals, the clinical practitioners differed in that both clinical and generalist dietitians attended rounds at least once a week, more group classes were offered to patients, and fewer required physicians' orders to begin diet counseling. When attitudes were considered, the difference was that in larger hospitals the dietetic notations in medical records were generally considered of value to physicians. When clinical activities were compared between 1972 and 1982, the biggest difference was that dietitians checked trays less often.

The ADA Manpower Study (1980) listed 42 activities of dietitians and noted the percentage difference in those responsibilities from less than five years to over eleven years of work experience.

Job satisfaction studies which were pertinent to this project begin with Warr and Routledge (1969) who used a job satisfaction scale with sub-scales for pay, prospects of promotion, job itself, immediate supervision, managers on your own level, subordinates and the firm. Single adjectives and short phrases were introduced. A scoring system

that allowed half positive and half negative responses for each scale was tested. Six firms in Britain were studied among varied industries to validate this study process.

Spangler (1971) investigated the educational preparation functions, and satisfaction of hospital dietitians in Michigan who were part of health teams. Not only dietitians but also administrators, chief of staffs, directors of nursing, and department heads from fifty-four non-teaching hospitals were interviewed. Job satisfaction was suggested as a measure of influence on quality of food and patient care.

Smith, Kendall and Hulin (1975) developed the Job Descriptive Index; two parts of which were used in this project. Job satisfaction was seen as the feelings that workers have about their jobs or that job satisfaction is a function of the perceived characteristics of the job in relation to an individual's frame of reference. Scales with an adjective checklist were used. The sub-scales developed were work, pay and promotions, supervision, and co-workers. The Index was validated with a group of undergraduates to test statistical possibilities. A farmer's cooperative was used to test a graphic, faces scale. A final version was tested within an electronics firm with emphasis on loading of answers positively or negatively. A factor analysis was done among the employees of a large bank. A direct scoring procedure was adopted for further studies. A Job in General index was developed to be used separately from the sub-scales.

Swartz and Vaden (1978) studied the work values of foodservice employees in both urban and rural hospitals. The Standard Metropolitan Statistical Area was used to define urban. A factor analysis of thirty items in nine categories was developed including: work and its

benefits, drive-ambition, knowing the right people, work as a central life interest, work as a necessary evil, ego-satisfaction, individualism, social idealism, and self-concept. Age of the respondents had more effects than urban or rural worksite. Younger workers were most concerned about seeing the results of their work and wanting work that would enable them to develop their special abilities. For older workers the factor of greater importance was "who you knew on the job" and that work "helped people to forget about their personal problems."

Martin and Vaden (1978) investigated job satisfaction among non-supervisory foodservice employees in large hospitals using the Job Descriptive Index scales for work, supervision, pay, promotion, and co-workers. Both age and length of employment were significant to increased satisfaction with work. Supervision was most satisfying to those working more than three years. Both higher degree of education and longer length of service positively influenced satisfaction with pay. Satisfaction with promotion increased with length of service. A higher degree of education increased satisfaction with co-workers.

Calbeck, Vaden and Vaden (1979) used the Job Descriptive Index as part of a job satisfaction study of professional and non-professional dietetic service workers. The results showed that dietitians were more satisfied with work itself, supervision, pay and co-workers. Non-professional foodservice employees showed only slightly more satisfaction with promotion. Work itself was more satisfactory to dietitians with over 25 years in the profession, those who were generalists, and who were over age 51. Supervision was more satisfactory to older dietitans. Pay and overall satisfaction were

related positively to age and length of service. The size of hospital, i.e., over 500 beds, was related positively to satisfaction with co-workers. When dietitians in this group answered the work value questionnaire of Swartz & Vaden, (1978) it was found that drive, ambition and self-concept were most valued when compared to non-supervisory workers. Dietitians who grew up in large cities (over 150,000) placed greater emphasis on the value of work than those from smaller communities. Drive and ambition factor scores were lower for clinical dietitians than those of directors, administrative or generalist dietitians. Work as a central life interest had a positive relationship to age. Married dietitians scored higher on the self-concept question showing a lesser concern with competition of others on the job. Directors of department were the dietitians who were most satisfied overall.

Hekeler (1980), as part of the ADA Manpower Study, asked 100 dietitians to rank satisfaction on eleven items. A moderate level of satisfaction was expressed on all items. A slightly higher positive response was shown to the current job, professional training, and career potential. The lowest scores were for image of dietitians among the general public and among "those with whom you work regularly."

Taylor (1984) used the six JDI scales and a job constraint measure scale for a quality of work life assessment of dietitians working in business and industry in Oklahoma. The results showed that satisfaction with work was greatest for married dietitians who were over 30 years of age and earning over $30,000 annually. Higher managers were most satisfied, as were those who worked over 35 hours or less than 20 hours per week. Actual work on the present job was more satisfying to

dietitians over age 41, who earned either less than $14,999 or over $30,000. Presidents of businesses again were the most satisfied. Pay and benefit were satisfactory for males, those over 51 years of age, presidents or directors. Opportunities for promotion scored the lowest in this study and were related to higher salaries, working more than 35 hours per week, and to being a president, manager, consultant or "other." Scores on supervision were high for all respondents and the institutional variables. When people on the present job were considered, there were high scores in general. There was a slight increase in scores among married dietitians.

The job constraint measure was derived from work by Peters, O'Conner and Rudolf (1980) who hypothesized that there were inhibiting situational variables on performance in work settings. Eight situational factors were tested. These were job-related information, tools and equipment, materials and supplies, budgetary support, required services and help from others, task preparation, time availability, and the work environment. Two studies were done to validate these ideas. The first was designed to establish the affect of the situational variables. The second study used the constraint measures to improve performance among college students. Peters and O'Conner (1980) suggested that the performance constraint or situational resource variables should be tested in a variety of work settings. Taylor (1984) used these eight measures with the scoring system of the JDI to find constraints among dietitians in business and industry and found that respondents who earned more than $40,000 per year reported less situational constraints on the job.

A review of literature showed that role or function of dietitians

were studied in relation to historical perspectives and perceived changes to society and the profession. Education of dietitians along with compentence was studied on a similar time line. No studies were found which focused exclusively on rural practice of dietitians. Health care practice was undergoing rapid change with greater emphasis on preventive measures by the individual.

CHAPTER III

METHOD

This study was undertaken to determine the role or function, job satisfaction, satisfaction with supervisor, and constraints on performance among Registered Dietitians (R.D.s) employed in rural and urban Minnesota. This chapter includes a discussion of the pilot study, a description of the research design, the sample and the methods of statistical analysis applied to this project.

The Pilot Study

During the fall of 1984, 50 names were selected randomly from the Minnesota Dietetic Association mailing list. These persons were sent a questionnaire by mail which included a role/function list based on the work of Faye (1982) and Fisher (1984). The demographic and personal data component was further developed by combining ideas pertinent to this study with those from the aforementioned studies. A Job Satisfaction Assessment was included which was based on the work of Smith et al (1975) which included six indexes.

The questionnaire (Appendix A) was sent first class with a stamped first class return envelope. The questionnaires were coded so that one follow-up mailing of a similar nature could be done among the non-responses after a two and one-half week period.

The overall return rate after the two mailings was 80% or 40

responses. Only 21 or 52% of the returns were useable for the defined purpose of studying Registered Dietitians working full or part-time in Minnesota. Reasons for not working given by the respondents included attending school, raising a family, married, did not want to, employed in a non-dietetic position, and retired. Five of the respondents had not reached R.D. status and two were Dietetic Technicians. The useable responses were sorted into two groups with 16 working in the urban areas and five R.D.s working in the rural areas of the state.

When considering the pilot study questionnaire for the main study, several factors were considered. The method of contact using first class mail with one follow-up proved successful. The cover letter (see Appendix A) using Mankato State University stationary was repeated, since the dietitians in Minnesota knew this researcher as a faculty member at that institution.

The questions for general information about marital status, age range, educational level attained and R.D. status were retained. The Smith et al (1975) Job Descriptive Index for Job in General, Supervision on the Present Job, and the Constraint Measure were retained.

Several problems with the questionnaire surfaced during this pilot study and were corrected in the major study. Because there were complaints about the length, the questionnaire was shortened by limiting part of the Job Descriptive Index. The questions concerning employment status were revised where there was confusion in responses.

One goal of this research project was to define the rural working dietitian. In the pilot study, job title was sought with an open-ended question. There were 17 different titles given by the 21 respondents. In the main study, therefore, the question was reworded as Major Area of

Responsibility with nine categories plus an "other" option. This forced the responses into workable groupings.

The definitions of rural and urban were based on the Standard Metropolitan Statistical Area (SMSA) instead of the open-ended question which received 16 different population responses in the pilot study. There were five Standard Metropolitan Statistical Areas in Minnesota (Bureau of Census, 1983).

The description of supervisor question was changed to ask for a choice between a Registered Dietitian and a non-Registered Dietitian supervisor to help identify that characteristic of rural and urban practice. The pilot study proved to be beneficial in refining the questionnaire for the larger study.

The Research Design

The method of this research project was a descriptive type of research, a mailed questionnaire with three sections. This instrument was sent to 300 randomly selected persons whose names appeared on the Fall 1984 Mailing List of the Minnesota Dietetic Association. The data collected was analyzed in accordance with six hypotheses.

The Sample

Persons on the mailing list of the Minnesota Dietetic Association for the Fall of 1984 were chosen as subjects for this study. Goers et al (1980) showed that fifty percent of the Minnesota Health Care Facilities have dietitians or dietetic technicians on their staff. The ADA Study Commission (1984) reported that 95% of the R.D.s are ADA members. Membership to a state association was automatic with

residence. This mailing list provided access to the desired group with accuracy and convenience when time and money were considered. The sample of 300 was chosen by a random table after assigning a number to each mailing label (Kish, 1965). The subjects of the pilot study were eliminated from the main frame in the selection process for the actual study.

The Instrument

The instrument was designed to meet the six objectives and hypotheses of this study. The questionnaire was the Minnesota Function and Job Satisfaction Assessment (Appendix B). There were three main parts, each with subsections.

The first part of the instrument was titled General Information. This part called for personal data including educational background, Registered Dietitian status, age and salary range, type and size of institution or business, Registered Dietitian status of supervisor, and the number of Registered Dietitians at the worksite.

The second part was the Role or Function Assessment which was expanded to thirty-two statements from the twenty-eight of the pilot study. This list of thirty-two functions was developed to include activities of foodservice management dietitians, clinical dietitians, and community dietitians. Spears (1978) tested a list of activities and their frequency among consultant dietitians. Consultant functions in Oklahoma were studied by Faye (1982). Then Fisher (1984) compared consultant roles in Ohio with those of Oklahoma consultants. Dietitians in New York State nursing homes were studied to determine their roles and functions by Gilbride (1981). The activities of clinical dietitians

were profiled, defined, and analyzed by Kris-Etherton et al, (1983). Schiller (1984) compared the changes in selected activities between 1972 and 1982. A tally of roles or functions was made from these studies which was compared to the ADA Manpower Technical Reports (1980). This process suggested the addition of Quality Assurance and Patient Care Audit statements to enrich the clinical, nutritional care, and diet history statements.

The third part of the questionnaire consisted of three subsections. From Smith et al (1975) the Job Descriptive Indexes called Job in General and Supervision on the Present Job were most pertinent to this study. The final section of the instrument was the Performance Constraint Measure developed by Taylor (1984).

Data Analysis

The methods of statistical analysis applicable to this study were descriptive for the demographic or general information. The distribution of responses to the Role Assessment checklist were analyzed by z-tests. The means of the Job in General Index, the Supervision of the Present Job, were subjected to t-tests. The Job Constraint Measure was compared using F-tests (Steel & Torrie, 1980).

CHAPTER IV

RESULTS AND DISCUSSION

A survey questionnaire was administered to Registered Dietitians employed in Minnesota for information about functions performed on the job, job satisfaction, satisfaction with supervision on the present job and performance constraints.

Data from this study will be presented in the following order: questionnaires sent and received, demographic information, educational background, role assessment for each area of responsibility, analysis of satisfaction expressed for the Job in General Index, the Supervision on the Present Job Index, and the Job Constraint Measure.

Questionnaires Sent and Received

In the Fall of 1984, 300 persons on the mailing list of the Minnesota Dietetic Association were mailed a "Minnesota Dietitians Function and Job Satisfaction Assessment" questionnaire. The group was randomly selected from a total membership of 783. With one follow-up mailing of the complete questionnaire, a total of 254 or 85% were returned. Twelve of the questionnaires were not delivered after two attempts.

Of the 254 returned questionnaries only 166 were judged to be useable. These met the criteria of being from Registered Dietitians who

were employed full or part-time in Minnesota. There were 88 unusable questionnaires from non-employed Registered Dietitians; employed non-registered dietitians; non-working non-registered dietitians or incompletely answered questionnaires for which employment and/or registered status could not be ascertained.

Demographic Information

The 166 responses from Registered Dietitians working in Minnesota were divided into two groups. One group represented 127 Registered Dietitians working within the Standard Metropolitan Statistical Areas of Minnesota or the urban areas. The other 39 respondents were designated as the rural group or those working in communities of less than 50,000 persons. Therefore, among the total useable responses, 77% worked in urban areas while 23% of the sample worked in rural areas.

The 1980 U.S. Census showed that 25% of the general population lived outside the Standard Metropolitan Statistical Areas (SMSA). The geographic location of employed Registered Dietitians in this study showed a similar overall percentage. Goers et al (1980) found that 75% of Minnesota dietitians worked in the Twin Cities, Rochester or Duluth Areas. The 1980 U.S. Census expanded the SMSA or urban areas to include St. Cloud, Fargo-Moorhead, and Grand Forks. These additional communities were considered as urban areas in this study.

Table I shows the distribution of the urban and rural Registered Dietitians by the major area of responsibility. The respondents were asked to designate their area of responsibility as the one which best described the greater part of their work. The term "consultant" was not listed as an area of responsibility. Consultants were placed in that

category according to their job described under the "other" category. There were three outpatient consultants from the urban areas. All of the consultants from the rural areas indicated an association with an institution.

The "other" category of urban dietitians listed the following job titles: nutrient database maintenance, customer service for a food delivery company, wellness consultant to business and industry, and private practice.

TABLE I

DISTRIBUTION OF THE URBAN AND RURAL REGISTERED DIETITIANS BY AREA OF RESPONSIBILITY

Area of Responsibility	Urban		Rural	
	Frequency	%*	Frequency	%*
Director	15	12	10	26
Assistant Director	10	8	0	
Clinical	49	34	8	20
Foodservice Management/Business	8	6	3	8
Generalist	6	4	3	8
Teaching	4	3	0	
Research	2	1	0	
Community	19	15	5	13
Consultant	14	11	10	26
Other	4	3	0	
Total	127		39	

* Not equal to 100% due to errors in rounding-off.

Notable differences were that no rural dietitians designated an areas of responsibility as assistant director, teaching, research, or other. Apparently work in rural areas was not defined with these terms or the positions are different due to institutional needs. On the other hand, more rural dietitians considered themselves directors and consultants than urban practitioners. Fewer rural dietitians considered themselves as clinical practitioners when compared to the urban group.

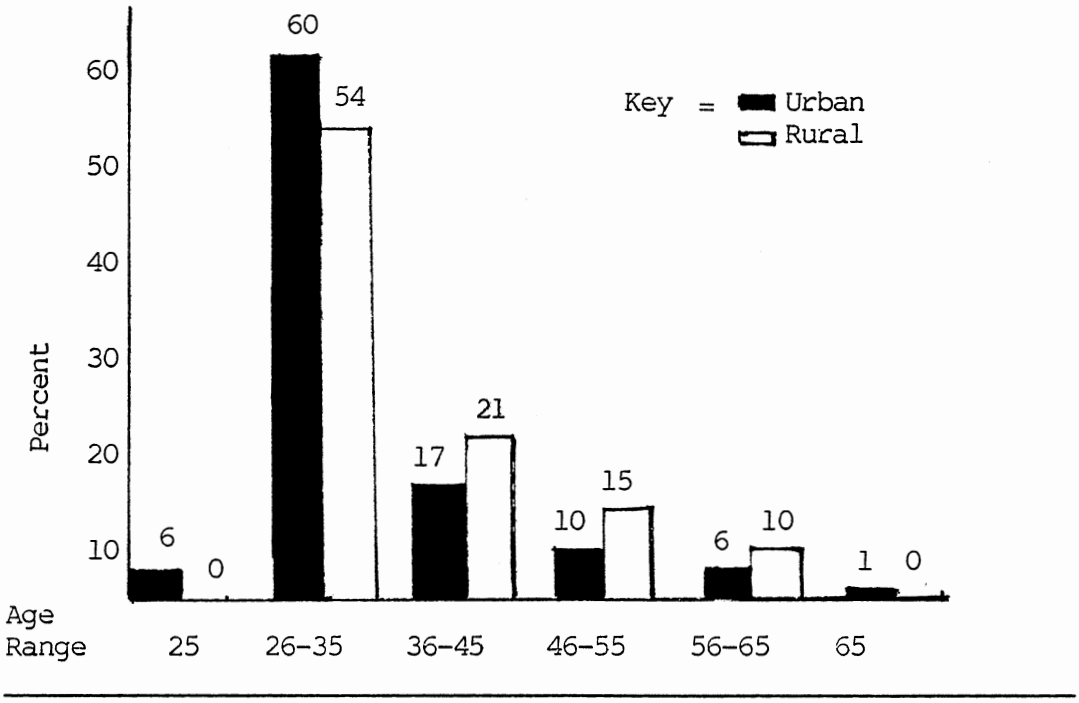

Figure 1. Age Range of Registered Dietitians Working in Minnesota

The age range information for the respondents are shown in Figure 1. Of the 127 urban dietitians studied, 6% (n=8) were under 25 years of age, 60% (n=76) were between 26 and 35 years old, 17% (n=21) were between 36 and 45 years, 10% (n=13) were between 46 and 55 years,

6% (n=8) were between 56 and 65 years and only 1% (n=1) was over age 65. Among the 39 rural dietitians, 54% (n=21) were between the ages 26 and 35, 21% (n=8) were between 36 and 45 years of age, 15% (n=7) were between ages 46 and 55 and 10% (n=4) were between 56 and 65 years old. A larger percent of rural dietitians were between ages 36 and 65 indicating that rural dietitians tend to be slightly older than their urban counterparts. In summary 83% of urban dietitians and 76% of rural dietitians were under 46 years of age.

Hekeler (1980) found that 74% of dietitians were under 45 years of age. The 1986 Census of the American Dietetic Association indicated that 73.4% of active members of the American Dietetic Association were under age 46 (Bryk, 1987). Young persons appeared to dominate the profession and more were working in urban areas of Minnesota.

All subjects were asked about marital status. "Single" also meant divorced or widowed. Those data are presented in Table II.

TABLE II

MARITAL STATUS

	Married		Single	
	Urban	Rural	Urban	Rural
Frequency	87	32	40	7
Percent	69	82	31	18

Of the 166 total respondents, 72% (n = 149) were married and 28% (n = 47)

were single. Rural dietitians in Minnesota studied were married more often than dietitians studied by Hekeler (1980) who found that 70.8% of the respondents to the ADA Manpower study were married. Martin & Vaden (1978) found that about half of the respondents were married. Taylor (1984) found that 56% of the respondents were married.

The number of years that urban and rural respondents had been Registered Dietitians are shown in Table III. Among rural practitioners, 51% were Registered Dietitians for 9 to 16 years, whereas 40% of urban dietitians were in this category.

TABLE III

NUMBER OF YEARS AS A REGISTERED DIETITIAN

	Urban		Rural	
	N=127	%	N=39	%
1-4 years	28	22	9	23
5-8 years	46	36	9	23
9-12 years	25	20	9	23
13-16 years	26	20	11	28
No answer	2	2	1	3

A series of questions were asked about employment circumstances of Registered Dietitians including whether they worked full or part-time. The responses are shown in Table IV. Full time work was considered to be forty hours per week. When the 166 respondents were considered 69% worked 40 hours or more and 31% worked part-time or less than 40 hours

TABLE IV

FULL OR PART-TIME WORK PER WEEK FOR REGISTERED DIETITIANS

Areas of Responsibility	Urban n = 127		Rural n = 39	
	Full Time (40 hrs/wk)	Part Time (< 40 hrs)	Full Time (40 hrs/wk)	Part Time (< 40 hrs)
Director	15	--	6	4
Assistant Director	10	--	--	--
Clinical	35	14	5	3
Foodservice	6	2	3	--
Generalist	4	2	1	2
Teaching	3	1	--	--
Research	1	1	--	--
Community	17	2	4	1
Consultant	2	8	2	8
Others	1	3	--	--
Total	94	33	21	18

per work. Table IV showed that a larger percentage (74%) of Registered Dietitians work a 40 hour week in an urban setting. Rural dietitians appeared to work more equally either full time (54%) or part-time hours (46%). Hekeler (1980) found that 70.2% of Registered Dietitians were working a full 40 hours per week. Bryk (1987) found that among all membership classes 74.4% worked 30 hours or more per week.

The number of years of employment in dietetic practice are shown in Figure 2 expressed as percent of practitioners by years in practice.

Minnesota dietitians in urban and rural settings were clustered at 5 to 9 years in practice with 39% (n=49) and 39% (n=15) respectively. Hekeler (1980) found that 21.6% of dietitians nationwide had 5-9 years in practice while 25.5% showed 1 to 4 years of practice which was the largest cluster in that study.

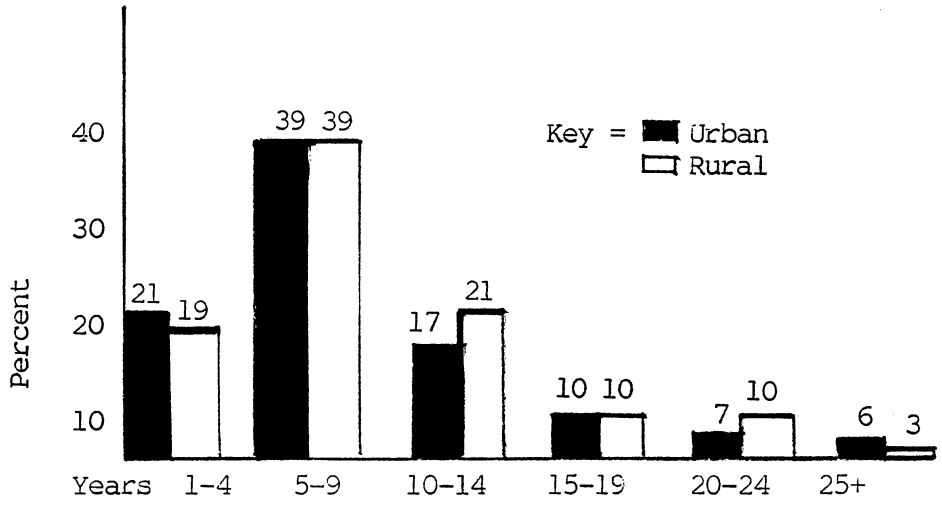

Figure 2: Years of Experience in Dietetics

In this study, 21% (n=27) of urban dietitians and 18% (n=7) of rural dietitians had worked 1-4 years. This means that this group of dietitians in Minnesota have been working longer than the nationwide

average with longer years of experience among rural practitioners. A summary of the Hekeler (1980) study showed that about 30% of dietitians had worked less than five years and that 53% had worked less than ten years. The 1986 Census of the American Dietetic Association showed that 59.3% of full-time (30 hrs or more per week) and 53.7% of part-time dietitians had practiced for ten years or less (Bryk, 1987).

Employment was considered from the standpoint both of areas of responsibilities and the range of years in dietetic practice and are shown in Table V. Entry-level or first year work was reported in the clinical, generalist, research, and community areas of responsibilities in the urban setting. In the rural area, entry-level work appeared in the generalist category only.

In both urban and rural settings, consultants appeared to have spent 4 or 5 years in previous practice. In the community dietetics category a relatively low average of years of practice was indicated, i.e., 7.5 years for urban and 6.4 years for rural dietitians. This area of responsibility has been undergoing a rapid change of growth and perspective with the trend in health care toward preventive measures which are practiced more outside of institutions, like hospitals and nursing homes, and within the larger community. It was noted that the mean years in clinical practice were 8.8 years for urban and 7.5 years for rural practitioners. The greatest percentage of dietitians reported working in the clinical area as Bryk (1987) found that 37.1% were in clinical practice. Practice in the categories of director, assistant directors, foodservice and business, teaching, consulting, and others all exceeded a mean of ten years for urban dietitians and a mean greater than 11 years for rural directors, foodservice and business,

generalists, and consultants. Urban dietitians showed an average of 10 years in practice while rural dietitians indicated an average of 10.3 years in practice.

TABLE V

YEARS EMPLOYMENT IN DIETETIC PRACTICE
BY AREAS OF RESPONSIBILITIES

Area of Responsibility	Urban n	Urban Mean	Urban Range	Rural n	Rural Mean	Rural Range
		Years in Dietetic Practice				
Director	15	10.9	2-27	10	11.7	3-25
Assistant Director	10	15.1	5-42			
Clinical	48	8.8	1-25	8	7.5	4-19
Foodservice	8	10.4	2-30	3	12.7	11-14
Generalist	6	4.2	1-9	3	13.7	1-29
Teaching	4	14.5	5-33			
Research	2	2.0	1-3			
Community	19	7.5	1-25	5	6.4	2-14
Consultant	10	15.8	4-40	10	11.4	5-21
Others	4	12.3	6-25			

TABLE VI

NUMBER OF YEARS ON PRESENT JOB

	Number of Years					
	Urban			Rural		
	n	Mean	Range	N	Mean	Range
Directors	15	5.4	1-25	10	7.7	2-20
Assistant Director	10	5.6	1-3			
Clinical	49	6.0	1-18	8	6.3	1-19
Foodservice	8	8.3	1-24	3	6.0	3-10
Generalist	5	3.2	1-7	3	11.7	1-26
Teaching	4	5.6	1-17			
Research	4	2.0	1-3			
Community	19	4.5	1-17	5	7.5	1-16
Consultant	14	6.2	1-13	10	7.5	1-16
Others	4	2.5	1-4			

Years of employment in the present job are shown in Table VI. When total years in practice, Table V, are compared to the years in the present job, all areas of responsibility except the research group show fewer years. Each area of responsibility category showed a first year on the present job except for the rural foodservice group. Dietitians appeared to change jobs relatively often or go in and out of the work force. Hekeler (1980) found that 46% of dietitians have held two jobs while 25% have held at least five different jobs during their years in practice.

The dietitians studied were asked to identify their place of

employment either by the size of the institution (number of beds) or by the number of clients per week. These data are presented in Table VII and Table VIII. There were two outliers as one urban based dietitian worked for the Minnesota Department of Health with responsibilities throughout the state. One rural based dietitian worked throughout the entire state and called on ten hospitals for Health Care Foodservice accounts. Four urban dietitians indicated that they had both in-house and off-site counseling responsibilities.

TABLE VII

PLACE OF EMPLOYMENT BY SIZE OF INSTITUTION

	Urban		Rural	
	Frequency	%	Frequency	%
Under 100 beds	19	18.6	12	41.4
100 - 299 beds	34	33.3	15	51.7
300 - 999 beds	38	37.3	2	6.9
1000 or more	8	7.8	0	
No answer	3	2.9	0	

TABLE VIII

NUMBER OF CLIENTS PER WEEK AT PLACE OF EMPLOYMENT

	Urban(n)	Rural(n)
Less than 50	16	6
51 - 100	5	2
101 - 120	2	1
More than 121	4	0
No answer	0	3

The largest percentage (37.3%) of urban dietitians were employed by institutions of between 300 to 999 beds, while the largest percentage (51.7%) of rural dietitians were employed by institutions of 100 to 299 bed size. Among urban dietitians, 51.9% worked in institutions of 299 bed or less. A large majority of dietitians in rural areas (93.1%) work in institutions of 299 beds or less. In both urban and rural areas 50 clients or less were seen in out patient, clinic, or community work.

Respondents were asked the type of institution in which they were employed. These data are represented in Table IX, showing that the majority of dietitians were employed in non-profit businesses or institutions in urban (68.5%) and rural (69.2%) settings. In this study 7.9% (n=10) of urban and 10.3% (n=4) of rural dietitians considered themselves self-employed.

TABLE IX

EMPLOYMENT BY TYPE OF BUSINESS

	Urban N = 127	%	Rural N = 39	%
Profit Making	27	21.3	8	20.5
Non-Profit	87	68.5	27	69.2
Self-employment	10	7.9	4	10.3
No answer	3	2.4	0	0

The last question in the general information section asked about salary. The salary range responses were divided for rural and urban comparison are shown in Table X.

TABLE X

SALARY RANGE FOR URBAN AND RURAL DIETITIANS

	Urban		Rural	
	Frequency	%	Frequency	%
Less than $16,000	21	16.5	15	38.5
$16,000 - 19,999	10	7.9	7	18.0
$20,000 = 29,999	70	55.1	12	30.7
$30,000 - 39,999	17	13.4	2	5.1
More than $40,000	6	4.7	0	0
No answer	3	2.4	3	7.7
Total	127		39	

Dietitians working in urban areas generally earned higher salaries than those in rural areas. The greater percentage (55.1%, n=70) of urban dietitians earned $20,000 to $29,999 per year in this study. While the greatest percentage (38.5%, n=15) of rural dietitians earned less than $16,000 per year, the annual salary range was asked so this response may reflect the more part-time nature of rural work. Hekeler (1980) found that 54.5% of dietitians earned less than $14,999, 26.7% earned between $15,000 and $19,999, while 18.8% earned over $20,000 in 1979. In the 1986 ADA Census, 21.9% of dietitians reported annual incomes of less than $20,000, 55.2% reported incomes of $20,000 to $30,000, while 22.9% showed over $30,001 (Bryk, 1987).

Hypothesis H stated that no significant difference in personal factors, such as age range, marital status, R.D. status, employment status, and salary range for dietitians working in rural or urban settings in Minnesota. No statistical analysis was applied to the results of this portion of the study. The responses showed that rural dietitians tended to be older, more were married, more were apt to work part-time, worked in institutions under 300 beds, and earned a lesser salary than their urban counterparts. The number of years as a Registered Dietitian was greater for rural practitioners. Dietitians showed an equal average number of years in dietetic practice whether they were employed in a rural or urban setting. The majority of dietitians in both settings worked most often in non-profit institutions.

Educational Background

Dietitians in this study were asked their highest academic degree.

The results of this inquiry are shown in Table XI.

TABLE XI

HIGHEST DEGREE EARNED BY MINNESOTA DIETITIANS

	Urban		Rural	
	Frequency	%	Frequency	%
Bachelor's degree	81	64	31	79
Master's degree	45	35	8	21
Doctorate degree	1	1	0	0

The ADA Manpower Study showed that 29 percent of all dietitians had completed Master's degrees and that another 30.9 percent had completed some graduate work (Hekeler, 1980). Bryk (1987) showed that 46.1% of ADA active members had completed or were working on a master's degree and 4.6% had completed or were working on a doctoral degree. Hypothesis H stated that there would be no significant difference in educational background among rural and urban dietitians. No statistical analysis was used. This study in Minnesota showed there were more urban dietitians with advanced academic background when compared to those in rural practice by 35% to 21%.

Role Assessment

A broader spectrum of job categories among urban dietitians compared to those in rural areas was observed. No responses were generated from the rural Registered Dietitians in Minnesota in the

categories of assistant directors, teaching, research, or "other" dietitians. All these categories therefore were eliminated from the subsequent analysis of the role or function assessment, job satisfaction, satisfaction with present supervisor, and the job constraint measure. The major areas of responsibility were compared in the following order: director, clinical, foodservice manager/business, generalist, community, and consultant.

The Role or Function Assessment consisted of thirty-two statements briefly describing tasks performed by dietitians. This list of thirty-two functions was developed to include activities of foodservice management dietitians, clinical dietitians, and community dietitians. Spears (1970) tested a list of activities and their frequency among consultant dietitians. Consultant functions in Oklahoma were studied by Faye (1982). Then Fisher (1984) compared consultant roles in Ohio with those of Oklahoma consultants. Dietitians in New York State nursing homes were studied to determine their roles and functions by Gilbride (1981). The activities of clinical dietitians were profiled, defined, and analyzed by Kris-Etherton et al (1983). Then Schiller (1984) compared the changes in selected activities between 1972 and 1982. A tally of roles or functions was made from these studies which was compared to the ADA Manpower Technical Reports (ADA 1980). This process suggested the addition of Quality Assurance and Patient Care Audit statements to enrich the clinical, nutritional care, and diet history statements.

The data was divided by major areas of responsibility into six categories so that urban and rural practitioners could be compared. Table XII through Table XVII show the role or function indicated by the

rural practitioners compared to the urban practitioners who checked that same function. The responses by percentages found were analyzed by the Z test.

Each of the 32 function statements was checked by both urban and rural dietitians designated as directors. A significant difference was found in six of the statements. The statements checked more often by rural practitioners were: item 2, prepare diet history for patient or client; item 12, assess drug-nutrient interactions; item 19, conduct nutrition education for patients and their families; item 25, develop summary of visitation; item 26, maintain summary of visitation; and item 31, administer self-evaluation forms to foodservice personnel. Only the function item 21, develop departmental organization, was checked by 100% of the urban directors while 80% of the rural directors checked that item. The difference is probably explained in that more rural dietitians performed a broader number of functions than the urban directors.

TABLE XII

TASKS PERFORMED BY DIETITIANS WITH ROLE ASSESSMENT AS DIRECTOR

		Total n=15 Urban		Total n=10 Rural	
		n	%	n	%
1.	Plan and write menus	9	60	10	100
2.	Prepare diet history for patient or client	3	20	9	90*
3.	Determine and write food specifications	10	67	9	90

Table XII (Continued)

4.	Standardize recipes	8	53	6	60
5.	Supervise service and distribution of meals	8	53	9	90
6.	Establish sanitation standards	10	67	9	90
7.	Assess nutritional status of clients	5	34	10	100
8.	Calculate modified diets	5	34	10	100
9.	Develop individual nutrition care plans for patients	4	27	10	100
10.	Confer with clients regarding modified diets	4	27	10	100
11.	Adjust modified diets	4	27	8	80
12.	Assess drug-nutrient interactions	4	27	6	60*
13.	Conduct in-service training for employees	12	80	10	100
14.	Conduct orientation for new employees	10	67	7	70
15.	Develop a quality assurance plan	12	80	8	80
16.	Feel a part of the health care team	11	73	10	100
17.	Participate in patient care audit	4	27	7	70
18.	Discuss diets with physicians	4	27	9	90
19.	Conduct nutrition education for patients and their families	3	20	9	90*
20.	Conduct nutrition education for professionals	7	27	7	70
21.	Develop departmental organization	15	100	8	80
22.	Develop departmental procedures	15	100	10	100
23.	Develop departmental policies	15	100	10	100

TABLE XII (Continued)

24.	Communicate with other departments	14	93	10	100
25.	Develop summary of visitation (consultant)	3	20	1	10*
26.	Maintain summary of visitation (consultant)	3	20	1	10*
27.	Develop dietary progress notes for patient medical record	4	27	10	100
28.	Maintain dietary progress notes for patient medical records	4	27	10	100
29.	Check texture and color of food served	9	60	8	80
30.	Check for proper food temperature	6	40	8	80
31.	Administer self-evaluation forms to food service personnel	8	40	6	60
32.	Conduct diet counseling for groups	3	20	7	70*

*Significant difference at P = .05 by Z test.

These findings were similar to those of Bloetjes et al (1962) who reported that the largest number administrative heads of dietary departments in New York State were performing the following duties: plan and maintain menus for patients and personnel meals, consider equipment and facilities, plan therapeutic diets, determine food purchases, confer with food salesman, determine department organization, assist in determining policies, interview personnel, confer with personnel, and meet with other department heads. This study did not show that a large percentage of urban directors were involved in

planning for modified diets.

Tasks performed by clinical dietitians are shown in Table XIII.

TABLE XIII

TASKS PERFORMED BY DIETITIANS WITH ROLL ASSESSMENT AS CLINICAL

		Total Urban n=49		Total Rural n=8	
		n	%	n	%
1.	Plan and write menus	14	29	5	63
2.	Prepare diet history for patient or client	40	82	7	88
3.	Determine and write food specifications	2	4	2	25
4.	Standardize recipes	2	4	1	13
5.	Supervise service and distribution of meals	4	8	2	25
6.	Establish sanitation standards	1	0	3	38
7.	Assess nutritional status of clients	47	96	8	100
8.	Calculate modified diets	44	90	8	100
9.	Develop individual nutrition care plans for patients	46	94	8	100
10.	Confer with clients regarding modified diets	47	96	8	100
11.	Adjust modified diets	46	94	8	100
12.	Assess drug-nutrient interactions	34	69	5	63
13.	Conduct in-service training for employees	21	43	7	88
14.	Conduct orientation for new employees	14	29	2	25

TABLE XIII (Continued)

15.	Develop a quality assurance plan	15	31	3	38
16.	Feel a part of the health care team	43	88	7	88
17.	Participate in patient care audit	23	47	4	50
18.	Discuss diets with physicians	48	98	8	100
19.	Conduct nutrition education for patients and their families	46	94	8	100
20.	Conduct nutrition education for professionals	38	78	5	63
21.	Develop departmental organization	7	14	4	50
22.	Develop departmental procedures	20	41	5	63
23.	Develop departmental policies	16	33	4	50
24.	Communicate with other departments	41	84	5	63
25.	Develop summary of visitation (consultant)	16	33	5	63
26.	Maintain summary of visitation (consultant)	16	33	5	63
27.	Develop dietary progress notes for patient medical record	48	98	8	100
28.	Maintain dietary progress notes for patient medical records	45	92	8	100
29.	Check texture and color of food served	8	16	6	75
30.	Check for proper food temperature	3	6	5	63
31.	Administer self-evaluation forms to food service personnel	2	4	0	0*
32.	Conduct diet counseling for groups	35	71	6	75

*Significant difference at P = .05 by Z test.

Similar functions were indicated by both rural and urban dietitians with the exception that there was a significant difference only for item 31, "administer self-evaluation forms to foodservice personnel," in that no rural dietitian checked that function.

There were eight urban respondents but only two in the rural group of foodservice managers,/business dietitian. The third person in this group indicated responsibilities as area-wide coordination of foodservice purchasing for ten sites, this list of functions did not apply to their work.

TABLE XIV

TASKS PERFORMED BY DIETITIANS WITH ROLE ASSESSMENT AS FOOD SERVICE

		Total Urban n=8 n	Total Rural n=3 n
1.	Plan and write menus	4	2
2.	Prepare diet history for patient or client	0	1
3.	Determine and write food specifications	4	2
4.	Standardize recipes	4	0
5.	Supervise service and distribution of meals	3	2
6.	Establish sanitation standards	2	2
7.	Assess nutritional status of clients	0	1
8.	Calculate modified diets	1	1
9.	Develop individual nutrition care plans for patients	0	1

TABLE XIV (Continued)

10.	Confer with clients regarding modified diets	0	1
11.	Adjust modified diets	1	1
12.	Assess drug-nutrient interactions	0	0
13.	Conduct in-service training for employees	1	0
14.	Conduct orientation for new employees	1	1
15.	Develop a quality assurance plan	4	0
16.	Feel a part of the health care team	2	0
17.	Participate in patient care audit	2	0
18.	Discuss diets with physicians	0	1
19.	Conduct nutrition education for patients and their families	1	1
20.	Conduct nutrition education for professionals	1	0
21.	Develop departmental organization	3	1
22.	Develop departmental procedures	5	2
23.	Develop departmental policies	4	2
24.	Communicate with other departments	5	1
25.	Develop summary of visitation (consultant)	1	1
26.	Maintain summary of visitation (consultant)	1	1
27.	Develop dietary progress notes for patient medical record	0	0
28.	Maintain dietary progress notes for patient medical records	0	2
29.	Check texture and color of food served	2	1

TABLE XIV (Continued)

30.	Check for proper food temperature	2	2
31.	Administer self-evaluation forms to food service personnel	1	0
32.	Conduct diet counseling for groups	1	0

Urban dietitians in this foodservice/business category apparently did not practice in any of the following roles or functions: item 2, prepare diet history for patient or client; item 7, assess nutritional status of client; item 8, calculate modified diets; and item 10, confer with clients regarding modified diets; and item 18, discuss diets with physicians. Neither urban nor rural dietitians checked item 12, assess drug-nutrient interactions; item 27, develop dietary progress notes for patient medical record; and item 28, maintain patient medical records. Since each of these functions relates more to direct client contact in clinical practice, these results were to be expected. Rural foodservice/business dietitians indicated no response to several items which were answered by at least one of the urban dietitians in this category. These items were: item 4, standardize recipes; item 13, conduct in-service training for employees; item 20, conduct nutrition education for professionals; item 31, administer self-evaluation forms to food service personnel; and item 32, conduct diet counseling for groups. Since standardizing recipes, in-service training, and evaluation of employees are management functions, there may be a need for continuing education for rural foodservice managers or education

assistance in their performance of these functions.

In the generalist dietitian category there were no significant differences between the functions checked by urban or rural practitioners. Each of the items was checked by at least one-third of the group of three respondents among the rural dietitians. Fewer dietitians indicated a role for several specific items: item 3, determine and write food specifications; item 31, administer self-evaluation forms to foodservice personnel; and item 32, conduct diet counseling for groups. In this study generalists dietitians demonstrated similar functions regardless of an urban or rural setting for dietetic practice.

TABLE XV

TASKS PERFORMED BY DIETITIANS WITH ROLE ASSESSMENT AS GENERALIST

	Total n=6 Urban n	Total n=3 Rural n
1. Plan and write menus	5	3
2. Prepare diet history for patient or client	4	3
3. Determine and write food specifications	3	1
4. Standardize recipes	5	2
5. Supervise service and distribution of meals	5	2
6. Establish sanitation standards	4	3
7. Assess nutritional status of clients	6	3

TABLE XV (Continued)

8.	Calculate modified diets	6	3
9.	Develop individual nutrition care plans for patients	6	3
10.	Confer with clients regarding modified diets	5	3
11.	Adjust modified diets	6	3
12.	Assess drug-nutrient interactions	4	3
13.	Conduct in-service training for employees	6	3
14.	Conduct orientation for new employees	3	2
15.	Develop a quality assurance plan	4	3
16.	Feel a part of the health care team	4	2
17.	Participate in patient care audit	2	2
18.	Discuss diets with physicians	4	3
19.	Conduct nutrition education for patients and their families	5	3
20.	Conduct nutrition education for professionals	4	1
21.	Develop departmental organization	5	3
22.	Develop departmental procedures	5	3
23.	Develop departmental policies	5	3
24.	Communicate with other departments	6	3
25.	Develop summary of visitation (consultant)	2	2
26.	Maintain summary of visitation (consultant)	3	2
27.	Develop dietary progress notes for patient medical record	5	3

TABLE XV (Continued)

28.	Maintain dietary progress notes for patient medical records	6	3
29.	Check texture and color of food served	4	3
30.	Check for proper food temperature	4	3
31.	Administer self-evaluation forms to food service personnel	3	1
32.	Conduct diet counseling for groups	3	1

In Table XVI the job functions for those dietitians classified as community dietitians is reported. There were two items which were not performed by either rural or urban community dietitians. These were item 5, supervise service and distribution of meals, and item 31, administer self-evaluation forms to foodservice personnel. Three other items were not performed by urban community dietitians but were by the rural community dietitians. These items were: item 6, establish sanitation standards, item 29, check texture and color of food served, and item 30, check for proper food temperature. Seven other role statements were not indicated by rural community dietitians but were performed among urban community dietitians. These included item 3, determine and write food specifications, item 4, standardize recipes, item 8, calculate modified diets; item 11, adjust modified diets, item 12, assess drug-nutrient interactions, and item 26, maintain summary of visitation.

In these results the functions of community dietitians within

Minnesota were found to be broad in that only two functions were not checked by either rural or urban practitioners. Apparently these two functions, supervision of meal distribution and the evaluation of employees, were completed by other workers or were not done. Rural community dietitians were involved in the mangement functions related to sanitation standards, and food color, texture, and temperature. Urban community dietitians work more often with food specifications, standardized recipes, modified diets and drug-nutrient interactions. This study did not show a clear concensus among or a clear set of tasks performed by the community dietitians.

TABLE XVI

TASKS PERFORMED BY DIETITIANS WITH ROLE ASSESSMENT AS COMMUNITY

		n=19 Urban		n=5 Rural	
		n	%	n	%
1.	Plan and write menus	2	12	1	20
2.	Prepare diet history for patient or client	7	41	2	10
3.	Determine and write food specifications	1	6	0	
4.	Standardize recipes	1	6	0	
5.	Supervise service and distribution of meals	0		0	
6.	Establish sanitation standards	0		1	20
7.	Assess nutritional status of clients	11	65	5	100
8.	Calculate modified diets	8	47	0	

TABLE XVI (Continued)

9.	Develop individual nutrition care plans for patients	10	59	4	80
10.	Confer with clients regarding modified diets	8	47	1	20
11.	Adjust modified diets	6	35	0	
12.	Assess drug-nutrient interactions	4	24	0	
13.	Conduct in-service training for employees	12	71	3	60
14.	Conduct orientation for new employees	6	35	1	20
15.	Develop a quality assurance plan	3	18	2	40
16.	Feel a part of the health care team	8	47	4	80
17.	Participate in patient care audit	7	41	2	40
18.	Discuss diets with physicians	9	53	3	60
19.	Conduct nutrition education for patients and their families	12	71	5	100
20.	Conduct nutrition education for professionals	14	83	5	100
21.	Develop departmental organization	7	41	3	60
22.	Develop departmental procedures	8	47	3	60
23.	Develop departmental policies	9	53	3	60
24.	Communicate with other departments	14	83	3	60
25.	Develop summary of visitation (consultant)	5	29	2	40
26.	Maintain summary of visitation (consultant)	5	29	0	
27.	Develop dietary progress notes for patient medical record	9	53	3	60
28.	Maintain dietary progress notes for patient medical records	9	53	3	60

TABLE XVI (Continued)

29.	Check texture and color of food served	0		1	20
30.	Check for proper food temperature	0		1	20
31.	Administer self-evaluation forms to food service personnel	0		0	
32.	Conduct diet counseling for groups	11	65	3	60

Among consultant dietitians (Table XVII) only one function differed significantly between the rural and urban groups. That was item 20, conduct nutrition education for professionals, which was performed more often by rural dietitans.

TABLE XVII

TASKS PERFORMED BY DIETITIANS WITH ROLE ASSESSMENT AS CONSULTANT

		n=14 Urban		n=10 Rural	
		n	%	n	%
1.	Plan and write menus	6	43	10	100
2.	Prepare diet history for patient or client	8	57	9	90
3.	Determine and write food specifications	3	16	3	30
4.	Standardize recipes	4	21	9	90
5.	Supervise service and distribution of meals	3	16	2	20

TABLE XVII (Continued)

6.	Establish sanitation standards	6	43	10	100
7.	Assess nutritional status of clients	9	64	9	90
8.	Calculate modified diets	9	64	8	80
9.	Develop individual nutrition care plans for patients	9	64	8	80
10.	Confer with clients regarding modified diets	8	57	8	80
11.	Adjust modified diets	8	57	8	80
12.	Assess drug-nutrient interactions	9	64	8	80
13.	Conduct in-service training for employees	8	57	9	90
14.	Conduct orientation for new employees	2	14	3	30
15.	Develop a quality assurance plan	4	21	8	80
16.	Feel a part of the health care team	9	64	7	70
17.	Participate in patient care audit	5	36	7	70
18.	Discuss diets with physicians	7	50	9	90
19.	Conduct nutrition education for patients and their families	8	57	7	70
20.	Conduct nutrition education for professionals	1	7	5	50*
21.	Develop departmental organization	4	21	7	70
22.	Develop departmental procedures	6	43	7	70
23.	Develop departmental policies	5	36	8	80
24.	Communicate with other departments	8	57	9	90
25.	Develop summary of visitation (consultant)	8	56	9	90

TABLE XVII (Continued)

26.	Maintain summary of visitation (consultant)	7	50	10	100
27.	Develop dietary progress notes for patient medical record	8	57	8	80
28.	Maintain dietary progress notes for patient medical records	8	57	7	70
29.	Check texture and color of food served	5	36	9	80
30.	Check for proper food temperature	2	14	1	10
31.	Administer self-evaluation forms to food service personnel	2	14	1	10
32.	Conduct diet counseling for groups	7	50	5	50

*Significant different at P = .05 by Z test.

There was some percentage of Consultant dietitians who participated in each of the thirty-two function statements showing the broad generalist nature of consultant work. Gilbride (1981) found that full-time dietitians in New York nursing homes put the following functions into a "must perform" category: attend care conference, implement Code standards, review/evaluates menus, plan therapeutic menus, review charts, identify high-risk cases, establish monitoring system, adapt care plans, consult with medical staff, and institute a diet manual.

Hypothesis H3 stated that there would be no significant difference for rural or urban dietitians when compairing each of the 32 functions with each of the nine areas of responsiblity including director,

assistant director, clinical, foodservice manager, generalist, teaching, research, community dietetics and "others." Consultants were designated from within "others" category. There were no responses from rural assistant directors, teaching, research or "other" dietitians. When possible, the results were analyzed by the Z test. Results showed that six functions were performed more often by rural directors than urban directors. Rural and urban dietitians performed 31 of 32 tasks within clinical, generalist, and consultant designations. The foodservice management/business group was too small to analyze. Community dietitians showed a broad set of functions but not the same functions in rural as compared to urban work settings. The number of respondents in this group was too small for a statistical analysis.

Job Satisfaction in General

The respondents completed the Job in General scale which is a supplement to the Job Description Index (Smith et al, 1975). The data is presented in Table XVIII with the total score, mean values, and t test results comparing urban and rural practitioners divided into six categories of major area of responsbility.

Hypothesis H_4 states that there will be no significant difference for job satisfaction in general among dietitians working in rural or urban areas. The hypothesis was rejected because the t-test revealed a difference among foodservice dietitians in job satisfaction, while urban foodservice dietitians were slightly more satisfied. The number of respondents in this category were small so these results were not conclusive on that account. Job satisfaction studies completed among dietitians have shown consistent satisfaction with their job. Calbeck

et al (1979) found that higher JDI scores for the Job In General index were related to increased age and the generalist function category. In this study, neither age nor major area of responsibility appeared to influence the level of satisfaction. Rural dietitians were found to be somewhat older. A direct association between age and job satisfaction was not analyzed in this study.

TABLE XVIII

JOB SATISFACTION IN GENERAL OF URBAN AND RURAL DIETITIANS

	Urban			Rural		
	n	Score	Mean	n	Score	Mean
Director	15	310	20.67	10	236	23.60
Clinical	49	984	20.08	8	176	22.00
Foodservice	8	190	23.75*	3	57	19.00
Generalist	6	113	18.83	3	72	24.00
Community	18	456	25.33	5	116	23.20
Consultant	10	218	21.8	9	217	24.11

*Statistical difference between urban and rural; $p = .05$ by t-test.

Supervision on the Present Job

There were three questions pertaining to supervision on the present job. Each urban and rural dietitian was asked the number of Registered Dietitians with whom they worked. Results are shown in Table XIX.

These numbers are reported in one of three groups with the range for each major area of responsibility. This data showed that rural dietitians more often work alone. The exception was the foodservice/business dietitian who serviced multiple institutions for food purchasing.

Each dietitian surveyed was asked whether or not their immediate supervisor was a Registered Dietitian. These data are presented in Table XX for R.D. supervisors or non-R.D. supervisors.

TABLE XIX

NUMBER OF REGISTERED DIETITIANS AT WORKSITE

	Number RDs in Work Group	Urban		Rural	
		Number	Range	Number	Range
Director	0	5		6	
	1-10	7	0-25	4	0-1
	>10	3		0	
Clinical	0	1		5	
	1-10	35	0-26	5	0-2
	>10	12		0	
Foodservice Management	0	0		2	
	1-10	4	1-27	0	0-30
	>10	4		1	
General	0	5		3	
	1-10	1	0-4	0	0
	>10	0		0	
Community	0	6		8	
	1-10	4	0-2	2	0-2
	>10	0		0	
Consultant	0	2		8	
	1-10	8	0-4	2	0-2
	>10	0		0	

TABLE XX

STATUS OF SUPERVISOR OF RESPONDENTS

	Urban Total n=105				Rural Total n=39			
	R.D.		Non R.D.		R.D.		Non R.D.	
	n	%	n	%	n	%	n	%
Director	1	07%	14	93%	1	10%	9	90%
Clinical	45	92%	4	8%	4	50%	4	50%
Foodservice Management	3	38%	5	63%	1	33%	2	67%
General	2	33%	4	67%	0		3	100%
Community	9	47%	1	53%	1	25%	4	75%
Consultant	1	13%	7	88%	0		10	100%
No Answers		2						

According to these data directors, foodservice, generalist, community and consultant Registered Dietitians tend to work for non-Registered Dietitian supervisors. More rural dietitians tend to work for non-Registered Dietitian supervisors (82%) compared to 42% for urban dietitians. Clinical dietitians in urban settings work most often for a Registered Dietitian supervisor (92%) compared 50% for rural clinical dietitians.

The scores and means on the Supervision on the Present Job scale (Smith et al, 1975) are presented in Table XXI. The data are presented for urban and rural Registered Dietitians comparing those working for a Registered Dietitian with those working for a non-R.D. supervisor.

TABLE XXI

SATISFACTION WITH SUPERVISION

	Supervisor			
	Registered Dietition		Non R.D.	
	Urban n=62	Rural n=7	Urban n=39	Rural n=28
Total scores	2153	300	1430	1031
Mean	34.73	42.86**	36.67	36.82

**Significant difference at P=.05 by F test.

The analysis revealed that rural dietitians are more satisfied with Registered Dietitian supervisors, however, the number of rural dietitians working with a Registered Dietitian supervisor is small. There was no significant difference in satisfaction with non-R.D. supervisors among urban dietitians compared to rural dietitians. Based on this analysis H_5 was rejected. There was a difference in satisfaction level with rural dietitians being more satisfied with Registered Dietitian supervisors.

TABLE XXII

OVERALL SUMMARY OF SATISFACTION OF SUPERVISION

	Registered Dietitan n=69	Non-R.D. n=67
Score	2453	2461
Mean	35.55	36.73*

*significant difference at P =.05 by t-test

When urban and rural designation was eliminated, the summary revealed there was more satisfaction with Non-R.D. supervisors compared to dietitians with Registered Dietitians supervision.

Job Constraint Measure

The dietitians also were asked to respond to ten aspects of constraint in accomplishing their work. These constraints involved information, tools, materials, money, support services, professional ethics, time, physical environment, personnel, and provisions for continuing education. The full statements of this measure are shown in Appendix B. Table XXII shows the score and means from this measure comparing urban and rural practitioners by areas of responsibility.

TABLE XXIII

JOB CONSTRAINT MEASURE FOR URBAN AND RURAL REGISTERED DIETITIANS

	Urban			Rural		
	n	Score	Mean	n	Score	Mean
Director	14	216	15.43*	10	179	17.90
Clinical	49	720	14.69	8	138	17.25
Foodservice	8	140	17.50	3	50	16.67
Generalist	6	90	15.00	2	31	15.50
Community	18	320	17.78	5	77	15.40
Consultant	10	134	13.40	10	141	14.10
No answer		2			1	

*Statistical difference between Urban and rural; $p = .05$ by t-test.

Hypothesis H_6 stated that there will be no significant difference between rural and urban dietitians when comparing performance constraints with each area of responsibility. There was a significant difference for the director area of responsiblity. Urban directors showed more constraints on their work than the rural directors. The higher the score on this measure meant less constraint on the job (Taylor, 1984).

The results of this study which compared rural to urban Registered Dietitians employed in Minnesota showed that there were differences. Rural dietitians were older, more often married, were in practice longer, worked more part-time hours, but earned lower salaries than urban practitioners. Urban dietitians displayed more graduate level academic training. Role assessment showed a broader set of functions for rural directors. A differing set of functions for foodservice/business dietitians and for community dietitians was revealed. Similar functions were checked by clinical, generalist and consultant dietitians in both urban and rural Minnesota. Rural dietitians were more satisfied with Registered Dietitian supervisors but there was a greater satisfaction with non-R.D. supervisors when all rural and all urban dietitians were grouped together. Urban directors felt more constraint on their jobs.

CHAPTER V

SUMMARY, RECOMMENDATIONS AND IMPLICATIONS

This study was undertaken to define the role or function, job satisfaction, and job constraints among Registered Dietitians employed in Minnesota to compare differences between the rural and urban setting. Other demographic data was also presented.

Summary of Findings

A profile of Registered Dietitians in Minnesota from this study showed that rural dietitians tend to be older, age 46 or more, than urban practitioners, i.e. 25% vs. 17%. Rural dietitians were more often married, i.e. 82% vs 69%, than their urban counterparts. The years as a Registered Dietitian showed that a larger percentage of rural practitioners were R.D.s for 15 or more years than urban dietitians, i.e. 33% vs. 23%. More urban dietitians worked full-time (40 hours/week) than rural dietitians, i.e. 74% vs. 54%. Regarding number of years in the practice of dietetics, urban dietitians had worked fewer than 10 years by 60.3% as compared to 56.4% for rural practitioners. From the range of the number of years in practice, it appeared that generalist positions in both settings and clinical positions in the urban areas attracted first year or entry-level dietitians. Eighty-one percent of urban and 75% of rural dietitians worked in hospitals and

nursing homes. Other worksites were out-patient clinics, the Minnesota Department of Health, private practice, database manager, food purveyer, in teaching and research. Rural dietitians, 93.1%, worked in institutions of under 300 beds, while 51.9% of urban practitioners were working in small hospitals of under 300 beds. Higher salaries were paid to urban dietitians, 20.5% of urban dietitians received earnings of more than $30,000/year and 55.1% earned $20,000-$29,999. Among rural dietitians, only 12.8% earned over $30,000, and 30.7% earned between $20,000 and $29,999. Educational background differed in that 35% of the urban dietitians and 21% of the rural dietitians had earned a Master's degree.

The most important component of this study was the role assessment to determine whether the work of rural Registered Dietitians differed from that of urban R.D.s in the major areas of responsibility. None of the rural Registered Dietitians studied considered themselves to be an assistant director, in teaching or research or in the "other" category. These more specialized areas of responsiblity appeared to be opportunities clustered in urban practice.

Rural directors were found to perform a broader spectrum of tasks than their urban counterparts. There were six significantly different statements related to direct patient care that were performed more often by rural directors. However, rural and urban clinical dietitians performed similar tasks. A larger percentage of administrative tasks were performed by rural practitioners. Rural dietitians tended to work alone or with one other R.D.

The number of respondents designated as foodservice managers/business was eight urban and three rural. The response from

both groups indicated development of departmental procedures. There were 13 different tasks statements with zero responses from either the rural or the urban group. It must be concluded that there is a variety of tasks under this area of responsibility.

The generalist area of responsibility showed no differences in tasks performed between rural and urban dietitians. A more extensive analysis of these practitioners should be done in relation to institution size, age and length of employment, and educational background. The rural group had just three respondents.

Community dietitians indicated only four functions where there was a difference among the two groups. Rural dietitians performed three administrative tasks more often and urban dietitians adjusted modified diets more often. Consultant dietitians in both urban and rural settings performed similar tasks except that rural R.D.s more often conducted nutrition education for professionals.

An overview of the results showed that the role and functions of clinical, generalist, and consultant dietitians were similar regardless of the urban or rural employment setting. A greater diversity of functions was presented by directors, foodservice/business and community dietitians. It was also concluded that the tasks of foodservice/business, community, and consultant dietitians were not described well by this study. Newer, non-traditional and community-based tasks were not part of the functions list.

Satisfaction with the job in general was not affected by the rural and urban setting. Job satisfaction in general has been highly rated in many previous studies.

Although more urban R.D.s worked with and for other R.D.s, there

was a slightly higher satisfaction with R.D. supervisors scored among rural dietitians. The degree of autonomous work by rural practitioners was high, 82%.

Job constraints were not found to be different for urban and rural Registered Dietitians except for directors where there was slightly more job related constraint expressed by urban directors.

Recommendations

Two types of recommendations are made from this study. Recommendations for improving this study procedurally and recommendations for additional studies. Recommendations for improving this study include:

1. Using a larger sample size so that a statistical analysis could be applied to foodservice/business tasks.

2. Correlations could be done with size of institution as the leading variable with role assessment, using urban and rural as a descriptor.

3. Size of institution could be the leading variable in a satisfaction and constraint study using rural and urban setting as a descriptor.

4. An analysis of variance for job satisfaction, supervision, and constraint could be done.

5. The role/function assessment checklist lacked statements about community work such as program development, wellness concepts, health promotion activities.

6. The question of reason for working and husband's occupation could be explained better, reworked, or conducted as a separate study.

There were too many non-responses for analysis.

Recommendations for additional studies based on the results of this study include:

1. A separate study of rural dietitians based on their institutional site for examination of roles or functions and continuing education needs.

2. A separate set of studies among rural dietitians not based in institutions to establish their roles or function, as well as satisfaction with undergraduate education and continuing education needs

3. A study of dietitian's reasons for working compared to their job satisfaction, salaries, and career patterning.

4. Repetition of this study in other rural areas to discern regional differences.

Implications

This study was designed to help establish what would be needed in a advanced degree program in a rural-based university. The findings point to a predominant generalist role or function by rural based Registered Dietitians in Minnesota. Therefore, an academic program should be generalist and broad in its curriculum with a wide variety of on-site work experiences. The program should include an emphasis in both small hospitals and nursing homes, as well as some experience in community-based education. Further study would help define that larger community, as well as the functions of consultant and community dietitians in rural areas. This master's degree program should plan to create a competent generalist and help to improve the generalist within practice settings in rural areas of Minnesota.

SELECTED BIBLIOGRAPHY

American Dietetic Association, "Outline for Standard Course for Student Dietitians in Hospitals." Journal of the American Dietetic Association, 3 (December, 1927), 183-186.

American Dietetic Association, Editorial, Journal of the American Dietetic Association, 9 (March. 1933), 532-533.

American Dietetic Association, Annual Reports, "Requirements for Active Membership in ADA." Journal of the American Dietetic Association, 16 (December, 1940), 1027.

American Dietetic Association, Association Section, "Continuing Education, 1957-1958." Journal of the American Dietetic Association, 34 (February, 1958), 162-163.

American Dietetic Association, Annual Reports and Proceedings, 1969 - 1970, 7-15.

American Dietetic Association, Position Paper, "Education for the Profession of Dietetics." Journal of the American Dietetic Association, 59 (October, 1971), 372-373.

American Dietetic Association, Dietetic Manpower Study: 1980, Technical Report #3: Introduction, Chicago: American Dietetic Association, 1980.

American Dietetic Association, Report of the 1984 Study Commission on Dietetics. A New Look at the Profession of Dietetics. Chicago: American Dietetic Association, 1984.

American Dietetic Association, Council on Education, "Standards of Education - Knowledge and Performance Requirements." January, 1987.

American Dietetic Association, Courier, "Council on Practice Marks 10th Anniversary." 26:6, June 1987, 1.

Arkwright, M.S. and M.E. Collins, J.L. Sharp, R.M. Yakel, "Titles, Definitions, and Responsibilities for the Profession of Dietetics." Journal of the American Dietetic Association, 64 (June, 1974), 661-665.

Armstrong, Ruth. "Role Delineation: Foodservice Systems Management and Community Dietetics." 430 Report for Educators, American Dietetic Association, 2 (April, 1981), 2-3.

Barber, Mary I. History of the American Dietetic Association: 1917 - 1959. Philadelphia, J.B. Lippincott Co., 1959.

Baird, S.C. and R. Armstrong. Role Delineation for Entry-Level Clinical Dietetic: 1980 - Summary and Final Documents. Chicago: American Dietetic Association, 1980.

Baxter, W.E., "How Residents of Rural Communities Decide Where and To Whom They Will Go For Health Care." (Unpub. D. of Public Health Dissertation, University of Oklahoma, 1973).

Beeuwkes, Adelia M. "A Look at Ourselves." Journal of the American Dietetic Association, 41 (December, 1962), 537-541.

Bloetjes, M.K., M.A. Couch, and R. Gottlieb. "A Study of Dietetic Training." Journal of the American Dietetic Association, 41 (December, 1962), 550-555.

Bogle, M. "Issues in Education and Practice: Quality Assurance and Standards of Practice." Vaden, A.G., ed.: Charting for the Changing Scene: Long-Range Planning Conference Proceedings. Chicago: American Dietetic Association, 1981, 84-88.

Boissoneau, R. "The Need for Professional Administrators in Rural Hospitals." Hospital and Health Services Administration, 29 (March/April, 1984), 46-55.

Brenner, M.E. "An Analylsis of Consulting Dietitians in Nursing Homes and Health Related Facilities." (Unpub. M.S. thesis, Cornell University, 1971).

Bryk, J.A. "Report of the 1986 Census of The American Dietetic Association", Journal of the American Dietetic Association, 87 (August, 1987), 1080-1085

Bureau of Census, U.S. Department of Commerce, General Population Characteristics: United States Summary 1980 Census of Population. Washington: U.S. Government Printing Office, May 1983, A-4 to I-87.

Calbeck, D.C., A.G. Vaden and R.E. Vaden. "Work-Related Values and Satisfactions." Journal of the American Dietetiac Association, 75 (October, 1979), 434-440.

Clifford, W.B. and T.B. Heaton, D.T. Lichter, G.V. Fuguitt. "Components of Change in the Age Composition of Non-metropolitan America." Rural Sociology, 48 (March, 1983), 458-470.

Coddington, Dean C. and Palmquist L.E., Trollinger, W.V. "Strategies for Survival in the Hospital Industry." Harvard Business Review, May-June 1985, 129-138.

Combs, E.B. "The Ann Pillsbury Home Service Center in Action." Journal of the American Dietetic Association, 22 (May, 1946), 426-429.

D'Costa, A. "Introducing the Dietary Manager." Dietetic Currents, 11 (October/December, 1984).

DeGarmo-Bryan, M. "Education Section." Journal of the American Dietetic Association, 6 (March, 1931), 348.

Dodge, Q. "The Dietitian in Industry." Journal of the American Dietetic Association, 19 (June, 1943), 441-444.

Donaldson, Beatrice. "The Future in Food Administration." Journal of the American Dietetic Association, 46 (May, 1965), 357-360.

Douglas, Priscilla D. "Are Dietitians Ready for the Wellness Movements?" Journal of the American Dietetic Association, 86 (January, 1986), 92-93.

Dowling, Rebecca, "Technical Report No. 4, Demand for Dietitians in Business and Industry: a Preliminary Assessment". Dietetic Manpower Demand Study, Chicago: American Dietetic Association, 1981, 12.

Faye, J. "Functional Analysis and Continuing Education Needs Assessment of Consultant Dietitians in Health Care Facilities in Oklahoma." (Unpub. M.S. thesis, Oklahoma State University, 1982).

Fickenscher, Kevin, Personal Letter, Grand Forks, North Dakota, May 19, 1984.

Fisher, R. "Analysis of Role Function and Continuing Education Needs of Ohio, as Compared to Oklahoma Consultant Dietitians in Health Care Facilities." (Unpub. M.S. thesis, Oklahoma State University, 1984.)

Fitz, P.A. and W.W. Baldyga. "Estimates of the Future Demand for Dietetic Services: Results of the Dietetic Manpower Study." Journal of the American Dietetic Association, 84 (August, 1983), 186-190.

Fruin, M.F. and J. P. Campbell. "Developing Behaviorally Anchored Scales for Rating Dietitians Performance." Journal of the American Dietetic Association, 71 (August, 1977), 111-115.

Gilbride, J. A. "A Study of Role Functions of Dietitians Employed in New York State Nursing Homes." (Unpub. Ph.D. dissertation New York University, 1981.)

Glanz, K. and Seewald-Klein, T. "Nutrition at the Worksite: An Overview." Journal of Nutrition Education, Vol. 18, No. 2. Supplement (April, 1986), S1-S12.

Goers, S.S., D. Verstraete, M. Fruin, and J. Held. "Dietetic Utilization and Demand in Minnesota Licensed Health Care Facilities." Journal of the American Dietetic Association, 77 (July, 1980), 49-52.

Gullickson, B. "Health-Care Foodservice Marketing Conditions Guarded." Restaurants and Institutions, 94 (January 18, 1984a), 112-113+.

Gullickson, B. "Weighing the Value of Wellness." Restaurants & Institutions, 94 (May 24, 1984b), 167-172+.

Hall, G.E. "The Future of the Dietitian." Journal of the American Dietetic Association, 20 (October, 1944), 587-589.

Hallahan, Isabelle, "The Dynamics of Dietetics." Journal of the American Dietetic Association, 68 (February, 1976), 115-119.

Hart, M. "Competency-Based Education." Journal of the American Dietetic Association, 69 (December, 1976), 616-620.

Haschke, M.B. and Maize, R.S. "President's Page: Dietetic Education: The Future and Policy Decisions." Journal of the American Dietetic Association, 84 (February, 1984), 208-212.

Hekeler, R.W. "Profile of Dietetic Personnel." Technical Paper #2, Dietetic Manpower Demand Study. Chcago: American Dietetic Association, 1980.

Henry, S. "The ADA Registration Examination." Journal of the American Dietetic Association, 67 (December, 1975), 541-544.

Herzlinger, Regina. "How Companies Tackle Health Care Costs: Part II. Harvard Business Review (September-October, 1985), 108-120

Horton, L.E. "The Shared Consultant in Food Service Management." Journal of the American Dietetic Association, 41 (1962), 230-235.

Houle, C.O. "The Dietitian as a Teacher of Adults." 24 (October, 1948), 837-840.

Howard, V.A. and R. Schiller. "Competency-based education in a career mobility program in dietetics." Journal of the American Dietetic Association, 71 (October, 1977), 428-430.

Hunscher, H.A. "Continuing Education: Ad Antidote to Obsolescense." Journal of the American Dietetic Association, 43 (August, 1963), 115-119.

Hunscher, H.A. "New Requirements for ADA Membership." Journal of the American Dietetic Association, 35 (March, 1959), 253-256.

Iglehart, J.K. "The Twin Cities' Medical Marketplace." New England Journal of Medicine, 311 (August 2, 1984), 343-348.

Ingerson, H.G. "Organization of the Dietetic Internship Council." Annual Reports and Proceedings, 1967-1968. Chicago, American Dietetic Association, 1968.

Johnson, Doris. "Changing Role of the Dietitian." Journal of the American Dietetic Association, 36 (June, 1960), 593-595.

Jones, E.A. "Opportunities Unlmited." Journal of the American Dietetic Association, 41 (December, 1962), 542-546.

Kish, L. Survey Sampling. New York: John Wiley & Sons, 1965.

Kline, A.B. "A Nutrition Consultation Service." Journal of the American Dietetic Association, 22 (May, 1946), 426.

Kriel, J. "Rural Values in a Changing World." Speech, Ag Extension Conference, Mankato, MN, (November, 1985).

Kris-Etherson, P.M., C.A. Lindsay, W.D. Smutz, and R. Chernoff. "A Profile of Clinical Practice in Pennsylvania." 83 (December, 1983), 654-660.

Kocher, R. "Some Effects of Legislation and Public Policy on the Demand for Dietetic Manpower." Discussion Paper #13, Dietetic Manpower Demand Study. Chicago: American Dietetic Association, 1981.

Konhauser, A. "Team Provides Dietary Care in Small Hospitals." Hospitals, 53 (September 1, 1979), 99-102.

Lewis, M.N. and T.M. Beaudette. "Coordinated Education in Dietetics." Journal of the American Dietetic Association, 70 (June, 1977), 597-601.

Loyd, M.S. and A.G. Vaden. "Practitioners Identify Competency for Entry-Level Generalists Dietitian." Journal of the American Dietetic Association, 71 (November, 1977), 510-517.

Lowenberg, M.E. "Organizatin of an Institutinal Food Service for Young Children." Journal of the American Dietetic Association, 22 (May, 1946), 429-431.

Mac Farland, A.M., Q. Dodge and M. DeGarmo Bryan. "The Food Administrator." Journal of the American Dietetic Association, 25 (June, 1949), 517-521.

Marshall, B.H. "The Package Plan." Hospitals, 41 (March 1, 1967), 92-94.

Mathieu, M. "Legislative Highlights." Journal of the American Dietetic Association, 82 (June, 1983), 671.

_____ "Legislative Highlights." Journal of the American Dietetic Association, 84 (January, 1984), 88.

Martin P.J. and A.G. Vaden. "Behavior Science Research in Hospital Foodservice, II. Job Satisfaction and Work Values of Foodservice Employees in Large Hospitals." Journal of the American Dietetic Association, 73 (August, 1978), 127-131.

McCormick, Brian. "Health Promotion Programs find their way into America's Heartland." Hospitals (February 20, 1986), 106-107.

Mead, M. "The Dietitian as a Member of the Therapeutic Team." Journal of the American Dietetic Association, 21 (August, 1945), 424-426.

Meredith, S.R., M.J. Lucas, J.A. Dickey, and M. Carey. "Practitioner Competencies." Journal of the American Dietetic Association, 81 (August, 1982), 168-179.

Miller, G.A. "Academic Preparation for Food Service Management." Journal of the American Dietetic Association, 37 (July, 1960), 21-31.

Miller, M.K., D.E. Voth, and D.M. Danforth. "The Medical Care System and Community Malady; Rural, Urban, and Suburban Variation in Impact." Rural Sociology, 47 (March, 1982), 643-654.

Millis, John S. The Profession of Dietetic. Chicago: The American Dietetic Association, 1972.

Mynko, L.F. "Health and Illness in Rural America." (Unpub. Ph.D. dissertation, Ohio State University, 1974).

Obert, Jessie C. Community Nutrition, 2nd Ed. John Wiley & Sons, New York, 1986, 46-47.

O'Brien, F.M. "The Dietitian on the Mental Health Team." Journal of the American Dietetic Association, 32 (May, 1956), 450-453.

Oliver, J. "Dietary Consultation for a Group of Homes Under One Management." Hospitals, 41 (March 1, 1967), 92-93.

Parks, S. and P.M. Kris-Etherton. "Practitioners View Dietetic Roles for the 1980s." Journal of the American Dietetic Association, 80 (June, 1982), 574-576.

Patterson, Isabel. "Dietetic Education - Some Current Issues." Journal of the American Dietetic Association, 45 (July, 1964), 19-21.

Payne, A. A Guide to Curriculum Planning in Dietetic Internships. Chicago: American Dietetic Association, 1961.

Pelcovits, J. "Nutrition for Older Americans." Journal of the American Dietetic Association, 58 (January, 1971), 17-21.

Peters, L.H. and E.J. O'Connor. "Situational Constraints and Work Outcomes: The Influences of a Frequently Overloaded Construct." Academy of Management Review, 5 (3, 1980), 391-197.

Peters, L.H., E.J. O'Connor, and C.J. Rudolf. "The Behavioral and Affective Consequences of Performance-Relevant Situational Variables." Organizational Behavior and Human Performance, 25 (1980), 79-96.

Phillips, Margaret C. "Nutrition Opportunities in Specialized Health Areas." Journal of the American Dietetic Association, 55 (October, 1969), 348-354.

Piper, G.M. and Youland, D.M. "Today's Opportunities for Dietitians and Nutritionists." Journal of the American Dietetic Association, 52 (January, 1958), 32-36.

Pollen, J. "Needed by Small Hospitals: The Shared Dietitian." Journal of the American Dietetic Association, 30 (September, 1954), 886-888.

Prall, C.E., M.A. Ohlson, M.M. Harrington, M. de Garmo Bryan, S.H. Myers, J. Eckers, and M. Gillam. "III. Need for Training Auxiliary Workers to Relieve the Dietitian." Journal of the American Dietetic Association, 27 (August, 1951), 638-644.

Richmond, J.B. Healthy People, The Surgeon General's Report on Health Promotion and Disease Prevention. U.S. Department of Health Education and Welfare, (1979), 1-1, 11-8

Riggs, S. "Hospital Heal Thyself: Hospital Swallow Medicare Medicine." Restaurants and Institutions, 94 (May 23, 1984), 255-260.

Robinson, W.F. "The Dietetic Internship." Journal of the American Dietetic Association, 39 (July, 1961), 18-21.

Robinson, W.F. "Educating the Dietetic Intern." Journal of the American Dietetic Association, 45 (July, 1964), 26-28.

Robinson, W.F. "Your Role in the Continuing Development of Dietetics." Journal of the American Dietetic Association, 47 (August, 1965), 89-95.

Robinson, W.F. "Dietitians' Role in Nursing Homes and Related Facilities." Journal of the American Dietetic Association, 51 (July, 1967), 130-137.

Rotman, D.B. "Vitamins and Alcoholic Diseases." Journal of the American Dietetic Association, 21 (May, 1945), 295.

Say, Julie N. "A Hospital-based Community Nutrition Program." Journal of Nutrition Education, 16 (1984), 18.

Schiller, M.R. "Current Hospital Practices in Clinical Dietetics." Journal of the American Dietetic Association, 84 (October, 1984), 1194-1197.

Schiller, M.R. and V. Behm. "Auditing Dietetic Services." Hospitals, 53 (April 16, 1979), 122-127.

Schwartz, W.B. and H.J. Aaron. "Rationing Hospital Care: Lessons from Britian." New England Journal of Medicine, 310 (January 5, 1984), 52-56.

Smith, E.E. "Dietitians - Suppy and Demand." Journal of the American Dietetic Association, 28 (October, 1952), 948-949.

Smith, F.H. "President's Address." Journal of the American Dietetic Association, 3 (December, 1927), 145.

Smith, P.C., L.M. Kendall and C.L. Hulin. The Measurement of Satisfaction in Work and Retirement. Bowling Green, Ohio: Bowling Green State University, 1975.

Spangler, A.A. "Educational Preparation of Hospital Dietitians: Present Functions and Satisfactions; Characteristics Needed for Contributing Membership on Health Teams." (Unpub. Ph.D. Dissertation, Michigan State University, 1971.)

Spear, D.M. "Role of the Consultant Dietitian in Nursing Homes: Perceptions of Dietitian and Administrators." (Unpub. M.S. thesis, Kansas State University, 1978.)

Stare, F.J. "Teaching Nutrition to Medical Students." Journal of the American Dietetic Association, 25 (July, 1949), 585-587.

Steel, R.C.D. and Torrie, J.H. Principles and Procedures of Statistics, 2nd Ed. New York: McGraw Hill, 1980.

Stumbo, W.G. "Rural Health Centers and Development of Progressive Patient Care." Clinical Medicine, 84 (March, 1977), 10-13.

Swartz, R.S. and A.G. Vaden. "Behavior Science Research in Hospital Foodservice: I. Work Values of Foodservice Employees in Urban and Rural Hospitals." Journal of the American Dietetic Association, 73 (August, 1978), 120-126.

Tarlov, A.R. "Shattuck Lecture - The Increasing Supply of Physicians, The Changing Structure of Health-services Systems and the Future Practice of Medicine." New England Journal of Medicine, 20 (May 19, 1983), 1235-1244.

Task Force of the American Society of Clinical Nutrition. "Guidelines for a committee on nutritional care of the Hospital Medical Board." American Journal of Clinical Nutrition, 42 (November, 1985), 906-908.

Taylor, M. "A Quality of Work Life Assessment of Dietitians in Business and Industry." (Unpub. M.S. thesis, Oklahoma State Unviersity, 1984).

Trithart, E.S. and M.B. Noel. "New Dimensions: The Dietitian in Private Practice." Journal of the American Dietetic Association, 73 (July, 1978), 60-64.

Tuohy, E.L. "Geriatrics and the Work of Dietitians." Journal of the American Dietetic Association, 21 (May, 1945), 291-195.

Van Horne, M.B. "A.D.A. Develops Supervisor's Training." Journal of the American Dietetic Association, 37 (September, 1960), 242-245.

Wallace, Cynthia. "Rural Hospitals Attack Payment System." Modern Healthcare, 1984 (April), 48.

Walters, F.M. and S. J. Crumley. Patient Care Audit, A Quality Assurance Procedure Manual for Dietitians. Chicago: American Dietetic Association, 1978.

Walters, Ruth M. "A Dietitian Serves a Supermarket Chain." Journal of the American Dietetic Association, 35 (February, 1959), 151-153.

Warr, P.B. and T. Routledge. "An Opinion Scale for the Study of Managers' Job Satisfaction," Occupational Psychology, 43 (January, 1969), 95-109.

Watson, D. "ADA Report's, President's." Journal of the American Dietetic Association, 84 (December, 1984), 1484-1485.

West, B.B. "Design for Progress." Journal of the American Dietetic Association, 22 (December, 1946), 1059-1063.

White, Philip. "Setting New Diet and Health Directions." Nutrition Today, (July/August 1986), 4-6.

Wickliff, N. and F.H. Boykin. "The Dietitian in Government Service." Journal of the American Dietetic Association, 16 (August/September, 1940), 639-645.

Williams, A.B., W.B. Schwartz, J.P. Newhouse and B.W. Bennett. "How Many Miles to the Doctor?". New England Journal of Medicine, 309 (October 20, 1983), 958-963.

Williams, C.R. "The Self-Employed Dietary Consultant." Hospitals, 44 (March 1, 1967), 91-99+.

Winterfelt, E.A. "A Dietetic Association's Peer Review Committee." Journal of the American Dietetic Association, 63 (July, 1973), 47-48.

Winterfeldt, E.A. "President's Page: Rash Events in A.D.A.'s History." Journal of the American Dietetic Association, 75 (November, 1979), 572.

Witkin, G. "Happiness: How Americans Pursue It - Back to Nature." U.S. News and World Report, 98 (March 4, 1985), 64-65.

Woodward, N. "Group Practice: A Legal Partnership of Dietitians." Hospitals, 44 (March 1, 1967), 92-99.

APPENDIX A

PILOT STUDY QUESTIONNAIRE

AND COVER LETTER

MANKATO STATE UNIVERSITY

HOME ECONOMICS DEPARTMENT/Box 44/(507) 389-2421
College of Natural Sciences, Mathematics and Home Economics

MANKATO, MINNESOTA 56001

02 West Bennett Hall
Oklahoma State University
Stillwater, Oklahoma 74077
October 30, 1984

Dear Colleague:

As part of my doctoral work at Oklahoma State University, this research project is being started. It is my purose to compare the role functions and job satisfaction between rural and urban members of the Minnesota Dietetic Association.

You have been selected as part of my pilot study. You will note that there three (3) parts to this questionnaire; general information, a role function section, and the job satisfaction section. Please answer all the questions that apply to you and return to me in the stamped envelope enclosed.

Feel free to write comments on any part of the questionnaire which is not copyrighted. This will help to clear up confusion with the questions.

My hope is to complete my study within one year so that the results can be shared with you at an MDA meeting or through the newsletter.

Be assured that the information you supply will be kept confidential. The survey forms have been coded to match your address for follow-up purposes only. That code will be removed as the questionnaires are returned and will not be used in the tabulation of the results.

It should take about 15 minutes to complete this questionnaire. Please return to me by November 15, 1984. Remember to use the stamped envelope enclosed.

If you have any questions, please call me at (405) 624-8061 in the evenings. Thank you for your assistance.

Sincerely,

Aileen V. Eick

Aileen V. Eick, Assistant Professor
Food and Nutrition

MANKATO STATE UNIVERSITY

HOME ECONOMICS DEPARTMENT/Box 44/(507) 389-2421
College of Natural Sciences, Mathematics and Home Economics

MANKATO, MINNESOTA 56001

02 West Bennett
Oklahoma State University
Stillwater, Oklahoma 74077
November 17, 1984

Dear Dietetic Friend:

About two weeks ago, I sent you a survey questionnaire about the role functions and job satisfaction between rural and urban members of the Minnesota Dietetic Association. As of this date, I have not received your response. Since this is a pilot study, I would like to have a response from everyone. If you do not wish to participate, please just mail the survey form back to me unanswered. If you would prefer to skip some questions, please feel free to do that but mail back the form.

This is all necessary so that I can do a better job of my main survey. Since my Minnesota dietitians are chosen in random fashion, you should not be chosen again. So this is your chance to help and to be heard.

This is another survey form enclosed and another stamped envelope for its return. Please return immediately.

If you have already returned the original survey questionnaire, you have my heartfelt thanks for participating.

Sincerely,

Aileen V. Eick

Aileen V. Eick, Assistant Professor
Food and Nutrition

OKLAHOMA STATE UNIVERSITY
Department of Food, Nutrition and Institution Administration

MINNESOTA DIEITIIANS ROLE FUNCTION AND JOB SATISFACTION ASSESSMENT

I. General Information

DIRECTIONS: Please check or fill in the appropriate answers. It is important that you check all the questions.

1. Are you currently employed in dietetic practice?

_____(1) Yes _____(2) No

2. If no, please indicate why:

_____(1) Attend school
_____(2) Raise family
_____(3) Marriage
_____(4) Health reasons
_____(5) No job available in area
_____(6) Did not want to work
_____(7) Am employed in a non-dietetic position
(Please specify)_____
_____(8) Other_____
(Please specify)

3. Marital Status:

_____(1) Married _____(2) Single, divorced, separated, widowed

4. Age Catagory:

_____(1) Under 25
_____(2) 26 - 35
_____(3) 36 - 45
____(4) 46 - 55
____(5) 56 - 65
____(6) Over 66

5. Highest level degree obtained and major:

_____(1) BS _____
_____(2) MS _____
_____(3) Ph.D. _____

6. _____(1) RD status _____ Give number of years. _____(2) Non-RD

If you are not currently employed in dietetic practice, you may conclude this questionniare at this point and return in the enclosed stamped envelope. Thank you for helping with this study.

QUESTIONS 7 - 12 refer to your employment status.

7. _____(1) Full-time _____(2) Part-time, _____ Hours per week
8. _____Number of years employed in dietetic practice.
9. _____Number of years in present job.
10. Title of present position: _____
11. Title of your immediate supervisor: _____
12. Number of employees you supervise: _____

If you are a dietetic educator at a university, college, junior college or AVTI, you may conclude this questionnaire at this point and return in the enclosed stamped envelope. Thank you for helping with this study.

(OVER)

13. Name the practice group to which you belong: _____

14. Annual Salary Range:
_____(1) Under $16,000 ($8/hr.)
_____(2) $16,000 ($8/hr.) to $20,000 ($10/hr.)
_____(3) $21,000 ($10.50/hr.) to $30,000 ($15/hr.)
_____(4) $31,000 ($15.50/hr.) to $35,000 ($17.50/hr)
_____(5) $36,000 ($18/hr.) to $40,000 ($20/hr.)
_____(6) Over $40,000

15. Institution size:
_____(1) Fewer than 100 beds
_____(2) 100 to 299 beds
_____(3) 300 - 999 beds
_____(4) 1,000 or more beds

OR Clients seen per week
_____(1) Under 50
_____(2) 51 to 100
_____(3) 101 to 120
_____(4) 121 or more

16. Financial goals of institution are:
____(1) Profit-making
____(2) Non-profit

16. Number of RDs with which you work _____.

17. Estimated population of the city or town in which institution is located _____.

II. ROLE FUNCTIONS:

In this section please check each role function which you perform in your job.

_____(1) Plan and write menus
_____(2) Make menu changes
_____(3) Determine and write food specifications
_____(4) Standardize recipes
_____(5) Supervise service and distribution of meals
_____(6) Establish santitation standards
_____(7) Assess nutritional status of clients
_____(8) Calculate modified diets
_____(9) Plan menus for modified diets
_____(10) Confer with clients regarding modified diets
_____(11) Adjust modified diets
_____(12) Assess drug-nutrient interactions
_____(13) Discuss diets with physicians
_____(14) Conduct orientation for new employees
_____(15) Conduct in-service training for employees
_____(16) Conduct nutrition education for patients and their families
_____(17) Conduct nutrition education for professionals
_____(18) Develop departmental organization
_____(19) Develop departmental procedures
_____(20) Develop departmenta; policies
_____(21) Communicate with other departments
_____(22) Develop summary of visitation (consultation)
_____(23) Maintain summary of visitation (consultation)
_____(24) Develop dietary progress notes for patient medical records
_____(25) Maintain dietary progress notes for patient medical records
_____(26) Check texture and color of food served
_____(27) Check for proper food temperature
_____(28) Administers self-evaluation forms to food service personnel

III. JOB SATISFACTION ASSESSMENT

ORGANIZATION

Think of the organization you work for now. In the blank beside each word below put:

__Y__ if it describes your organization
__N__ if it does NOT describe it
__?__ if you cannot decide

____ Too big	_____Efficient
____ Feel you belong	_____Too much class distinction
____ Has a good reputation	_____Looks after employees well
____ Progressive	_____Too many rules and regulations
____ Needs some fresh people at the top	_____ Insufficient coordination between departments
____ Higher management keeps us in the dark about things we ought to know	_____ A good organization to work for

ACTUAL WORK ON PRESENT JOB (Copyright, Bowling Green State University, 1975, 1983)

Think of the actual work you do on your present job. What is it like most of the time? In the space beside each word or phrase given below, put:

__Y__ for "yes" if it describes your work
__N__ for "no" if it does NOT describe it
__?__ if you cannot decide

____Fascinating	____Pleasant	____Endless
____Routine	____Useful	____Gives sense of accomplishment
____Satisfying	____Tiresome	____Repetitive
____Boring	____Healthful	____Hectic
____Good	____Challenging	____Well defined duties
____Creative	____On your feet	____Too much to do
____Respected	____Frustrating	____Tiring
____Hot	____Simple	____Physically uncomfortable
		____Pressured

(OVER)

PAY AND BENEFITS (Copyright, Bowling Green University, 1975, 1983)

Think of the pay and benefits you get now. How well does each of the following phrases describe your present pay? In the space provided beside each word or phrase put:

Y if it describes your pay
N if it does NOT describe it
? if you cannot decide

____Income adequate for normal expenses
____Satisfactory profit sharing
____Barely live on income
____Bad
____Income provides luxuries
____Insecure
____Less than I deserve
____Highly paid
____Underpaid
____Fair
____Good benefits
____Too long between pay days
____Steady income
____Well paid
____Too little vacation
____Clear pay policy
____Above average for job
____Unfair
____Errors in payment
____Not enough increases

OPPORTUNITIES FOR PROMOTION (Copyright, Bowling Green University, 1975, 1983)

Think of the opportunities for promotion that you have now. How well does each of the following phrases describe these? In the space provided beside each phrase below put:

Y for "Yes" if it describes your opportunities for promotion
N for "No" if it does NOT describe them
? if you cannot decide

____Good opportunities for promotion
____Opportunity somewhat limited
____Promotion on ability
____Dead-end job
____Good chance for promotion
____Unfair promotion policy
____Infrequent promotions
____Regular promotions
____Fairly good chance for promotion
____Clear promotion policy
____Rather stay in present job
____Consistent promotion policy
____Could be worse
____Others have better opportunities
____Promotions depend on who you know
____Less than elsewhere

APPENDIX B

QUESTIONNAIRE

AND LETTERS

MANKATO STATE UNIVERSITY

HOME ECONOMICS DEPARTMENT/Box 44/(507) 389-2421
College of Natural Sciences, Mathematics and Home Economics

MANKATO, MINNESOTA 56001

August 25, 1985

Dear Colleague,

Part of my doctoral work at Oklahoma State University is to study the role or functions and the job satisfaction among members of the Minnesota Dietetic Association who are working in rural and urban settings. Your name has been chosen to be part of this study.

You will note that the enclosed questionnaire has three parts; general information, the role or function assessment, and the job satisfaction section. Please answer all of the questions that apply to you and return the questionnaire to me in the stamped envelope enclosed.

Be assured that the information you supply will be kept confidential. The survey forms have been coded only to match your address for follow-up purposes. That code will be be removed as the questionnaires are returned and will not be used in the tabulation of the results.

Hopefully, the questionnaire will take about 15 to 20 minutes to complete. Please return to me by September 13, 1985. Remember to use the stamped envelope provided.

It is my hope to be able to share my results with you through the MDA Newsletter or at a meeting.

If you have any questions, please call me collect at my office, (507) 389-5923 or at (507) 625-3549 in the evenings.

Sincerely,

Aileen V. Eick

Aileen V. Eick, R.D., Assistant Professor
Food and Nutrition

MANKATO STATE UNIVERSITY

HOME ECONOMICS DEPARTMENT/Box 44/(507) 389-2421
College of Natural Sciences, Mathematics and Home Economics

MANKATO, MINNESOTA 56001

September 21, 1985

Dear Dietetic Friend,

About three weeks ago, I sent you a survey questionnaire about the role and functions and job satisfaction among rural and urban members of the Minnesota Dietetic Association. As of this date, I have not recieved your response. It is important to my research that all members contacted be identified. If you do not wish to participate, please just mail the survey form back to me unanswered. If you would prefer to skip some questions, please feel free to do that but mail back the form.

If an educational program to prepare dietitians for rural practice is to be developed, it is important to know what dietitians are doing in their work and how they feel about it. Please help me with this goal.

There is another survey form enclosed and another stamped envelope for the return of the survey questionnaire. Please return this immediately.

If you have already returned the original survey questionnaire, you have my heartfelt thanks for participating.

Sincerely,

Aileen V. Eick, RD

Aileen V. Eick, RD, Assistant Professor
Food and Nutrition

OKLAHOMA STATE UNIVERSITY
Department of Food, Nutrition, and Institution Administration

MINNESOTA DIETITIANS FUNCTION AND JOB SATISFACTION ASSESSMENT

I. General Information

DIRECTIONS: Please check or fill in the appropriate answers. It is impoortant that you check all of the questions.

1. Are you currently employed in dietetic practice?

_____(1) Yes _____(2) No

2. If yes, please state your reason for working _____

3. If no, please indicate why:

_____(1) Attend school
_____(2) Raise family
_____(3) Marraige
_____(4) Health reasons
_____(5) No job available in area
_____(6) Do not want to work
_____(7) Am employed in a non-dietetic position
(Please specify)_____
_____(8) Retired
_____(9) Other _____

4. Marital Status:

_____(1) Married _____(2) Single, divorced, separated, widowed

If yes, please state your spouse's occupation _____

5. Age Catagory:

_____(1) Under 25
_____(2) 26 - 35
_____(3) 36 - 45
_____(4) 46 - 55
_____(5) 56 - 65
_____(6) Over 65

6. Highest level degree obtained and major:

_____(1) B.S. or B.A. _____
_____(2) M.S. _____
_____(3) Ph. D. _____

7. _____(1) RD status _____give number of years as RD. _____(2) Non-RD

If you are not currently employed in dietetic practice, you may conclude this questionnare at this point and return in the enclosed stamped envelope. Thank you for helping me with this study.

QUESTIONS 8 - 16 refer to your employment status:

8. _____(1) Full-time _____(2) Part-time, _____ Hours per week

9. _____ Number of years employed in dietetic practice.

10. _____ Number of years in the present job.

(OVER)

11. Major Area of Responsibility: Choose the one best answer to describe the greater part of your work.

_____Director of foodservice or dietary department
_____Assistant or Associate Director
_____Clinical Dietitian
_____Foodservice Management/Business and Industry
_____Generalist (combines clinical and foodservice management)
_____Teaching (AVTI, junior college or university)
_____Research Dietitian
_____Community Dietitian
_____ Other (Please specify)_____

If you are a dietetic educator at a university, college, junior college or AVTI, you may conclude this questionnaire at this point and return in the enclosed stamped envelope. Thank you for helping with this study.

12. Annual Salary Range:

_____(1) Under $16,000
_____(2) $16,000 to $19,999
_____(3) $20,000 to $29,999
_____(4) $30,000 to $39,999
_____(5) $40,000

13. Institution Size or Number of Clients Seen:

_____(1) Fewer than 100 beds
_____(2) 100 to 299 beds
_____(3) 300 to 999
_____(4) 1,000 or more beds

OR NUMBER OF CLIENTS SEEN PER WEEK:

_____(1) Under 50
_____(2) 51 to 100
_____(3) 101 to 121
_____(4) 121 or more

14. Geographical Location of Your Employment:

_____(1) Minneapolis or St. Paul
_____(2) Rochester
_____(3) St. Cloud
_____(4) Duluth
_____(5) Fargo Moorhead
_____(6) Grand Forks
_____(7) None of the above

15. Type of Business of Your Employment:

_____(1) Profit Making
_____(2) Non-profit
_____(3) Self-employed

16. Number of RDs with whom you work _____.

17. Is your immediate supervisor an RD? _____(1) Yes _____(2) No

II. ROLE OR FUNCTION ASSESSMENT

In this section, please check each role/function which you perform in your job.

_____(1) Plan and write menus

_____(2) Prepare diet history for patient or client

_____(3) Determine and write food specifications

_____(4) Standardize recipes

_____(5) Supervise service and distribution of meals

_____(6) Establish santitation standards

_____(7) Assess nutritional status of clients

_____(8) Calculate modified diets

____(9) Develop individual nutrition care plans for patients

____(10) Confer with clients regarding modified diets

____(11) Adjust modified diets

____(12) Assess drug-nutrient interactions

____(13) Conduct in-service training for employees

____(14) Conduct orientation for new employees

____(15) Develop a quality assurance plan

____(16) Feel a part of the health care team

____(17) Participate in patient care audit

____(18) Discuss diets with physicians

____(19) Conduct nutrition education for patients and their families

____(20) Conduct nutrition education for for professionals

____(21) Develop departmental organization

____(22) Develop departmental procedures

____(23) Develop departmental policies

____(24) Communicate with other departments

____(25) Develop summary of visitation (consultant)

____(26) Maintain summary of visitation (consultant)

____(27) Develop dietary progress notes for patient medical record

____(28) Maintain dietary progress notes for patient medical records

____(29) Check texture and color of food served

____(30) Check for proper food temperature

____(31) Administer self-evaluation forms to food service personnel

____(32) Conduct diet counseling for groups

(OVER)

III. JOB SATISFACTION ASSESSMENT

SUPERVISION ON PRESENT JOB (Copyright, Bowling Green University, 1975,1983)

Think of the kind of supervision that you get on your job. How well does each of the phrases describe your supervisor? In the space beside eachword or phrase, put:

__Y__ if it describes your supervisor
__N__ if it does NOT describe him/her
__?__ if you cannot decide

____Asks my advice	____Tactful
____Hard to please	____Influential
____Impolite	____Up-to-date
____Praises good work	____Doesn't supervise enough
____Quick tempered	____Lazy
____Tells me where I stand	____Has favorites
____Annoying	____Good listener
____Stubborn	____Tells me how I'm doing
____Knows job well	____Interferes with my work
____Bad	____ I'm unsure who supervises me
____Intelligent	____Keeps me informed
____Leaves me on my own	____Poor planner
____Around when needed	____Gives clear directions

JOB IN GENERAL (Copyright, Bowling Green University, 1975, 1983)

Now, think of your job in general. What is it like most of the time? In the space provided beside each word or phrase given below, put:

__Y__ for "Yes" if it describes your job
__N__ for "No" if it does NOT describe it
__?__ if you cannot decide

____Pleasant	____Like to leave
____Bad	____Better than Most
____Ideal	____Disagreeable
____Waste of time	____Makes me content
____Good	____Inadequate
____Undesirable	____Excellent
____Worthwhile	____Rotten
____Worse than most	____Enjoyable
____Acceptable	____Poor

PERFORMANCE CONSTRAINT MEASURE

The following statements are designed to assess your perceptions of various aspects of work situations. In the space provided beside each statement below, put:

Y for "Yes" if it describes your situations
N for "No" if it does NOT describe it
? if you cannot decide

_____Job related information (from supervisors, peers, subordinates, customers, company rules, polices, and procedures, etc.) needed to do the job assigned is readily available.

_____The specific tools, equipment, and machinery needed to do the job are sufficient.

_____ The materials and supplies needed to do the job are difficult to obtain.

_____Financial resources and budgetary support necessary to accomplish tasks that are a part of the job are adequate.

_____The services, assistance and support from others needed to do the job assigned are available.

_____Do you feel there is a conflict of interests between your job responsibilities and your standards of professional responsibility as an ADA member?

_____Time needed to do the job assigned is available, taking into consideration both the time limits imposed and the interruptions, unnecessary meetings, non-job-related distractions, etc.

_____The physical aspects of the immediate work environment interfere with rather than facilitate doing the assigned tasks (too noisy, too cold, too hot, inappropriate work area, poorly lit, unsafe, etc.).

_____There is an adequate number of qualified personnel to select from when a vacancy exists.

_____Time and/or expenses related to continuing education or professional development is provided.

Please make sure you have completed the front and back portions of each page. Thank you for your participation. Please use the enclosed stamped envelope to return your questionnaire. THANK YOU VERY MUCH.

PERFORMANCE CONSTRAINT MEASURE

The following statements are designed to assess your perceptions of various aspects of work situations. In the space provided beside each statement below, put:

Y for "Yes" if it describes your situations
N for "No" if it does NOT describe it
? if you cannot decide

_____Job related information (from supervisors, peers, subordinates, customers, company rules, polices, and procedures, etc.) needed to do the job assigned is readily available.

_____The specific tools, equipment, and machinery needed to do the job are sufficient.

_____ The materials and supplies needed to do the job are difficult to obtain.

_____Financial resources and budgetary support necessary to accomplish tasks that are a part of the job are adequate.

_____The services, assistance and support from others needed to do the job assigned are available.

_____Do you feel there is a conflict of interests between your job responsibilities and your standards of professional responsibility as an ADA member?

_____Time needed to do the job assigned is available, taking into consideration both the time limits imposed and the interruptions, unnecessary meetings, non-job-related distractions, etc.

_____The physical aspects of the immediate work environment interfere with rather than facilitate doing the assigned tasks (too noisy, too cold, too hot, inappropriate work area, poorly lit, unsafe, etc.).

_____There is an adequate number of qualified personnel to select from when a vacancy exists.

_____Time and/or expenses related to continuing education or professional development is provided.

Please make sure you have completed the front and back portions of each page. Thank you for your participation. Please use the enclosed stamped envelope to return your questionnaire. THANK YOU VERY MUCH.

VITA

Aileen Virginia Eick

Candidate for the Degree of

Doctor of Philosophy

Thesis: ROLE AND JOB SATISFACTION AMONG REGISTERED DIETITIANS EMPLOYED IN RURAL AND URBAN MINNESOTA

Major Field: Home Economics
Food Nutrition and Institution Administration

Biographical:

Personal Data: Born in Detroit, Michigan June 13, 1928, to Lucile and LeRoy Snell.

Education: Graduate from Southeastern High School, Detroit, Michigan, June, 1946; received Bachelor of Science degree in Food and Nutrition from Michigan State University in June, 1950; completed dietetic internship at Massachusetts General Hospital in June, 1951; received Master of Science degree from Mankato State University in August, 1971; completed requirements for the Doctor of Philosophy degree Oklahoma State University in December, 1987.

Professional Experience: Staff Dietitian, Massachusetts General Hospital, June, 1951 to May, 1952; Food and Nutrition Coordinator, Mott Foundation Adult Education, Flint, Michigan, 1954-1958; Staff Dietitian, Mercy Hospital, Detroit, Michigan, 1960; Head Therapeutic Dietitian, Edward W. Sparrow Hospital, Lansing, Michigan, 1960-1963; Nutrition Instructor, Clark County Vocational Technical Institute, 1967-1968; Consultant Dietitian, Nursing Home, Springfield, Ohio, 1967 to 1968; Nutrition Instructor, September, 1971 to June, 1978; Assistant Professor, Food and Nutrition, Mankato State University, September, 1978 to present.