# ANALYSIS OF ROLE FUNCTIONS AND LIFESTYLE PRACTICES OF SPORTS AND CARDIOVASCULAR NUTRITIONISTS

BY

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# ANALYSIS OF ROLE FUNCTIONS AND LIFESTYLE PRACTICES OF SPORTS AND CARDIOVASCULAR NUTRITIONISTS

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#### CHAPTER I

#### INTRODUCTION

Heart disease continues to be the leading cause of death in the United States. It is estimated that coronary heart disease will contribute to 1.5 million heart attacks and 550,000 deaths each year in the United States. Of these deaths, more than 300,000 will be under 65 years old. The National Center for Health Statistics reported a 39 percent decline in death from cardiovascular disease in the United States from 1963 to 1983. One-third of this decline can be attributed to improved eating habits resulting in the reduction of cholesterol (U.S.D.H.E.W., 1979).

The American Heart Association estimates that the cost of treating patients with cardiovascular disease will be greater than \$78.6 billion and \$13.8 billion will be lost annually due to reduced productivity. Specialized nutrition counseling is becoming more important in coronary health care and prevention. Hospitals are starting to set up specialized cardiac centers which require a cardiac dietitian. Cardiovascular risk reduction programs at corporations are also increasing in number (LaRosa, Goor and Haines, 1986).

Americans have become more health-conscious and fitness-minded. Many people exercise to lose weight, to be able to eat more without gaining weight, and to reduce stress. Athletes are searching for valid sports nutrition information and are seeking professional nutritional advice (Clar, 1986).

Fitness and wellness centers, sports medicine clinics, health clubs, athletic teams, in-patient cardiac care centers and cardiac rehabilitation centers are creating more employment opportunities for dietitians who specialize in sports and cardiovascular nutrition. With the abundance of research literature available, a specialized knowledge is essential for keeping abreast of current research information.

The 1972 Study Commission on Dietetics found that "there will be increased differentiation of roles and functions of dietitians" and "dietetics will become more specialized." A dietitian employed in the area of sports and cardiovascular nutrition needs to know more than nutrition. Dietitians must also understand metabolic changes and their effects on the body during exercise (O'Neil, Gorman and Hynak-Hankinson, 1986).

The American Dietetic Association (ADA) practice group of Sports and Cardiovascular Nutritionists (SCAN) promotes the following:

To promote the integration of nutrition, exercise, and respiratory fitness to achieve and maintain optimal health; to help prevent or control cardiovascular

disease; and to utilize nutrition and fitness to enhance the quality of life for all people (ADA, 1986).

As the demand for sports and cardiovascular nutrition counseling increases and the SCAN practice group grows, so is there a need for increased research information about the SCAN practice group members. Since SCAN members are employed in a variety of employment settings, a functional role analysis is needed to determine the different tasks and activities performed. At present, no analysis of role function studies have been performed on this practice group.

SCAN members promote optimal health and wellness. This researcher wishes to determine if members of SCAN practice health promotion activities and if participation in these activities is a necessary part of their role when interacting with patients/clients and other health professionals.

Only recent studies have been performed to document dietetic practitioners' current personal lifestyle practices. Martin, Holcomb, and Mullen (1987) surveyed members of the Texas Dietetic Association about their personal health behaviors and beliefs. The results found that dietetic practitioners had better health habits (e.g. non-smoking, physical activity, and dietary patterns) than those of the general female population.

Information obtained from this research would be useful to educators, students, dietitians, and other health care professionals enabling them to better understand the role functions and practices of sports and cardiovascular nutritionists in different health services.

#### Purpose and Objectives

The purpose of this research was to conduct an analysis of role functions and lifestyle practices of Sports and Cardiovascular Nutritionists. Specific objectives included:

- To determine the role functions (activities, responsibilities, or duties) and frequency of activities performed by Sports and Cardiovascular Nutritionists.
- 2. To determine the lifestyle practices of Sports and Cardiovascular Nutritionists.
- 3. To determine the wellness inventory score of Sports and Cardiovascular Nutritionists.
- 4. To make recommendations for further studies involving Sports and Cardiovascular Nutritionists.

#### Hypotheses

The hypotheses postulated in this study were:

 $H_1$ : There will be no significant Associations between the frequency of the role functions (activities, responsibilities, or duties) of Sports and Cardiovascular Nutritionists and the following selected demographic variables:

- 1. Age
- 2. Sex
- 3. R.D. status
- 4. Route to registration
- 5. Highest degree obtained
- 6. Place of employment
- 7. Job title

- 8. Salary
- 9. Years employed in the dietetic profession
- 10. Years employed in the area of Sports and Cardiovascular Nutritionist.
- 11. Years employed in present position

 $H_2$ : There will be no significant associations between the lifestyle practices of SCAN members and the selected demographic variables as listed in  $H_1$ .

 $H_3$ : There will be no significant differences in the wellness inventory scores of SCAN members based on the same variables as in  $H_1$ .

#### Limitations

This study was limited to the American Dietetic

Association Practice group of Sports and Cardiovascular

Nutritionists at the time of August 1988. Results from this

study can therefore only be generalized to this group.

#### Assumptions

- Respondents were working in the area of Sports and/or Cardiovascular Nutrition.
- 2. Respondents completed the questionnaire objectively and without bias.
- 3. The survey questionnaire used was a valid and reliable instrument for testing the hypotheses under consideration.

#### Definitions

<u>American Dietetic Association (ADA)</u>: A professional organization responsible for establishing educational and

- supervised clinical experience requirements and standards of practice in the profession of dietetics (Arkwright, Collins, Sharp, and Yakel, 1974, p. 664).
- Competence: The quality of being functionally adequate in assuming the role of a specified position with the requisite knowledge, ability, capability, skill, judgement, attitudes, and values (Lanz, 1983, p. 156).
- Entry-level Position: The minimum-based position within
   each practice level of the role (or generic position)
   (Lanz, 1983, p. 157).
- Function: "The nucleus of activities, responsibilities, or duties so homogeneous in character as to fall logically into a unit for purpose of execution" (Tead and Metcalf, 1925, p. 59).
- <u>Health</u>: A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (Lanz, 1983, p. 157).
- Lifestyle: An individual's mode of living as affected by
   physiologic, psychosocial, environmental, economic, and
   religious influences (Lanz, 1983, p. 157).
- Registered Dietitian (R.D.): A specialist educated for the profession responsible for the nutrition care of individuals and groups. This includes 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. This participation may be in single or combined functions, in foodservice systems management, in extending knowledge of food and nutrition principles, in teaching these principles for application according to particular situations, or in dietary counseling (Lanz, 1983, p. 159).

- Responsibilities: General statements of the actions for which entry-level personnel must be accountable. There are two types of responsibilities: major and specific (Lanz, 1983, p. 159).
- Role: Configuration of major and specific responsibilities for which one is accountable (Lanz, 1983, p. 159).
- Role Delineation: A process for determining the minimal basic level of major and specific responsibilities that must be assumed by personnel in a given generic practitioner position (Lanz, 1983, p. 159).
- <u>Skill Statements</u>: Specific statements describing what entry-level personnel must do in order to successfully assume their specific responsibilities (Lanz, 1983, p. 159).
- Sports and Cardiovascular Nutritionists: A practice group of the American Dietetic Association with a membership listing of 3,279 in August 1988.

Wellness: "The actualized potential in each person to function at peak levels of performance with a healthy body, alert mind and sound emotions" (Cook, 1981).

#### CHAPTER II

#### REVIEW OF LITERATURE

#### Historical Perspectives

Dietetics as a practice dates back to the beginning of medical history (Barber, 1959). The professional status of the dietetic practitioner, however, was not reached until the development of nutrition knowledge and the founding of a national organization (Lanz, 1983). The American Dietetic Association (ADA) was founded in Cleveland, Ohio, in October 1917. The ADA was organized by 58 dietitians, educators, foodservice directors and students in response to the need created by problems of feeding during World War I (Langholz, 1982). World War I marked the beginning of change in the practice of diet therapy and the training of dietitians (Ohlson, 1976). The ADA defined dietetics in 1917 as "the science of nutrition and the art of feeding people."

In cooperation with the American Hospital Association, the first annual ADA convention was held in September 1918. At this meeting, four sections or areas of practice were identified: dietotherapy, administration, social welfare, and teaching. These names were eventually changed to diet therapy, food administration, community nutrition, and

education (Lanz, 1983). The 1970's were a time of change and restructuring of the ADA. Between 1949 and 1979, the membership had grown by almost 30,000 (Winterfeldt, 1979). This growth of membership, along with changes in practice and need, spawned the emergence of special interest groups. The ADA and the four areas of practice were unable to meet the needs of these special interest groups which led the ADA to reevaluate its structure (Langholz, 1982).

The 1970 Study Commission on Dietetics was formed to review the ADA's organizational framework. The Commission recommended changes in the organization of the ADA and, in 1972, developed bylaws for the Association. The Commission identified the need for better communication among members with similar interests and made several changes to provide for this. These changes included the elimination of the four sections or areas of practice and the organizing of the Council on Practice (COP) in 1977 (Lanz, 1983).

The Council on Practice is the coordinating body for the Divisions of Practice and Dietetic Practice Groups. It gives dietetic practitioners with similar interests an opportunity to share information. The Council consists of five Divisions of Practice: Community Dietetics, Clinical Dietetics and Research, Consultation and Private Practice, Management Practices, and Educators. Each Division of Practice has a number of Dietetic Practice Groups within it. There are currently 23 Practice Groups that are recognized by the ADA. They include:

- Public Health Nutrition
- Gerontological Nutrition
- Dietetics in Developmental and Psychiatric Disorders
- Renal Dietitians
- Pediatric Nutrition
- Diabetes Care and Education
- Dietitians in Nutrition Support
- Dietetics in Physical Medicine and . Rehabilitation
- Sports and Cardiovascular Nutritionists
- Dietitians in General Clinical Practice
- Consulting Nutritionists Private Practice
- Consultant Dietitians in Health Care Facilities
- Dietitians in Business and Industry
- ADA Members with Management Responsibilities in Health
- Care Delivery Systems
- School Food and Nutrition Services
- Dietitians in College and University Foodservice
- Clinical Nutrition Management
- Technical Practice in Dietetics
- Dietetic Educators of Practitioners
- Nutritionists in Nursing Education
- Nutrition Education for the Public
- Dietitians in Medical and Dental Education
- Nutrition Research

Practice Groups reflect the diversity among the membership and are a fast-growing component of the ADA (Lanz, 1983). In 1982, Practice Group membership exceeded 13,200, while in 1988, membership exceeded 30,094. A Practice Group may be formed when at least 50 members petition to form such a group. Once established, a Practice Group functions to: determine quality assurance standards for its area of practice, identify continuing education needs for its members, and plan and implement activities to meet education needs (Lanz, 1983; Study Commission on Dietetics, 1984).

The dietetic practice group, Sports and Cardiovascular Nutritionists (SCAN), is a part of the Division of Clinical Dietetics and Research. The SCAN practice group has its roots in New York where a group of registered dietitians, mostly employed by the Mr. Fit Program, began campaigning in 1979 to form a national dietetic practice group of dietitians specialized in sport and cardiovascular nutrition.

SCAN became a dietetic practice group in 1982 with approximately 500 members. By 1983, the membership was over 950, and by October 1987 had grown to a membership of 3,300.

From 1982 to 1987, SCAN experienced a growth of 560 percent which made SCAN the second largest ADA Dietetic Practice Group (Muir, 1987). In 1989 the membership of SCAN was 3,500.

SCAN held its first Symposium at the Cooper Clinic,
Aerobics Center in Dallas, Texas, in 1984. Since then a
symposium has been held every year. These symposia have
been vital to SCAN's professional growth and image and have
benefitted SCAN in at least two ways:

- The SCAN practice group has increased its visibility to others in fields akin to sports/ cardiovascular/wellness medicine.
- 2. SCAN members have come away better "equipped to respond to consumer and professional demands in their field" (Muir, 1987).

SCAN has produced three practice manuals for use by professionals as a resource:

- 1. Sports Nutrition: A Manual for Professionals Working with Active People.
- 2. The Cardiovascular Nutrition Manual.
- The Wellness Nutrition Manual.

ADA/SCAN has an official professional liaison with the American College of Sports Medicine which has greatly improved communication between these organizations. Both have worked together on organizationl projects which has helped to stimulate growth (Muir, 1987).

### Functions of Sports and Cardiovascular Nutritionists

This study was prompted by a desire to find out what SCAN members actually do. What types of jobs do they have? Are their lifestyle practices the same as they promote to their patients/clients? Any member of the ADA can join a practice group whether employed in that area or not. This research will help to determine the approximate percentage of SCAN members employed in the area of SCAN.

SCAN members are employed in a variety of settings.

They work as consultants with some or all of the following health care facilities and professionals:

- Cardiac rehabilitation centers
- In-patient cardiac care centers
- Sports medicine clinics and institutes
- Health clubs and conditioning centers
- Wellness centers and health promoters
- Community recreation departments
- Corporate fitness programs
- Exercise and weight reduction groups
- Athletic staff at schools and colleges
- Coaches and athletic trainers
- Professional and Olympic athletics
- Individuals interested in physical fitness
- Runners' clubs and sports organizations
- Physicians and health professionals
- Exercise physiologists and researchers
- Cardiac, orthopedic, and pulmonary specialists
- Sports, health and food writers
- Media specialists
- Health specialists
- Health educators

Since SCAN members are employed in a variety of employment settings, a functional role analysis is needed to determine the different tasks and activities performed. At present, no analysis of role function studies have been performed on this practice group.

Individuals in the health care field are identified through the concept of "role." A professional in a specific

role elicits a definite set of expectations based on training and orientation (Cason, 1972). "Role delineation" refers to the identification of responsibilities which a practitioner must perform at a defined competency level.

The formalized study of role delineation within dietetics is providing a legitimate basis for the profession to make strides in setting standards for education, certification, and practice (ADA, 1981). In 1981, the Role Delineation Study for entry-level clinical dietetics was published (Baird and Armstrong, 1981). It is the official position of the ADA concerning what a clinical dietetic practitioner must do and know to provide quality care. The definition of the Registered Dietitian in clinical practice includes the following:

- A specialized dietetic professional who affects the nutrition care of individuals and groups in health and illness.
- Provides nutrition assessment, planning, implementation (including education and referral) and educational services.
- Provides consultation for foodservice to coordinate nutrition care services, manages departmental and personnel functions for nutrition care services.
- Delineates and manages external influences on the delivery of nutrition care.
- Educates and coordinates activities as a member of the health care team.
- Maintains skill and knowledge in optimal nutrition care.

The SCAN practice group has defined some of its roles as follows:

Sports and Cardiovascular nutritionists practice the nutritional care for all people with special emphasis on promotion of cardiovascular health. SCAN members also develop and promote educational programs for dietitians, allied health professionals and the general public; and they promote research, writing, and teaching in the field of sports and cardiovascular nutrition (A.D.A., 1986).

This research analyzed the roles of SCAN members as compared with the ADA's Role Delineation for entry-level clinical dietetics. This analysis will help to more clearly define the roles of members in the SCAN practice group and aid in further research of role delineations.

#### Future Challenges for SCAN

SCAN is one of the fastest growing practice groups and with this growth, will need to come revisions and standardization of practice. The science of sports/cardiovascular/wellness nutrition is young with new research advances occurring rapidly. This, along with the large variety of employment settings, will create future challenges for SCAN members as new opportunities in the field open up.

As public interest in nutrition has grown, many individuals and groups are identifying themselves with nutrition, and there is a growing competition outside the profession (South, 1981). Physicians, nurses and other health professionals are viewed by the public as a reliable source of nutrition information (Poplin, 1980). There is currently, no standard of practice for sports and cardiovascular nutritionists. Specialization credentialing for SCAN members is

at present being investigated and devloped. This will help to prevent the encroachment of other professions into this area and also help to insure competency among SCAN members (Muir, 1987).

Perhaps the best description of the future challenges for SCAN members is stated by Jennettee Harris, SCAN Chairman 1988-1989:

As we approach the 1990's, it is important to take note of trends and new ideas that may shape our practice. A willingness to step into uncharted territory through experimentation and research, to solicit feedback from colleagues, and to inspire patients/clients with new methods is the hallmark of a leader. SCAN members must develop and grow in response to change and demands of the marketplace. Enthusiastic, energetic and caring SCAN members can respond to these changes. The type of growth our practice niche is experiencing requires qualities of the adventurer/caregiver (1989, p. 1).

These statements reflect the need for risk taking in today's highly competitive and changing markets. The 1984 Study Commission on Dietetics stated: "The profession must become more dynamic, but in order to do so, it must increase its depth of knowledge and expertise" (p. 1052). For this to occur, the Commission recommended changes in education, in patterns of dietetic practice, and in the activities of the ADA. This role analysis study will hopefully aid in recognizing the needs of the SCAN Practice Group with regards to education and patterns of dietetic practice.

#### CHAPTER III

#### METHODS AND PROCEDURES

The purpose of this research was to determine the kinds of responsibilities and activities (role functions) of Sports and Cardiovascular Nutritionists and assess their personal lifestyle practices. The research design, sample, data collection and analysis is outlined in this chapter.

#### Research Design

A descriptive status survey was the research design used in this study. Descriptive research is concerned with hypotheses formulation and testing, analysis or relationships between non-manipulated variables in a natural setting and development of generalizations, principles or theories through the use of inductive-deductive reasoning (Best, 1981).

#### Sample

The study sample was drawn from a population comprised of the 1988 membership listing of the American Dietetic Association practice group of "Sports and Cardiovascular Nutritionists" (n = 3279). A simple random sample of 655

was selected to be mailed the research questionnaire. The information collected from this study can only be generalized to this group.

#### Data Collection

#### Instrumentation

The research instrument consists of multiple choice questions, check lists and short answer or completion-type questions. In developing the instrument, several question-naires from Faye (1982), Taylor (1984), Fisher (1984), and Boog (1985) were used to compile Part One. The question-naire consists of four parts:

- Part One Questions concerning relevant demographic information.
- Part Two Questions about personal lifestyle practices.
- Part Three Questions contained in the wellness inventory score.
- Part Four Questions about Sports and Cardiovascular Nutritionists' role functions (activities, responsibilities or duties).

A trial study of the questionnaire was sent to a random sample of five members of the SCAN practice group.

#### Survey Procedure

A cover letter accompanied the instrument explaining the research and providing information for completion of the questionnaire. The questionnaire was folded into thirds and stapled shut. Mailing information and codes were

printed on the back of the last sheet so that the questionnaire could be folded when completed and mailed without an
envelope. The questionnaires were mailed from the Oklahoma
State University Department of Central Mailing using third
class bulk rates. Business reply mail were used for the
return mailing so that only those which were returned were
paid for.

#### Data Analysis

Data collected was transcribed and processed into computer work sheets and entered into the computer. Appropriate programs to analyze the data using the Statistical Analysis System (SAS) (SAS, 1986) was used. Percentages and frequencies were generated to translate demographic, functional, attitudinal, institutional and educational variables into meaningful and useful information (Joseph and Joseph, 1979). The analysis of variance (ANOVA) procedure, t test and Duncan's new multiple range test were used to test if differences existed between the wellness inventory scores and the selected independent variables. Chi square values were used to test whether a relationship existed between selected independent variables and functional activities (Kerlinger, 1973).

#### CHAPTER IV

#### RESULTS AND DISCUSSION

The purpose of this study was to analyze the lifestyle practices and role functions of Sports and Cardiovascular Nutritionists (SCAN). The research instrument was developed to obtain the data as described in Chapter III. Copies of the research instrument were sent to 655 randomly selected members of the SCAN practice group. Ten of the questionnaires were returned blank due to change of address or unknown reasons, therefore, the researcher used 645 as the study sample size. A total of 213 completed questionnaires were returned, for a response rate of 33 percent.

Characteristics of the Respondents

#### Sex and Age

Participants in this study were 94 percent (n=200) female and 6 percent (n=13) male. The respondents ranged in age from less than 25 to over 60. Only 5 percent (n=10) of the respondents were less than 25 years old. The majority of the respondents were between 25-35, 36 percent (n=76) were between 25-30, and 26 percent (n=56) were between 31-35. Of the remaining respondents, 18 percent (n=10)

= 39) were between 36-40, 10 percent (n = 20) were between 41-50, and 5 percent (n = 11) were 51 years of age and older (Figure 1). One participant did not respond to this question.

#### Highest Level Degree Obtained and Major

The percentage of respondents holding only the bachelor's degree was 46 percent (n = 98) (Figure 2). Ninety-one percent (n = 89) of these respondents received their degree in food and nutrition or dietetics. Six percent (n = 6) of these respondents majored in institution administration or foodservice, while 3 percent (n = 3) comprised the "other" category of study.

Half of the respondents received their master's degree (n = 106, 50%). Seventy-five percent (n = 78) of these respondents earned their master's degree in food and nutrition, nutrition education, or community-public health nutrition. Eighteen percent (n = 19) majored in institution administration or foodservice, and 7 percent (n = 7) indicated the "other" category. Two participants did not indicate their field of study.

Four percent (n = 9) of the respondents had obtained their doctoral degree. Seventy-eight percent (n = 7) of these respondents earned their doctoral degree in food and nutrition, nutrition education or a related area, while 22 percent (n = 2) majored in institution administration or foodservice.

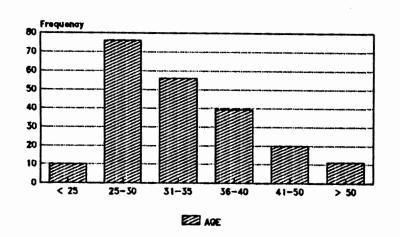


Figure 1. Respondents by Age Group

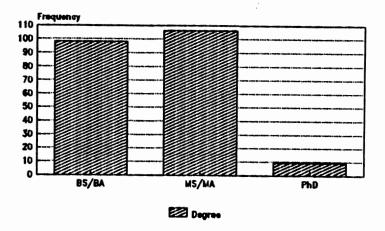


Figure 2. Respondents by Degree Earned

#### R.D. Status and Route

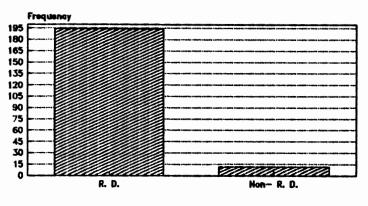
Ninety-five percent (n = 194) of the respondents were registered dietitians, while 5 percent (n = 11) were not (Figure 3). Eight participants did not respond to this question. Almost half of the respondents chose the dietetic internship as their route to registration (n = 93, 49%) (Figure 4). The advanced degree plus six-month work experience and Coordinated Undergraduate Program (CUP) were about equal in popularity as a route to registration with 24 percent (n = 45) obtaining advanced degrees and 21 percent (n = 41) graduating from a CUP program.

There were 12 respondents (6%) who indicated the category of "other" as their route to registration. Of these respondents, 5 indicated a three-year work experience; 5 a "dietetic traineeship," 1 respondent grandfathered into registration, and 1 listed being an undergraduate. Twenty-two participants did not respond to this question.

#### Position Title and Type of Employer

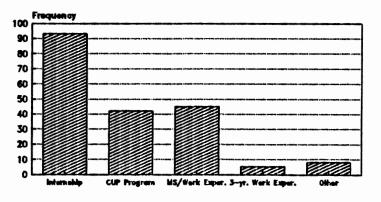
Seventy-four percent of the respondents are either clinical or consulting dietitians: clinical dietitians represented 50 percent (n = 102) and consulting dietitians 24 percent (n = 50) of the respondents (Figure 5).

Seventeen percent (n = 34) of the respondents were administrative dietitians, while university professors or students comprised the remaining 9 percent (n = 18). Nine individuals did not respond to this question.



R. D. Status

Figure 3. Respondents by R.D. Status



Route to Regist.

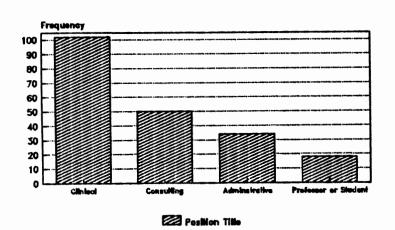
Figure 4. Respondents by Route to Registration

Hospitals employed the largest number of respondents at 55 percent (n = 111) (Figure 6). SCAN members employed in private practice comprised 15 percent (n = 31) of the respondents and an almost equal 15 percent (n = 30) were employed by either a doctor's office, weight management center, or other business. Dietitians employed in sports clinics, wellness programs, fitness centers or related businesses comprised 7 percent (n = 14) of the respondents, while the remaining 8 percent (n = 15) were either professors employed by a university or students. Twelve respondents did not choose to respond to this question.

#### Employment Status and Annual Salary

Sixty-nine percent (n = 144) of the respondents were employed full-time and 17 percent (n = 35) were employed half-time. Nine percent (n = 18) of the respondents were employed less than half-time, while the remaining 5 percent (n = 11) were not employed. Five individuals did not respond to this question.

Twelve percent (n = 24) of the respondents earned an annual salary that was \$20,000 or less (Figure 7). A possible reason for this was the high number of respondents who work half-time or less. This salary was comparable to the salaried from the 1986 census of The American Dietetic Association which found that slightly more than 20 percent of the census respondents reported annual salaries of \$20,000 or less (Bryk, 1987).



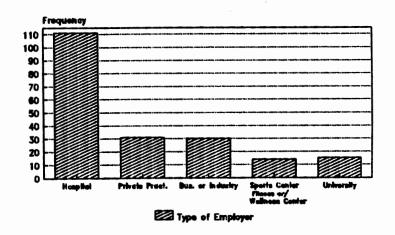


Figure 5. Respondents by Position Title

Figure 6. Respondents by Type of Employer

The salary range between \$20,001 to \$30,000 was the most prevalent in this study with 64 percent (n = 127) response rate. Eighteen percent (n = 35) of the respondents earned a salary between \$30,001 to \$40,000, 5 percent (n = 11) between \$40,001 to \$50,000, and 1 percent (n = 2) between \$50,001 to \$60,000. Fourteen participants did not choose to respond to this question.

# Number of Years in Dietetic Profession, Present Position, Sports and Cardio-vascular Nutrition and Percentage of Time Devoted to SCAN Functions

of the respondents, 39 percent (n = 82) had been employed from 5 to 10 years in the dietetic profession, 34 percent (n = 72) for less than 5 years, and 27 percent (n = 58) for greater than 10 years. One individual did not respond to this question. With regard to the number of years in their present position, 67 percent (n = 141) of the respondents had been in their position for less than three years, and 33 percent (n = 71) for three years or more. One participant did not respond to this question. The majority of the respondents had been employed in the area of sports and cardiovascular nutrition for two years or less (n = 131, 62%). Twenty-eight percent (n = 59) of the respondents indicated employment in this area to be 2.5 to 5 years, and 10 percent (n = 22) indicated greater than 5 years of

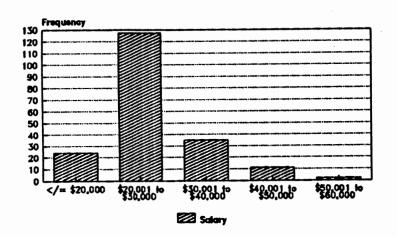


Figure 7. Respondents by Annual Salary

Figure 8. Respondents by Methods of Specialization

employment in this area. One individual did not respond to the question.

The majority of respondents indicated that they spent 25 percent or less of their time on functions related to sports and cardiovascular nutrition (n = 140, 66%). This may reflect the number of respondents who are not employed in this specific area: the ADA allows members to join one or more Practice Groups regardless of whether they are practicing in that group or not. This may also reflect the fact that SCAN as a function may be only a percentage of clinical responsibility (i.e., clinical 75%, SCAN 25%). Twenty percent (n = 42) of the respondents spent 27 to 70 percent of their time on SCAN functions. One participant did not respond to this question.

### Specialization

Participants were asked to check all of the ways in which they have obtained specialized knowledge in sports and cardiovascular nutrition. Multiple answers were allowed so percentages will not equal 100 percent. The most popular method of obtaining specialized knowledge was attendance at seminars and workshops (n = 172, 81%) (Figure 8). Other popular methods were the mass media (n = 157, 74%), work experience (n = 135, 64%), advanced degree (n = 45, 21%), and non-degree courses (n = 30, 14%). Thirty-eight respondents (18%) comprised the "other" category. The responses given for the "other" category included: in-services,

personal interest and self study, being a member of the SCAN DPG, research experience in this area, practical application, aerobic instructor certification, and personal participation in physical exercise and competitive athletics.

Health and Fitness Characteristics of the Respondents

#### Weight

Participants were asked to check their appropriate weight range according to height and weight charts. The majority of the respondents were in the normal range for weight (n = 144, 68%) (Figure 9). Almost an equal number of the respondents were above normal weight (n = 33), 16%) and below normal weight (n = 35, 17%). Nine percent (n = 19) of the respondents were 10 percent overweight, 7 percent (n = 14) were 11-20 percent overweight, 13 percent (n = 28) were 10 percent underweight, and 3 percent (n = 7) were 11-20 percent underweight. One participant did not respond to this question.

Respondents of this survey had a higher percentage in the normal weight range than a study of Texas dietitians in which 41 percent were average weight, 21 percent overweight, and 38 percent underweight. The researchers for that study suggested that the high percentage of dietitians considered underweight "may indicate a desire to portray an ideal weight for height image and/or the respondents' acquired

ability to modify their personal eating or exercise behavior" (Martin, Holcomb and Mullen, 1987). This reason may be the reason for the 35 percent of respondents who were underweight, since SCAN members promote optimal health and wellness. The 11 demographic variables did not significantly affect the weight of the respondents.

#### Vitamin/Mineral Supplements and Medications

The respondents were almost equally divided between those who take a vitamin and/or mineral supplement and those who do not. Fifty-two percent (n = 110) of the respondents stated that they do not take a vitamin and/or mineral supplement, while 48 percent (n = 102) do take a supplement. One participant did not respond to this question. The variable job title significantly affected (p = 0.044) the taking of vitamin and/or mineral supplements. Sixty-three percent (n = 32) of the total consultants and 53 percent (n= 18) of the respondents in administrative positions took a vitamin and/or mineral supplement. In contrast, less than half of the respondents in clinical dietetic positions took a vitamin and/or mineral supplement (n = 45, 45%) while 28 percent (n = 5) of the university professors and students took a supplement. Respondents in consultant or administrative positions may take supplements because of their busy schedules effect on eating habits and their belief in the health benefits of supplements. This also reflects the same behaviors found in the general population where 35 to 40

percent of adults use supplements with an even higher usage among women (Koplan, Annest, Layde, and Rubin, 1986; Stewart, McDonald, Schucker, and Henderson, 1985). In one study, 80 percent of the women surveyed used supplements (Raab, 1987). The remaining 10 demographic variables did not significantly affect this health characteristics.

With regard to medications, 76 percent (n = 162) of the respondents were not currently taking any medications, while 24 percent (n = 51) were. The 11 demographic variables did not significantly affect the taking of medications.

#### Breakfast, Meals per Day and Snacks

Ninety-six percent (n = 204) of the respondents usually ate breakfast, while only four percent (n = 8) did not. One respondent did not answer this question. The variables sex (p = 0.012) and years employed in the area of SCAN (p = 0.033) significantly affected the eating of breakfast. Ninety-seven percent (n = 193) of the female respondents usually ate breakfast while 85 percent (n = 11) of the male respondents did. This may reflect the differences in eating patterns of the sexes in the general population. Respondents employed in the area of SCAN for more than five years ate breakfast less often (86%, n = 19) than respondents employed from two to five years (98%, n = 59) and less than two years (97% n = 126). Many of those employed longer are older in age and may have developed the habit of not eating breakfast in a less health-conscious time. Also, they may

be in more administrative positions with busier schedules that affect the skipping of meals. The remaining nine demographic variables did not significantly affect the eating of breakfast.

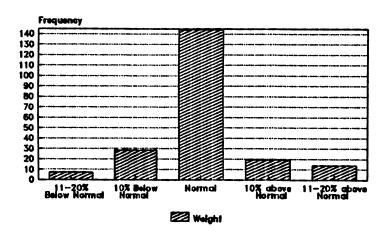
In response to the number of meals eaten per day, 92 percent (n = 197) of the respondents ate three meals or less per day, while 8 percent (n = 16) ate more than three meals The variables sex (p=0.029) and R.D. status (p=0.029)0.000) significantly affected the number of meals eaten each day. Ninety-three percent (n = 186) of the female respondents and 77 percent (n = 10) of the male respondents ate three meals or less each day. Only 7 percent (n = 13) of the females ate more than three meals a day while 23 percent (n = 3) of the males did. These results suggest that women ate less frequently than men throughout the day which may reflect the same differences between sexes in the general population. Women tend to be more diet conscious and may skip more meals than men. Ninety-four percent (n = 184) of R.D. respondents ate three or less meals per day while 36 percent (n = 4) of the non-R.D. respondents ate more than three meals per day. This may reflect that most non-R.D. respondents were students with their lifestyle and schedules allowing them to eat more frequently. The other nine demographic variables did not significantly affect meals eaten per day.

With regard to snacks eaten, 45 percent (n = 96) of the respondents ate one or less snacks per day, 44 percent (n = 96)

94) ate more than one to 2.5 snacks per day, and 11 percent (n = 23) ate three or more snacks per day. The variable title significantly affected (p = 0.041) the number of snacks eaten per day. Respondents who were consultants ate snacks more frequently, greater than three per day, than those in other positions (n = 10, 20%). Clinical dietitian respondents ate fewer snacks with 50 percent (n = 51) eating only one or less per day. These results suggest that the different work environments affect eating patterns. Consultants may have busy schedules with traveling that interferes with eating standard meals but allows them to snack instead. The other 10 demographic variables did not significantly affect snacks eaten.

#### Caffeinated Beverages and Alcohol

Respondents who consumed one to two cups of coffee, tea or other caffeinated beverages per day comprised the largest percentage (n = 84, 40%). Twenty-seven percent (n = 57) of the respondents occasionally consume these beverages, 24 percent (n = 51) consume three or more cups per day, while only 9 percent (n = 20) never consume these beverages (Figure 10). One participant did not respond to this question. The variable R.D. status significantly affected (p = 0.001) the consumption of caffeinated beverages. The majority of R.D.'s (n = 78, 40%) drank one to two cups per day while the majority of non-R.D.'s (n = 4, 36%) only occasionally consumed these beverages. Why the non-R.D.'s



Frequency

90

80

70

60

50

40

30

Never Doccassionally 1-2 Cups/Day >/= 3 cups/day

Figure 9. Respondents by Weight

Figure 10. Respondents by Intake of Coffee, Tea or Other Caffeinated Beverage

drank less caffeinated beverages than R.D.'s can only be speculated. The other 10 demographic variables did not significantly affect caffeine consumption.

With regard to consumption of alcohol, the majority of respondents consumed alcohol (n = 150, 71%), while 29 percent (n = 62) did not consume alcohol. One individual did not respond to this question. The variable of years employed in the dietetic profession significantly affected (p = 0.030) the consumption of alcohol. Seventy-nine percent (n = 57) of respondents employed less than or equal to 5 years, 60 percent (n = 79) of those employed 5 to 10 years, and 75 percent (n = 44) of participants employed 10 years or more consumed alcohol. Why respondents employed 5 to 10 years in the dietetic profession drank significantly less alcohol than those employed less or more years can only be speculated. The other 10 demographic variables did not significantly affect alcohol consumption.

#### Diet and Type of Diet

Seventy-six percent (n = 161) of the respondents were not on a diet while 24 percent (n = 52) were on a diet. The majority of the respondents on a diet were on either a low fat, low cholesterol, low sodium, or a combination of the three (n = 26, 58%). Thirty-six percent (n = 16) were on a weight reducing or maintenance diet, and seven percent (n = 3) were on a diabetic diet.

The variable place of employment significantly affected (p = 0.031) the diet of the respondents. A higher percentage of respondents employed in the area of sports/ cardiovascular nutrition (sports clinics, wellness centers, and health clubs; n = 5, 36%) and employed by a hospital (n = 33, 30%) were on a diet than respondents employed in other areas. The other 10 demographic variables did not significantly affect the diet of respondents. The variable R.D. significantly affected (p = 0.028) the type of diet that respondents were on. The majority of R.D.'s who were on a diet (n = 26, 61%) were on a low fat/low cholesterol and/or low sodium diet, none of the non-R.D.'s were on this diet. Thirty-three percent (n = 14) of the R.D.'s on a diet were on a weight loss or maintenance diet and 5 percent (n = 2)were on a diabetic diet. The non-R.D.'s were equally divided between being on a diabetic diet and a weight loss or maintenance diet.

Dietitians employed in sports/cardiovascular nutrition and in hospitals usually have much more patient/client contact than those in consulting or administrative positions. Therefore, these results may show a desire by R.D.'s in these positions to practice the diets (low fat/low cholesterol/low sodium) which they promote to their patients/clients.

#### Participation in Exercise

Fifty-two percent (n = 111) of the respondents did not belong to a fitness/exercise center, while 48 percent (n = 102) did belong. An overwhelming majority of the respondents exercised on a regular basis (n = 198, 93%), while only 7 percent (n = 15) do not exercise on a regular basis. The variables where employed (p = 0.013) and years employed in the area of SCAN (p = 0.008) significantly affected the current participation of respondents in regular exercise. All of the respondents employed in the area of sports/ cardiovascular nutrition (sports clinics, wellness centers and health clubs) and by doctors' offices, weight loss centers or corporations exercised on a regular basis. Ninety-four percent (n = 104) of those employed by a hospital and 91 percent (n = 29) of respondents in private practice exercised regularly. As related to years employed in the area of SCAN, an overwhelming majority of those employed for five years or less (n = 181, 95%) exercised on a regular basis while 77 percent (n = 17) of those employed greater than five years do. These results may be related to the factor of age with those respondents who are employed longer being older and exercising less frequently.

With regard to frequency of exercise, 50 percent (n = 97) of the respondents exercised three to four times per week, 43 percent (n = 84) exercised one to two times per week (Figure 11). Nineteen participants did not respond to this question. In response to duration of exercise, 46

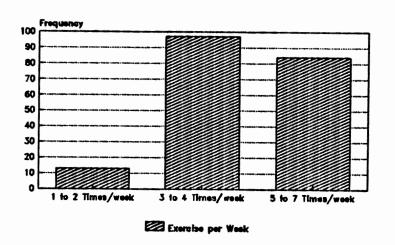


Figure 11. Respondents by Frequency of Exercise per Week

Figure 12. Respondents by Exercise Duration

percent (n = 66) of the respondents exercised for one hour or more, 43 percent (n = 61) exercised for 31 to 59 minutes, and 11 percent (n = 16) exercised for 30 minutes or less (Figure 12). Seventy participants did not respond to this question.

SCAN members were asked to specify physical activities in which they participate. Multiple answers were allowed so percentages will not total 100 percent. The respondents were almost equally divided between participation in cycling (n = 94, 44%) and running (n = 93, 44%). The next most popular physical activities were walking (n = 74, 35%), aerobic dancing (n = 70, 33%), the category of "other" physical activities (n = 58, 27%), weight training (n = 48, 23%), and swimming (n = 46, 22%) (Figure 13). The "other" category included mostly team sports such as basketball, volleyball, tennis and racketball, but also included horseback riding, hiking, rowing machine, light stretching, and yoga.

There were no significant associations between the 11 demographic variables and the participation by respondents in the activities of running or aerobic dancing. There was a significant association (p = 0.003) between the respondents' place of employment and participation in cycling. An overwhelming majority (n = 12, 86%) of those employed in the area of SCAN (sports clinics, wellness centers and health clubs) rode bicycles for exercise while significantly less of those employed in other areas did. The variable of sex

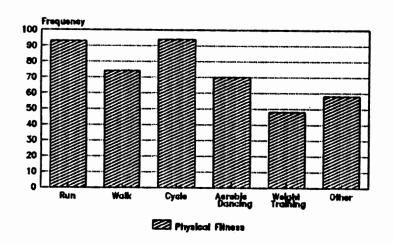
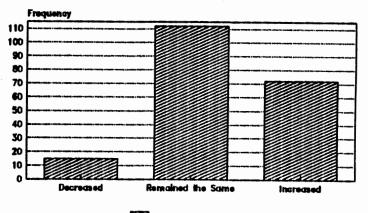


Figure 13. Respondents by Choices of Physical Fitness Activities



Change in Phy. Act.

Figure 14. Respondents by Change in Physical Activity Since Employed in SCAN

significantly affected the participation in walking (p = 0.034), swimming (p = 0.027), and "other" exercises (p = 0.024). More women walked as an activity than men, while more male respondents swam and did "other" exercises than The variable of years employed in the dietetic women. profession significantly affected the participation in walking and weight training. About half of the respondents who have been in the profession for greater than 10 years walked (n = 29, 49%) for exercise, while more of those employed for less than five years (n = 21, 29%) and greater than 10 years (n = 16, 27%) participated in weight training than those employed between 5 to 10 years (n = 11, 13%). The variable of R.D. significantly affected (p = 0.007) the participation in weight training. A higher percentage of non-R.D.'s (n = 6, 54%) weight trained than R.D.'s. variable title significantly affected (p = 0.012) the participation in "other" exercises. Respondents in administrative positions (n = 16, 47%) participated more in "other" activities than those respondents with other job titles. The variable of years employed in the area of SCAN significantly affected (p = 0.018) the participation in swimming. More respondents who have been employed in the area of SCAN for two years or less (n = 36, 27%) participated in swimming than those employed for greater than two years (n = 10, 10%). Why the significant associations existed between some of the demographic variables and physical fitness activities can only be speculated.

Fifty-nine percent (n = 126) of the respondents have participated regularly in sports or other athletic activities throughout their lives, while 41 percent (n = 86) have not. One individual did not respond to this question. The variables R.D. (p = 0.004) and age (p = 0.000) were significantly related to the respondents' participation in exercise throughout life. All of the non-R.D.'s and 56 percent (n = 109) of the R.D.'s have participated in exercise throughout their lives. With regard to the variable of age, the majority of those who were 30 years old or less (n = 60, 70%) have participated in lifetime exercise while 56 percent (n = 53) of those 31-40 years old and 39 percent (n = 12) of those 41 years old or older had. These results suggest that the younger SCAN members have been more physically active in their youth than the older members were since almost all of the SCAN members currently exercise. This may also be related to generational differences, the younger members have been raised in a more health and exercise conscious time. The remaining nine demographic variables did not significantly affect this health characteristic.

In response to a change in physical activity since being employed in the area of sports and cardiovascular nutrition, 56 percent (n=112) of the respondents stated that their physical activity has remained the same, 36 percent (n=72) have increased their physical activity, and 8 percent (n=15) have decreased their physical activity (Figure 14). Fourteen participants did not respond to this

question. The variables sex (p = 0.014) and years employed in the area of SCAN (p = 0.002) significantly affected if the respondents have changed their physical exercise since being employed in the area of SCAN. Most of the males and females have not changed their level of physical activity. However, 38 percent (n = 7) of the women have increased their physical activity while only 9 percent (n = 1) of the men have and 26 percent (n = 3) of the men have decreased their activity while only 6 percent (n = 12) of the women have. Why more women have increased their level of activity and more men have decreased their physical activity can only be speculated. With regard to years employed in the area of SCAN, the majority of those employed for five years or less (n = 107, 56%) had not changed their level of exercise while the majority of those employed for more than five years had increased their physical activity. These results may be due to differences in age with those being employed in the area of SCAN for longer being older.

#### Wellness Inventory

SCAN members promote optimal health and wellness. This section of the questionnaire was used to determine if members of SCAN practice health promotion activities.

Participants were asked to respond to statements in 10 areas of lifestyle/wellness practices. Within each area are five statements which participants answered as being either true

(1 point each) or false (0 points). The Wellness Inventory Score (WIS) key is as follows:

40-50: Healthier than average lifestyle

25-39: Average lifestyle

0-25: Below average, need for improvement

It would be expected that SCAN members would score in the healthier than average lifestyle range which 89 percent (n=191) of the respondents did (Figure 15). This suggests that an overwhelming majority of SCAN members practice good health/wellness promotion activities. Nine percent (n=20) of the respondents had average lifestyle scores while only two percent (n=4) had below average lifestyle scores.

The t-test and analysis of variance (ANOVA) were used to determine the effect of independent variables on the WIS through the calculation of mean differences. Significant differences were considered at the p = 0.05 level or less. The variable of age significantly affected (p = 0.018) the WIS, while the other 10 independent variables had no significant effect (Table I). A Duncan's multiple range test was performed to determine if significant differences existed between WIS scores based on age. A significant difference was found; SCAN members who were 41 years of age or older had lower WIS than younger members (Table II). This could be due to generational differences in health habits. With age may also come a decrease in physical activity and an increase in body weight, similar to that which is found in the general population.

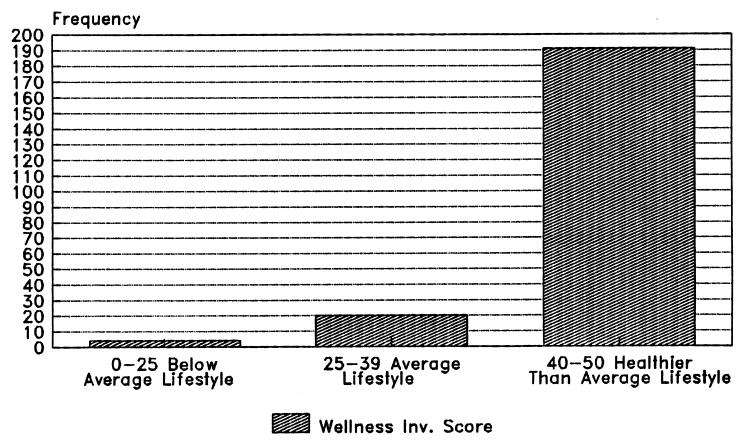


Figure 15. Respondents by Wellness Inventory Score

TABLE I

ANALYSIS OF VARIANCE TABLE FOR THE WELLNESS INVENTORY SCORE AND AGE

Age	df	Sum of Squares	Mean Square	F Value	Observed Significant Level
Between	_				
Groups	2	172.08	86.04	4.07	0.0184
Within					
Groups	207	4371.43	21.11		
Oroups	207	4371.43	24.11		
Corrected					
Total	209	4543.52			

TABLE II

MEAN SCORES FOR THE WELLNESS
INVENTORY SCORE AND AGE

Age	N	Mean Scores	Duncan
≤ 30 years	86	38.116	A
31-40 years	93	38.817	A
≥ 41 years	31	36.097	В

Two health and fitness characteristic variables significantly affected the WIS; these included: body weight and swimming. The other health and fitness characteristics had no significant effect on the WIS. A Duncan's multiple range test was also performed to determine if significant differences existed between WIS scores based on body weight. Therewas a significant difrerence found between the WIS scores based on categories of body weight (Tables III and IV). The WIS score of underweight respondents was significantly different than the WIS scores of overweight respondents. There was a significant difference (p = 0.019) between categories of body weight. Respondents that were below normal weight had a higher WIS than those of normal and above normal weight. The relationship between body weight and WIS may reflect the respondents' ability to modify their eating, exercise and other health behaviors. Those able to control their weight through modification in diet and exercise may be more willing and/or dedicated to practicing good health/ wellness behaviors. As stated earlier, dietitians who are underweight "may indicate a desire to portray an ideal weight for height image and/or the respondents' acquired ability to modify their personal eating or exercise behavior" (Martin, Holcomb and Mullen, 1987).

The second variable to significantly affect (p = 0.0004) the WIS is swimming (Table V). Respondents who swam for exercise had a higher WIS than those who did not. Why

TABLE III

ANALYSIS OF VARIANCE TABLE FOR
THE WELLNESS INVENTORY
SCORE AND WEIGHT

Weight	df	Sum of Squares	Mean Square	F Value	Observed Significant Level
Between Groups	2	242.61	121.27	4.01	0.0196
Within Groups	208	6297.44	30.27		
Corrected Total	210	6540.05			

TABLE IV

MEAN SCORES FOR THE WELLNESS
INVENTORY SCORE AND WEIGHT

Weight	N	Mean Scores	Duncan
Below normal	34	48.70	A
Normal	144	46.67	AB
Above normal	33	44.90	В

TABLE V
T-TEST PROCEDURE FOR THE WELLNESS
INVENTORY SCORE AND THE HEALTH
VARIABLE OF SWIMMING

Variable	N	Mean	Standard Deviation	t	Observed Significant Level
Participate in Swimming:					
No	166	46.37	5.89	-2.01	0.0465
Yes	46	47.89	4.05		

swimming would affect the WIS while the other six activities that respondents participated in did not can only be speculated. It seems to reflect that those participants who swim for exercise are possibly more dedicated to good health/wellness behaviors in their lives.

#### Analysis of Role Functions

The fourth and last section of the questionnaire listed role functions and activities which may have been performed by members of the SCAN practice group. The role functions were divided into 10 separate groups of major responsibility with additional functional activities delineated within the 10 groupings. The respondents stated the frequency (daily, weekly, monthly, "other", or never) with which they performed each activity. The responses given for the "other" category included: occasionally, as needed, bimonthly, semi-annually, more than twice a year, and yearly. Of the 213 total respondents, 187 answered this section of the questionnaire. For more detailed information of the role functions, please refer to the ADA's Role Delineation and Verification for Entry-level Positions in Clinical Dietetics.

## Function One: Assessment of the Nutritional Status of Client/Patient

This function contains three activities:

- 1. Evaluates nutritionally relevant data (anthropometric, laboratory, energy and intake data).
- 2. Interviews client/patient for diet history.
- Analyzes nutrition needs based on relevant data.

Within this function, the variables job title and place of employment significantly affected all three activities while MS degree significantly affected activities two and three (Table VI). The other eight independent variables did not significantly affect function one activities.

The first activity was significantly affected by job title (p = 0.039) and place of employment (p = 0.009). Sixty percent (n = 112) of the 187 respondents performed this activity daily/ weekly, 19 percent (n = 36) performed it monthly or "other", while 21 percent (n = 39) never performed this activity. Concerning job title, more clinical dietitian respondents (n = 100) performed this activity on a daily/weekly basis than the other job titles (n = 70, 70%). Fifty-one percent (n = 24) of the 47 consultant respondents also performed this activity daily/ weekly. Respondents in administrative positions (n = 31) performed the least on a daily/weekly basis (n = 13, 42%), but performed more than the other job titles on a weekly or "other basis. It was unexpected that 56 percent (n = 5) of

TABLE VI
SIGNIFICANT ASSOCIATIONS
BETWEEN FUNCTION ONE AND
DEMOGRAPHIC VARIABLES

Evaluation of the				
Nutritional Status				
of Client/Patient	Variables	P	× 2	df
Evaluate Nutri-				
tionally Relevant Data (anthro-	Job Title	0.039	13.26	6
pometric,laboratory,	flace of			
energy and intake data)	employment*	0.009	20.514	8
Interviews Client/ Patient for Diet	Job Title*	0.001	23.739	6
History	Place of			
,	Employment*	0.000	27.886	8
	MS Degree	0.006	10.332	2
Analyzes Nutrition Needs Based on	Job Title*	0.000	31.841	6
Relevant Data	Flace of			
	Employment*	0.000	39.403	8
	MS Degree	0.001	14.572	2

\*Warning: More than 20 percent of the cells have expected counts less than 5.

the nine respondents who are educators, teachers, professors, or graduate student teaching assistants performed this activity daily/weekly. This group, however, also had the largest percentage who never performed this activity (n = 3, 33%).

With regard to activity one and place of employment, respondents employed in sports clinics, wellness centers or health clubs performed this activity on a daily/weekly basis more than those employed in other areas (n = 10, 77%).

Sixty-five percent (n = 71) of the 109 dietitians employed in hospitals also performed this activity on a daily/weekly basis. Respondents employed in private practice (n = 29) performed this activity more than those in the other employment areas on a monthly or "other" basis. Fifty-six percent (n = 5) of those employed in education never do this activity, as well as, 41 percent (n = 11) of those employed by doctors offices, weight loss centers or corporations (n = 27).

The second activity was significantly affected by job title (p = 0.001), place of employment (p = 0.000), and MS degree (p = 0.006). Seventy-four percent (n = 138) of the respondents performed this activity daily/weekly, 13 percent (n = 25) performed it monthly or "other", while 12 percent (n = 23) never performed this activity. Eighty-eight percent (n = 88) of the clinical dietitian respondents (n = 100) performed this activity on a daily/weekly basis, as well as, 61 percent (n = 28) of the consulting respondents

and 58 percent (n = 18) of the administrative respondents. The nine educators performed this activity more than the other job titles on a monthly or "other" basis (n = 2, 22%) and never performed this activity (n = 3, 33%).

With regard to activity two and place of employment, 85 percent (n = 93) of those employed in hospitals performed this activity on a daily/weekly basis, as well as, 77 percent (n = 10) of those employed by a sports clinic, wellness center or health club, and 63 percent (n = 17) of those employed by a doctor's office, weight loss center or corporation. Respondents employed in private practice performed this activity the most on a monthly or "other basis (n = 9, 32%). Those employed ed education (n = 9)never performed this activity less than the other areas of employment (n = 4, 44%). Concerning activity two and MS degree, respondents who held a Masters Degree performed this activity less frequently than those who did not. Eightyfour percent (n = 81) of 97 respondents who do not have an M.S. degree performed this activity daily/weekly while 64 percent (n = 59) of those with an M.S. degree (n = 92)performed daily/weekly.

The third activity was significantly affected by job title (p = 0.000), place of employment (p = 0.000) and M.S. degree (p = 0.001). Seventy-four percent (n = 148) of the respondents performed this activity on a daily/weekly basis, 13 percent (n = 24) performed it on a monthly or "other" basis, and 8 percent (n = 15) never did this activity.

Concerning job title, more clinical dietitian respondents (n = 100) performed this activity on a daily/weekly basis than the other job titles (n = 94, 94%). Sixty-four percent (n = 30) of the 47 consulting respondents and 61 percent (n = 19) of the administrative respondents also performed this activity on a daily/weekly basis. Twenty-two percent (n = 2) of the nine educators never performed this activity.

As related to activity three and place of employment, 100 percent (n = 13) of those employed in sports clinics, wellness centers or health clubs performed this activity on a daily/weekly basis. Eighty-six percent (n = 94) of those employed in hospitals also performed it on a daily/weekly basis, as well as, 70 percent (n = 19) of those employed by a doctor's office, weight loss center or corporation; 66 percent (n = 6) of those employed in education; and 59 percent (n = 17) of those employed in private practice.

Concerning activity three and M.S. degree, respondents who had an M.S. degree performed this activity less frequently than those who did not. Ninety percent (n = 88) of the 98 respondents who did not have an M.S. degree performed this activity daily/weekly, while 67 percent (n = 62) of those with an M.S. degree (n = 92) did. This may be because those respondents with M.S. degrees may be employed in more administrative and less clinical-type positions.

#### Function Two: Nutrition Care Planning

This function contains four activities:

- 1. Identifies desired goals/outcomes of plan.
- 2. Determines nutrient and energy requirements.
- 3. Selects appropriate sources of specific nutrients.
- 4. Develops and documents nutrition care plan. Within this function, the variables job title, place of employment and M.S. degree significantly affected all four activities (Table VII). The other seven demographic variables did not have significant associations with function two activities.

The first activity was significantly affected by job title (p = 0.000), place of employment (p = 0.000) and M.S. degree (p = 0.002). The majority of the respondents (n = 149, 79%) performed this activity daily/weekly, while only 11 percent (n = 22) performed it monthly or "other" and 8 percent (n = 16) never performed this activity. Concerning job title, almost all of the clinical dietitians performed this activity on a daily/weekly basis (n = 94, 94%), while 68 percent (n = 32) of the consulting dietitians, 58 percent (n = 18) of the administrative dietitians, and 55 percent (n = 5) of the educators performed it daily/weekly. More administrators (n = 7, 23%) and consultants (n = 10, 21%) performed this activity on a monthly or "other" basis, while more educators (n = 3, 33%) and administrators (n = 6, 19%) never performed this activity.

TABLE VII
SIGNIFICANT ASSOCIATIONS BETWEEN FUNCTION
TWO AND DEMOGRAPHIC VARIABLES

Nutrition Care				
Planning	Variables	Р	× 2	df
Identifies Desired Goals/Outcomes of	Job Title*	0.000	33.611	6
Plan	Place of Employment*	0.000	35.233	8
•	MS Degree	0.002	12.080	2
Determines Nutrient	Job Title*	0.000	29.075	6
and Energy Requirements	Place of Employment*	0.000	42.117	8
	MS Degree	0.016	8.286	2
Selects Appropriate	Job Title*	0.000	33.298	6
Sources of Specific Nutrients	Place of Employment*	0.000	27.909	8
	MS Degree	0.000	19.635	2
Develops and Documents Nutrition Care Plan	Job Title*	0.000	41.004	6
Nucricion Care Fian	Flace of Employment*	0.000	45.458	8
	MS Degree	0.005	10.803	2

\*Warning: More than 20 percent of the cells have expected counts less than 5.

With regard to activity one and place of employment, those employed by sports clinics, wellness centers or health clubs (n = 12, 94%) and by hospitals (n = 96, 88%) performed this activity almost exclusively on a daily/weekly basis. Sixty-seven percent (n = 18) of respondents employed by doctors' offices, weight loss centers or corporations, 65 percent (n = 19) of those employed in private practice, and 56 percent (n = 5) employed in education also performed this activity on a daily/weekly basis. Respondents in private practice (n = 9, 31%) performed more on a monthly or "other" basis than those employed elsewhere, while those employed in education (n = 3, 33%) and employed by a doctor's office, weight loss center or corporation (n = 7, 26%) never performed this activity. Concerning M.S. degree, respondents who held a Masters Degree (n = 87, 89%) performed this activity less on a daily/weekly basis than those who did not (n = 64, 69%).

The second activity was significantly affected by job title (p = 0.000), place of employment (p = 0.000), and M.S. degree (p = 0.016). The frequency with which the activity was performed by the respondents was the same as for activity one: 80 percent (n = 147) performed it daily/weekly, 12 percent (n = 24) performed it monthly or "other", and 8 percent (n = 16) never performed this activity. The majority of clinical dietitians (n = 92, 92%) performed this activity daily/weekly, while 68 percent (n = 32) of the consulting dietitians, 58 percent (n = 18) of the

administrative dietitians, and 56 percent (n = 5) of the educators also performed daily/weekly.

As in activity one, more administrators (n = 8, 26%) and consultants (n = 10, 21%) performed this activity monthly or "other", while 33 percent (n = 3) of educators never performed this activity.

Concerning activity two and place of employment, 89 percent (n = 97) employed by hospitals, 84 percent (n = 11) employed by sports clinics, wellness centers or health clubs, 65 percent (n = 19) employed in private practice, 55 percent (n = 15) employed by doctors' offices, weight loss clinics or corporations, and 55 percent (n = 5) employed in education performed this activity on a daily/weekly basis.

Respondents in private practice (n = 9, 31%) and employed by doctors' offices, weight loss centers or corporations (n = 6, 22%) performed more on a monthly or "other" basis than those employed in the other areas. Forty-four percent (n = 4) of those employed in education never performed this activity. With regard to M.S. degree, less respondents who held a Masters Degree (n = 64, 69%) performed activity two than those who did not (n = 84, 85%).

The third activity was significantly affected by job title (p = 0.000), place of employment (p = 0.000), B.S. degree (p = 0.008), and M.S. degree (p = 0.000). Eighty percent (n = 150) of the respondents performed this activity daily/weekly, 11 percent (n = 20) performed it monthly or

"other", and 9 percent (n = 17) never performed this activity.

Concerning job title, clinical dietitians (n = 94, 94%) performed this activity the most on a daily/weekly basis, while 70 percent (n = 33) of consultants, 58 percent (n = 18) of administrators, and 55 percent (n = 5) of educators also performed it daily/weekly. Twenty-two percent (n = 2) of educators and 21 percent (n = 10) of consultants performed this activity on a monthly or "other" basis more than those with other job titles, while 26 percent (n = 8) of administrators never performed this activity.

With regard to activity three and place of employment, 100 percent (n = 13) of the respondents employed by sports clinics, wellness centers or health clubs performed this activity daily/weekly, while 86 percent (n = 94) employed by hospitals, 72 percent (n = 21) employed by a doctor's office, weight loss center or corporation, and 56 percent (n = 5) employed in education also performed daily/weekly. A higher percentage of respondents employed in private practice (n = 7, 24%) performed this activity on a monthly or "other" basis than those employed in other areas. other hand, 33 percent (n = 3) employed in education and 267 percent (n = 7) employed by a doctor's office, weight loss center or corporation never performed activity three. Concerning M.S. degree, respondents who had a Master Degree (n = 61, 66%) performed this activity less than respondents who did not have this degree (n = 90, 92%).

The fourth activity was significantly affected by job title (p = 0.000), place of employment (p = 0.000) and M.S. degree (p = 0.005). Seventy-nine percent (n = 147) of the respondents performed this activity daily/weekly, 12 percent (n = 23) performed it monthly or "other", and 9 percent (n =17) never performed this activity. Concerning job title in the first three activities, clinical dietitians (n = 94, 94%) performed this activity daily/weekly more than consulting dietitians (n = 31, 66%), administrators (n = 17, 54%) and educators (n = 5, 56%). Consulting dietitians (n = 12, 26%) performed this activity on a monthly or "other" basis more than those with other job titles, while 30 percent (n = 9) of the administrative respondents never performed it. With regard to place of employment, 100 percent (n = 13) of respondents employed by sports clinics, wellness centers or health clubs performed this activity daily/weekly, while 88 percent (n = 96) employed by hospitals, 63 percent (n = 17) employed by a doctor's office, weight loss center or corporation, 62 percent (n = 18) employed in private practice, and 44 percent (n = 4)employed in education performed it daily/weekly. A higher percentage of respondents in private practice (n = 10, 34%) performed this activity monthly or "other" than those employed elsewhere; while 30 percent of respondents employed by a doctor's office, weight loss clinic or corporation never performed it. Concerning M.S. degree, once more, respondents who had an M.S. degree (n = 63, 68%) performed

this activity less on a daily/weekly basis than those without an M.S. degree.

Function Three: Nutrition Care

Implementation

This function contains four activities:

- 1. Communicates implementation.
- 2. Monitors implementation.
- 3. Documents all aspects of plan.
- 4. Verifies implementation.

Within this function, the variables job title, place of employment, and M.S. degree significantly affected all four activities, while sex significantly affected only activities three and four (Table VIII). The other seven demographic variables did not have significant associations with function three activities.

The first activity was significantly affected by job title (p = 0.000), place of employment (p = 0.000), and M.S. degree (p = 0.045). Of the respondents, 77 percent (n = 145) performed this activity daily/weekly, 13 percent (n = 24) performed it monthly or "other", and 10 percent (n = 18) never performed this activity. Concerning job title, almost all of the clinical dietitians (n = 93, 93%) performed this activity daily/weekly, while only 66 percent (n = 31) of consultants, 51 percent (n = 16) of administrators, and 55 percent (n = 5) of educators did. Consultants (n = 12, 26%) performed more on a monthly or "other" basis than the other

TABLE VIII

SIGNIFICANT ASSOCIATIONS BETWEEN FUNCTION
THREE AND DEMOGRAPHIC VARIABLES

Nutrition Care Implementation	Variables	P	× 2	df
Communicates Implementation	Job Title*	0.000	42.793	6
	Flace of Employment*	0.000	45.724	8
	MS Degree	0.045	6.207	2
Monitors Implementation	Job Title∗	0.000	31.151	6
	Flace of Employment*	0.002	24.513	8
	MS Degree	0.019	7.906	2
Documents All Aspects of Plan	Job Title*	0.000	27.179	6
	Flace of Employment*	0.000	38.216	8
	Sex*	0.019	7.948	2
	MS Degree	0.001	13.997	2
Verifies Implementation	Job Title*	0.000	35.079	6
	Place of Employment	0.000	40.216	8
	Sex*	0.009	9.381	2
	MS Degree	0.001	14.066	2

\*Warning: More than 20 percent of the cells have expected counts less than 5.

ob titles, while 32 percent (n = 10) of the administrators never performed this activity.

In regards to activity one and place of employment, 100 percent of respondents employed by sports clinics, wellness centers or health clubs performed it daily/weekly, while 87 percent (n = 95) employed by hospitals, 65 percent (n = 19) employed in private practice, and 51 percent (n = 14) employed by a doctor's office, weight loss center or corporation did. Respondents in private practice (n = 9, 31%) performed more on a monthly or "other" basis than those employed by the other groups. Forty-four percent (n = 4) of educators and 30 percent (n = 8) of those employed by a doctor's office, weight loss center or corporation never performed activity one. In relation to M.S. degree, respondents who held a Master Degree (n = 64, 69%) performed this activity less frequently than those who did not (n = 83, 83%).

The second activity was significantly affected by job title (p = 0.000), place of employment (p = 0.002), and M.S. degree (p = 0.019). Seventy-seven percent (n = 143) of the respondents performed this activity on a daily/weekly basis, while 7 percent (n = 14) performed it monthly or "other", and 16 percent (n = 30) never performed this activity. With regards to job title, 90 percent (n = 90) of the clinical dietitians performed this activity on a daily/weekly basis, while 70 percent (n = 33) of consultants, 56 percent (n = 5) of educators, and only 48 percent (n = 15) of administrators

did. Administrators performed this activity more on a monthly or "other" basis (n = 6, 19%) or never performed this activity (n = 10, 32%).

In relation to activity two and place of employment, almost equal percentages of respondents employed by sports clinics, wellness centers or health clubs (n = 11, 84%) and employed by hospitals (n = 91, 83%) performed it on a daily/weekly basis. Seventy-two percent (n = 21) of respondents employed in private practice, 59 percent (n = 16) employed by a doctor's office, weight loss center or corporation, and 56 percent (n = 5) employed in education also performed it daily/weekly. As in the previous activity, educators (n = 4, 44%) and respondents employed by a doctor's office, weight loss center or corporation never performed this activity more than those employed in the other employment groups. Concerning M.S. degree, the same occurred as in activity one. Respondents who had an M.S. degree (n = 62, 67%) performed this activity less than those who did not have the degree (n = 83, 84%).

The third activity was significantly affected by job title (p = 0.000), place of employment (p = 0.000), M.S. degree (p = 0.001), and sex (p = 0.019). Of the respondents, 80 percent (n = 150) performed this activity daily/weekly, 8 percent (n = 15) performed it monthly or "other", and 12 percent (n = 22) never performed it. With regard to job title, the same held true as in the previous activities, with almost all of the clinical dietitians (n = 93, 93%)

performing activity three daily/weekly. The majority of the other groups also performed this activity on a daily/weekly basis: 70 percent (n = 33) of consultants, 60 percent (n = 19) of administrators, and 56 percent (n = 5) of educators. As in the previous activities, a higher percentage of administrators (n = 9, 29%) never performed this activity than those with other job titles.

In relation to activity three and place of employment,

92 percent (n = 12) of respondents employed by sports

clinics, wellness centers, or health clubs performed it

daily/weekly, while 89 percent (n = 97) employed by

hospitals, 69 percent (n = 20) employed in private practice,

59 percent (n = 16) employed by a doctor's office, weight

loss center or corporation, and 67 percent (n = 6) of educators also perform it daily/weekly. A surprising 41 percent

(n = 11) of respondents employed by a doctor's office,

weight loss center or corporation never performed this

activity.

Concerning activity three and M.S. degree, the same held true as for the previous activities with respondents who had an M.S. degree (n = 64, 69%) performing significantly less on a daily/weekly basis than those who did not have this degree (n = 88, 90%). With regard to sex, a much higher percentage of female respondents (n = 144, 81%) performed this activity daily/weekly than the male respondents (n = 7, 58%).

The fourth activity was significantly affected by job title (p = 0.000), place of employment (p = 0.000), M.S. degree (p = 0.001), and sex (p = 0.009). The majority of the respondents performed this activity on a daily/weekly basis (n = 126, 67%), while 17 percent (n = 31) performed it monthly or "other", and 16 percent (n = 30) never performed it. In relation to job title, 87 percent (n = 87) of clinical dietitians, 51 percent (n = 24) of consultants, 56 percent (n = 5) of educators, and only 48 percent (n = 15) of administrators performed this activity daily/weekly. Thirty-four percent (n = 16) of consultants and 26 percent (n = 8) of administrators performed this activity on a monthly or "other" basis, while 33 percent (n = 3) of educators and 26 percent (n = 8) of administrators never performed this activity.

With regard to activity four and place of employment, 100 percent of respondents employed by sports clinics, wellness centers or health clubs performed this activity daily/weekly, the same as for activity one. In addition, 79 percent (n = 86) of respondents employed by hospitals, 52 percent (n = 15) employed in private practice, 56 percent (n = 5) employed in education, and only 48 percent (n = 13) of those employed by a doctor's office, weight loss center or corporation also performed activity four daily/weekly. Thirty-eight percent (n = 11) of respondents in private practice performed this activity monthly or "other", while

41 percent (n = 11) employed by a doctor's office, weight loss center or corporation never performed it.

In relation to activity four and M.S. degree, the same holds true as for the previous activities. Respondents who had an M.S. degree (n = 53, 57%) performed this activity less on a daily/weekly basis than those who did not have an M.S. degree (n = 80, 81%). Concerning the variable sex, female respondents (n = 128, 72%) performed this activity more on a daily/weekly basis than the male respondents (n = 5, 41%).

# Function Four: Nutrition Care Evaluation of Client/Patient Adherence to Tolerance of Nutrition Care Plan

This function contains two activities:

with function four activities.

- Monitors outcome of plan.
- Within this function, the variables job title, place of employment, and M.S. degree significantly affected both activity one and two (Table IX). The other eight demographic variables did not have significantly associations

Makes necessary adjustments to plan.

The first activity was significantly affected by job title (p = 0.000), place of employment (p = 0.000), and M.S. degree (p = 0.000). The majority of the respondents performed this activity daily/weekly (n = 135, 72%), while 14 percent (n = 27) performed it monthly or "other", and 13

TABLE IX
SIGNIFICANT ASSOCIATIONS BETWEEN FUNCTION
FOUR AND DEMOGRAPHIC VARIABLES

Nutrition Care Evaluation: Client/ Patient Adherence to Tolerance of Nutrition Care Plan	Variables	ρ	× 2	đf
Monitors Outcome of Plan	Job Title*	0.000	29.744	6
	Place of Employment*	0.000	45.381	8
	MS Degree	0.000	20.778	2
Makes Necessary Adjustments to Flan	Job Title*	0.000	35.176	6
	Flace of Employment*	0.000	37.433	8
	MS Degree	0.003	11.619	2

\*Warning: More than 20 percent of the cells have expected counts less than 5.

percent (n = 25) never performed this activity. With regards to job title, a much greater percentage of clinical dietitians (n = 88, 88%) performed this activity daily/ weekly than those with other job titles. Fifty-six percent (n = 5) of educators, 55 percent (n = 26) of consultants, and 51 percent (n = 16) of administrators performed this activity daily/weekly. More consultants (n = 13, 28%) performed this activity on a monthly or "other" basis, while more administrators (n = 9, 29%) never performed this activity.

Concerning activity one and place of employment, respondents employed by sports clinics, wellness centers or health clubs (n = 12, 92%) and employed by hospitals (n =90, 82%) had a higher percentage performing this activity daily/weekly than the other employment areas. Fifty-six percent of both those employed in education (n = 5) and respondents employed by a doctor's office, weight loss center or corporation (n = 15) performed this activity daily/weekly, as well as, 48 percent (n = 14) of respondents in private practice. Respondents in private practice (n = 11, 38%) performed more than the other groups on a monthly or "other" basis. Forty-one percent (n = 11\_ of respondents employed by a doctor's office, weight loss center or corporation and 33 percent (n = 33) of educators never performed activity one. In relation to activity one and M.S. degree, the same held true as for the first three functions. Respondents with an M.S. degree (n = 52, 56%) performed this activity less on a daily/weekly basis than respondents without this degree (n = 84, 85%).

The second activity was significantly affected by job title (p = 0.000), place of employment (p = 0.000), and M.S. degree (p = 0.003). The majority of the respondents performed this activity daily/weekly (n = 126, 67%), 17 percent (n = 31 performed it monthly or "other", and 16 percent (n = 30) never performed it. Concerning job title, 85 percent (n = 85) of the clinical dietitians performed this activity daily/weekly, while only 56 percent (n = 5) of educators, 49 percent (n = 23) of consultants, and 42 percent (n = 13) of administrators did. Consultants (n = 15, 32%) and administrators (n = 8, 26%) performed more than the other job titles on a monthly or "other" basis. In addition, 33 percent (n = 3) of educators and 32 percent (n = 10) of the administrators never performed this activity.

With regard to activity two and place of employment, the same two groups as in activity one, those employed by a sports clinic, wellness center or health club (n = 11, 85%) and those employed by a hospital (n = 86, 79%), performed more than the other employment areas on a daily/weekly basis. Fifty-six percent (n = 5) of educators, 52 percent (n = 14) employed by a doctor's office, weight loss center or corporation, and only 38 percent (n = 11) employed in private practice performed this activity daily/weekly.

Respondents in private practice (n = 12, 41%) performed more on a monthly or "other" basis. Forty-one percent (n = 11)

of respondents employed by a doctor's office, weight loss center or corporation never performed this activity.

Concerning activity two and M.S. degree, one again, respondents who had an M.S. degree (n = 51, 55%) performed this activity less on a daily/weekly basis than respondents who did not have an M.S. degree (n = 77, 78%).

# Function Five: Nutrition Education and Referral

This function contains nine activities:

- 1. Recommends nutrition education.
- 2. Identifies all appropriate opportunities and settings for learning.
- 3. Prepares and/or selects nutrition.
- 4. Provides technical support for implementing and maintaining nutrition education processes.
- Counsels individual clients/patients concerning nutrition concepts and desired eating habits.
- 6. Gives classes and lectures in nutrition to groups.
- 7. Evaluates effectiveness of nutrition education events.
- 8. Documents individual responses to nutrition education.
- 9. Arranges for follow-up or terminates nutrition care.

Within this function, the variable job title significantly affected activities one (p = 0.000), two (p = 0.000), three (p = 0.009), four (p = 0.048), seven (p = 0.000), and eight (p = 0.021) (Table X). The variable place of employment

TABLE X
SIGNIFICANT ASSOCIATIONS BETWEEN FUNCTION
FIVE AND DEMOGRAPHIC VARIABLES

Nutrition Education and Referral	Variables	P	×2	₫f
Recommends Nutrition Education	Job Title*	0.000	37.691	6
	Flace of Employment*	0.000	33.038	8
	MS Degree	0.012	8.925	2
Identifies Appropriate	Job Title*	0.000	41.713	6
Opportunities and Settings for Learning	Place of Employment*	0.000	33.564	8
	MS Degree	0.021	7.733	2
Prepares and/or Selects Nutrition Education Materials/Exhibits	Job Title*	0.009	17.075	6
Provides Technical Support for Implementing and Maintaining Nutrition Education Processes	Job Title*	0.048	12.688	6
	Years Employed in SCAN*	0.018	11.927	4
Counsels Individual Clients/Patients on Nutrition	Years Employed in SCAN*	0.008	13.709	4
Evaluates Effectiveness of Nutrition Education Events	Job Title*	0.000	27.324	6
	Place of Employment*	0.028	17.200	8
Documents Individual Responses to Nutrition Education	Job Title*	0.021	14.962	6

\*Warning: More that 20 percent of the cells have expected counts less that 5.

significantly affected activity one (p=0.000), two (p=0.000), and seven (p=0.028), while M.S. degree was only significantly associated with activities one (p=0.012) and two (p=0.021). The variable number of years employed in the area of SCAN was significantly associated with activities four (p=0.018) and five (p=0.008). The other seven demographic variables were not significantly associated with function five activities. In addition, none of the variables had a significant effect on activity six or activity nine.

For the first activity, the majority of the respondents performed it daily/weekly (n = 115, 62%), 26 percent (n = 49) performed it monthly or "other", and 12 percent (n = 26) never performed it. Concerning job title, 77 percent (n = 77) of clinical dietitians performed this activity daily/weekly, while only 51 percent (n = 24) of consultants, 35 percent (n = 11) of administrators, and 33 percent (n = 3) of educators did. More respondents performed this activity monthly or "other" than for the activities in previous functions. Thirty-six percent (n = 17) of consultants, 32 percent (n = 10) of administrators, 22 percent (n = 2) of educators, and 20 percent (n = 20) of clinical dietitians all performed this activity monthly or "other". Forty-four percent (n = 4) of educators and 32 percent (n = 10) of administrators never performed this activity.

In relation to activity one and place of employment, the same held true as in previous functions' activities; a

higher percentage of respondents employed by sports clinics, wellness centers or health clubs (n = 10, 77%) and by hospitals (n = 73, 67%) performed this activity daily/ weekly. Fifty-six percent (n = 15) of respondents employed by a doctor's office, weight loss center or corporation and 48 percent (n = 14) employed in private practice performed it daily/weekly. A higher percentage of respondents in private practice (n = 13, 45%) and employed by hospitals (n= 29, 27%) performed this activity monthly or "other", while forty-four percent (n = 4) of educators and 33 percent (n =9) of respondents employed by a doctor's office, weight loss center or corporation never performed this activity. With regard to M.S. degree, 69 percent (n = 68) of respondents who did not have an M.S. degree performed this activity monthly or "other", while only 53 percent (n = 49) of respondents who had an M.S. degree did.

Concerning the second activity, the majority of respondents performed it daily/weekly (n = 119), 24 percent (n = 44) performed it monthly or "other", and 13 percent (n = 24) never performed it. With regard to job title, 80 percent (n = 80) of the clinical dietitians performed this activity daily/weekly while only 51 percent (n = 24) of consultants, 39 percent (n = 12) of administrators, and 33 percent of educators did. As in the first activity, a higher percentage of consultants (n = 17, 36%) and administrators (n = 8, 26%) performed this activity on a monthly or "other" basis,

while educators (n = 4, 44%) and administrators (n = 11, 35%) never performed this activity.

In relation to activity two and place of employment, the percentages of respondents in different groups performing daily/weekly, monthly or "other", and never performing were almost identical to those found in activity one. Concerning M.S. degree, the same also held true as in activity one with respondents who had an M.S. degree (n = 70, 71%) performing the activity less than those who did not have the degree (n = 51, 55%%).

Concerning the third activity, more respondents performed this activity daily/weekly (n = 142, 76%) than in activity one and two, while 15 percent (n = 29) performed it monthly or "other", and 9 percent (n = 16) never performed it. With regard to job title, one again, more clinical dietitians performed this activity daily/weekly than those with other job titles. Seventy-four percent (n = 35) of consultants, 67 percent (n = 6) of educators, and 55 percent (n = 17) of administrators performed it daily/weekly. The administrative respondents had an equal percentage (n = 7, 23%) performing monthly or "other" and never performing.

Concerning the fourth activity, 73 percent (n = 137) of the respondents performed it daily/weekly, 18 percent (n = 33) monthly or "other", and 9 percent (n = 17) never performed this activity. In relation to job title, an unexpected 89 percent (n = 8) of educators performed this activity daily/weekly, while 81 percent (n = 81) of clinical

dietitians, 64 percent (n=30) of consultants, and 58 percent (n=18) of administrators did. It would be assumed that most of the educators would perform the activities related to education as in activity four. Once again, a higher percentage of consultants (n=12, 26%) performed on a monthly or "other" basis.

With regard to the fifth activity, 68 percent (n = 127) of the respondents performed it daily/weekly, 26 percent (n = 49) monthly or "other", and only 6 percent (n = 11) never performed this activity. This activity was only significantly affected by the number of years employed in the area of SCAN. A higher percentage of respondents employed in this area for 2.5 to 5 years (n = 45, 81%) performed this activity daily/weekly than those employed two years or less (n = 74, 64%) and more than five years (n = 11, 52%).

Twenty-six percent (n = 30) of those employed two years or less, 18 percent (n = 10) employed 2.5 to 5 years, and 43 percent (n = 9) employed more than five years performed this activity on a monthly or "other" basis.

Concerning activity six, 65 percent (n = 22) of respondents performed this activity daily/weekly, 21 percent (n = 39) monthly or "other", and 14 percent (n = 26) never performed this activity. There were no significant associations between any of the 11 variables and this activity.

For the seventh activity, a higher percentage of respondents performed it daily/weekly (n = 154, 82%) than for the previous activities in function five, while 11

percent (n = 20) performed it monthly or "other" and 7 percent (n = 13) never performed it. With regard to job title, the majority of all of the groups performed this activity on a daily/weekly basis: 94 percent (n = 94) of clinical dietitians, 74 percent (n = 35) of consultants, 67 percent (n = 6) of educators, and 61 percent (n = 19) of administrators.

In relation to activity seven and place of employment, respondents employed by a hospital (n = 97, 89%) or a sports clinic, wellness center or health club (n = 11, 84%) performed more on a daily/weekly basis than those employed in education (n = 7, 78%), respondents in private practice (n = 22, 76%), and those employed by a doctor's office, weight loss center or corporation (n = 18, 67%). Number of years employed in the area of SCAN was also significantly associated with activity seven. Unlike in activity five, a higher percentage of respondents employed greater than five years (n = 17, 81%) in the area of SCAN performed on a daily/weekly basis than those employed 2.5 to 5 years (n = 43, 78%) and two years or less (n = 72, 63%). Thirty percent (n = 35) of respondents employed two years or less, 20 percent (n = 11) employed 2.5 to 5 years, and 19 percent (n = 4) employed more than five years performed this activity monthly or "other".

Concerning activity eight, a much higher percentage of respondents performed this activity on a monthly or "other" basis (n = 84, 45%) than for all of the previous function's

activities. The remaining respondents performed daily/
weekly (n = 92, 49%) or never performed (n = 11, 6%). As
related to job title, the majority of respondents still
performed this activity daily/weekly: 56 percent (n = 56)
of clinical dietitians, 56 percent of educators, and 51
percent (n = 24) of consultants. However, a higher percentage of respondents performed on a monthly or "other" basis
than for all of the previous function's activities: 64
percent (n = 20) of administrators, 42 percent (n = 42) of
clinical dietitians, 40 percent (n = 19) of consultants, and
33 percent (n = 3) of educators.

For the ninth and last activity of function five, as similarly occurred in activity eight, less respondents performed on a daily/weekly basis (n = 54, 29%) and more performed monthly or "other) (n = 100, 54%) than for all of the previous function's activities. Eighteen percent (n = 33) of the respondents never performed this activity. There were no significant associations between any of the 11 variables and this activity.

# Function Six: Professional/Educational Activity and Development

This function contains two activities:

- Use research findings and current knowledge to solve nutritional problems.
- Designs applied nutrition research projects and reports results to solve nutritional problems.

Within this function, the variable job title significantly affected activity one (p = 0.015) and two (p = 0.015) (Table XI). The variables place of employment (p = 0.-16), route to registration (p = 0.032), and M.S. degree also significantly affected activity two. The other seven independent variables were not significantly associated with any of this function's activities.

Concerning the first activity, 52 percent (n = 97) of the respondents performed it daily/weekly, 27 percent (n = 51) monthly or "other", and 21 percent (n = 39) never performed this activity. With regard to job title, less respondents performed this activity daily/weekly and more monthly or "other", or never performed it more than for any of the previous function's activities. Sixty-four percent (n = 64) of clinical dietitians performed daily/weekly, while only 45 percent (n = 21) of consultants, 29 percent (n= 9) of administrators, and 33 percent (n = 3) of educators did. An equal percentage of the administrative respondents (n = 11, 35%) performed both monthly or "other" and never performed this activity. In addition, 44 percent (n = 4) of educators, 34 percent (n = 16) of consultants, and 20 percent (n = 20) of clinical dietitians performed this activity monthly or "other".

Concerning activity two, once again, the majority of respondents performed daily/weekly (n = 118, 63%), while 21 percent (n = 40) performed monthly or "other" and 16 percent (n = 29) never performed it. In relation to job title, 73

TABLE XI
SIGNIFICANT ASSOCIATIONS BETWEEN FUNCTION
SIX AND DEMOGRAPHIC VARIABLES

Professional/ Educational Activity and Development	Variables	p	× 2	df
Use Research Findings and Current Knowledge to Solve Nutritional Problems	Job Title∗	0.015	15.810	6
Designs Applied Nutrition Research	Job Title*	0.015	15.737	6
Projects and Reports Result to Solve Nutritional Problems	Place of Employment	0.016	18.721	8
	Route to Registration	0.032	13.768	6
	MS Degree	0.003	11.609	2

\*Warning: More than 20 percent of the cells have expected counts less than 5.

percent (n = 73) of clinical dietitians, 60 percent (n = 28) of consultants, and only 44 percent (n = 4) of educators and 42 percent (n = 13) of administrators performed this activity daily/weekly. An equal percentage of both consultants (n = 12, 26%) and administrators (n = 8, 26%) performed this activity on a monthly or "other" basis.

Thirty-three percent (n = 3) of educators and 32 percent (n = 10) of administrators never performed this activity.

With regard to activity two and place of employment, a near equal percentage of respondents employed by hospitals (n = 76, 70%) and by a sports clinic, wellness center or health club (n = 9, 69%) performed it daily/weekly. In addition, an equal 52 percent of respondents employed in private practice (n = 15) and employed by a doctor's office, weight loss center or health club also performed this activity daily/weekly. A higher percentage of respondents in private practice (n = 11, 38%) and employed by a sports clinic, wellness center or health club (n = 4, 31%) performed this activity on a monthly or "other" basis. Lastly, 33 percent of both respondents employed by a doctor's office, weight loss center or corporation (n = 9) and educators never performed this activity.

In relation to activity two and M.S. degree, the same held true as for previous function's activities: respondents with an M.S. degree (n = 50, 54%) performed less on a daily/weekly basis than respondents without this degree (n =

69, 70%). Also, more respondents with an M.S. degree (n = 23, 25%) never performed this activity.

Route to registration was the fourth variable to significantly affect activity two. Respondents who completed an internship (n = 58, 68%) or a CUP program (n = 25, 67%) performed this activity more daily/weekly than respondents who completed an advance degree plus work experience (n = 17, 44%) and those who completed "other" programs (n = 8, 57%). More of the respondents who completed these last two programs never performed this activity: 34 percent (n = 13) of advanced degree plus work experience and 28 percent (n = 4) of "other" program respondents.

#### Function Seven: Health Team Functions

This function contains five activities:

- Contributes the nutrition-related expertise to health team.
- 2. Participates in grand rounds.
- 3. Meets with health team members to coordinate nutrition care of clients/patients.
- 4. Coordinates clinical dietetic activities with administrative dietetic activities.
- 5. Gives classes and lectures on nutrition-related topics for health team members.

Within this function, the variable job title significantly affected activities three (p=0.043) and five (p=0.003) (Table XII). M.S. degree and route to registration both significantly affected activity five (p=0.011) and (p=0.020) respectively. The variable number of years employed

TABLE XII
SIGNIFICANT ASSOCIATIONS BETWEEN FUNCTION
SEVEN AND DEMOGRAPHIC VARIABLES

Health Team Funtions	Variables	р	× 2	df
Participates in Grand Rounds	Years Employed in SCAN	0.028	10.850	4
Meets with Health Team Members to Coordinate Nutrition Care of Clients/Patients	Job Title*	0.043	12.979	6
Gives Classes and Lectures on Nutrition- Related Topics for Health Team Members	Job Title*	0.003	19.731	6
	Route to Registration	0.020	15.049	6
	MS Degree	0.011	9.092	2

\*Warning: More than 20 percent of the cells have expected counts less than 5.

in the area of SCAN significantly affected activity two.

The remaining six variables had no significant associations with function seven activities. None of the 11 independent variables had a significant effect on activities one and four.

Concerning the first activity, the majority of respondents performed daily/weekly ( $n=131,\ 70\%$ ), while 26 percent (n=49) performed monthly or "other", and only 4 percent (n=7) never performed it. As stated before, there were no significant associations between the 11 variables and activity one.

With regard to the second activity, the majority of respondents never performed this activity (n = 94, 50%). This activity is the first of all the previous 25 activities to have the majority of respondents not performing it. The remaining respondents performed it more monthly or "other" (n = 62, 33%) than daily/weekly (n = 31, 17%). This activity was only significantly affected by the number of years employed in the area of SCAN. The majority of respondents employed two years or less (n = 63, 55%) and those employed more than five years (n = 12, 57%) never performed this activity more than respondents employed 2.5 to 5 years (n = 20, 36%). Forty-seven percent (n = 26) of respondents employed 2.5 to 5 years, 30 percent (n = 35) employed two years or less, and only 14 percent (n = 3) employed more than five years performed this activity monthly or "other".

Concerning the third activity, 67 percent (n = 126) performed it daily/weekly, 19 percent (n = 35) monthly or "other", and 14 percent (n = 26) never performed it. With regard to job title, clinical dietitians (n = 78, 78%) performed this activity more on a daily/weekly basis than consultants (n = 27, 57%), administrators (n = 16, 52%) and educators (n = 5, 56%). An equal 21 percent (n = 10\_ of consultants performed both monthly or "other" or never performed this activity, while 26 percent (n = 8) of administrators performed it monthly or "other" and 23 percent (n = 7) never performed it.

Concerning the fourth activity, the majority of respondents never performed it (n = 124, 66%). This response is similar to that found in activity two. An equal 17 percent of the remaining respondents performed this activity daily/weekly (n = 32) and monthly or "other". As previously stated, there were no significant associations between the 11 variables and this activity.

With regard to activity five, the majority of respondents performed daily/weekly (n = 102, 54%), while 20 percent (n = 37) performed it monthly or "other", and 26 percent (n = 48) never performed it. Concerning job title, once again, a higher percentage of clinical dietitians (n = 67, 67%) performed this activity daily/weekly than consultants (n = 22, 47%), administrators (n = 10, 32%), and educators (n = 3, 33%). Forty-two percent (n = 13) of administrators and 36 percent (n = 17) of consultants never

performed this activity, while the majority of educators (n = 4, 44%) performed it monthly or "other".

In relation to activity five and M.S. degree, as held true for previous activities, respondents with an M.S. degree (n = 41, 44%) performed this activity less on a daily/weekly basis than those without an M.S. degree (n = 63, 64%). Thirty-five percent (n = 32) of M.S. degree respondents never performed this activity.

. In regards to activity five and route to registration, the majority of CUP ( $n=23,\ 64\%$ ), internship ( $n=49,\ 57\%$ ) and "other" program ( $n=8,\ 57\%$ ) respondents performed this activity daily/weekly. In contrast, the majority of advanced degree plus work experience respondents (n=18, 47%) never performed this activity and 42 percent (n=16) did it daily/weekly.

## Function Eight: Strategic Direction and Personnel Management

This function contains ten activities:

- 1. Formulates budgets for nutrition care.
- Maintains system to contain costs while preserving quality.
- Specifies criteria to measure the quality of nutritional care.
- 4. Provides the nutrition expertise in establishing goals for the health care facility.
- Establishes program goals for a clinical dietetics section.

- 6. Participates in an ongoing program of quality assurance for patient care and for delivery of services to clients/patients.
- 7. Develops orientation and training program for clinical dietetic personnel.
- 8. Supervises and evaluates personnel in clinical dietetics section.
- 9. Develops orientation and training programs for dietetic students.
- 10. Develops clinical dietetic personnel in nutrition care area.

Within this function, the variable job title significantly affected activities one (p=0.003), three (p=0.000), four (p=0.018), and seven (p=0.018) (Table XIII). Place of employment significantly affected activities one (p=0.000), two (p=0.044), seven (p=0.033), eight (p=0.000), and ten (p=0.011). M.S. degree significantly affected only activity two (p=0.043), while sex was significantly associated with activity three (p=0.001) and four (p=0.016). In addition, the R.D. status of respondents significantly affected activities three (p=0.000) and five (p=0.027). The remaining six variables were not significantly associated with function eight activities. Furthermore, none of the 11 variables had a significant affect on activities six and nine.

Concerning activity one, 49 percent (n = 92) of the respondents never performed this activity, while 36 percent (n = 67) performed it daily/weekly and 15 percent (n = 28) never performed it. With regard to job title, 72 percent (n = 34) of consultant dietitians and 67 percent (n = 6) of

TABLE XIII

SIGNIFICANT ASSOCIATIONS BETWEEN FUNCTION
EIGHT AND DEMOGRAPHIC VARIABLES

Strategic Direction and Fersonnel Management	Variables	Þ	× 2	₫f
Formulates Budgets for Nutrition Care	Job Title*	0.003	20.035	6
	Place o+ Employment*	0.000	31.930	8
Maintains System to Contain Costs While Preserving Uuality	Place of Employment*	0.044	15.868	8
	MS Degree	0.043	6.307	2
Specifies Criteria to Measure the Guality	Job Title*	0.000	26.333	6
of Nutritional Care	Sex*	0.001	13.567	2
	R.D.*	0.000	19.655	2
Provided the Nutrition Expertise in Estab- lishing Goals for the Health Care Facility	Job Title*	0.018	15.284	6
	Sex*	0.016	8.234	2
Establishes Program Goals for a Clinical Dietetics Section	R.D.*	0.027	7.257	2
Develops Orientation and Training Program for Clinical Dietetic Personnel	Job Title*	0.018	15.260	6
	Place of Employment*	0.033	16.763	8
Supervises and Evaluates Personne: in Clinical Dietetics Section	Place of Employment*	0.000	32.973	8
Develops Clinical Dietetic Personnel in Nutrition Care Area	Place of Employment*	0.011	19.844	8
Health Care Facility  Establishes Program  Goals for a Clinical  Dietetics Section  Develops Orientation and Training Program for  Clinical Dietetic  Personnel  Supervises and Evaluates  Personnel in Clinical  Dietetics Section  Develops Clinical  Dietetic Personnel in	R.D.*  Job Title*  Place of Employment*  Place of Employment*	0.027 0.018 0.033 0.000	7.257 15.260 16.763 32.973	6

\*Warning: More than 20 percent of the cells have expected counts less than 5.

educators never performed this activity, as well as, 45 percent (n = 14) of administrators and 38 percent (n = 38) of clinical dietitians. An equal 45 percent of both clinical dietitians (n = 45) and administrators performed this activity daily/weekly.

In relation to activity one and place of employment, respondents employed by a hospital (n = 56, 51%) performed the most on a daily/weekly basis, while the majority of respondents employed in other areas never performed this activity. Seventy-six percent (n = 22) of respondents employed in private practice, 70 percent (n = 19( employed by a doctor's office, weight loss center or corporation. 67 percent (n = 6) employed in education and only 33 percent (n = 36) of clinical dietitians never performed this activity.

Concerning activity two, the majority of respondents performed on a monthly or "other" basis (n = 118, 63%).

This is the first activity, as compared to all of the previous function's activities, in which the majority of respondents performed monthly or "other". Thirty percent (n = 57) of respondents never performed this activity and only 6 percent (n = 12) performed it daily/weekly.

In relation to activity two and place of employment, 70 percent (n = 76) of respondents employed by a hospital, 69 percent (n = 9) employed by a sports clinic, wellness center or health club, 59 percent (n = 17) employed in private practice, 52 percent (n = 14) employed by a doctor's office, weight loss center or corporation, and only 33 percent (n =

3) employed in education performed it monthly or "other". An equal 44 percent of respondents employed by a doctor's office, weight loss center or corporation (n = 12) and employed in education (n = 4) never performed this activity, while 41 percent (n = 12) employed in private practice, 31 percent (n = 4) employed by a sports clinic, wellness center or corporation, and only 22 percent (n = 24) employed by a hospital also never performed it.

With regard to activity two and M.S. degree, respondents who had an M.S. degree (n=50, 54%) performed less on a monthly or "other" basis than respondents who did not have this degree (n=69, 70%). More M.S. degree respondents never performed this activity than non-M.S. degree respondents dents (n=22, 22%).

Concerning activity three, the overwhelming majority of respondents never performed (n = 145, 77%) this activity.

Only 2 percent (n = 3) performed it daily/weekly and 21 percent (n = 39) performed it monthly or "other". With regard to job title, 10 percent (n = 3) of administrative respondents performed on a daily/weekly basis, while none of the respondents with other job titles did. Fifty-six percent (n = 5) of educators, 14 percent (n = 14) of clinical dietitians, and an equal 26 percent of consultants (n = 12) and administrators (n = 8) performed this activity monthly or "other". The remaining percentages never perform this activity: 86 percent (n = 86) of clinical dietitians,

74 percent (n = 35) of consultants, 64 percent (n = 20) of administrators, and 44 percent of educators.

In relation to activity three and the sex of participants, male respondents performed this activity more than female respondents. Sixteen percent (n = 2) of male respondents performed this activity daily/weekly, while only 1 percent (n = 2) of females did. Female respondents never performed (n = 138, 78%) this activity more than males (n = 7, 58%), while similar percentages of both performed monthly or "other".

With regard to activity three and R.D. status, more non-R.D.'s performed daily/weekly ( $n=2,\ 22\%$ ) than R.D.'s ( $n=2,\ 1\%$ ). Twenty-two percent (n=40) of R.D.'s performed monthly or "other" while none of the non-R.D.'s did.

Concerning activity four, most of the respondents never performed (n = 118, 63%) it, 22 percent (n = 41 performed it monthly or "other", and 15 percent (n = 28) performed it daily/weekly. With regard to job title, the majority of clinical dietitians (n = 69, 69%) and consultants (n = 33, 70%) never performed this activity. Thirty-three percent of educators and 29 percent of administrators performed it daily/weekly. In addition, forty-four percent of educators and 26 percent (n = 8) of administrators performed this activity monthly or "other".

In relation to activity four and the sex of participants, a higher percentage of men (n = 5, 41%) performed

daily/weekly than women (n = 14, 25%). However, 23 percent (n = 41) of the female respondents performed this activity on a monthly or "other" basis, while none of the men did.

With regard to activity five, 47 percent (n = 89) of the respondents never performed it, 43 percent (n = 80) performed it monthly or "other", and 10 percent (n = 18) performed it daily/weekly. Concerning place of employment, more respondents employed by a hospital performed this activity on a monthly or "other" basis than respondents employed by a sports clinic, wellness center or health club (n = 5, 38%); employed in private practice (n = 10, 34%); employed by a doctor's office, weight loss center or corporation (n = 9, 33%); and educators (n = 2, 22%). majority of respondents, other than employed by a hospital, never performed this activity: 62 percent (n = 18) employed in private practice, 56 percent (n = 5) employed in education, 54 percent (n = 7) employed by a sports clinic, wellness center or health club, and 52 percent (n = 14)employed by a doctor's office, weight loss center or corporation.

In relation to activity five and R.D. status, the same held true as for activity three; more non-R.D.'s performed daily/weekly (n = 3, 33%) than R.D.'s (n = 16, 9%). On the other hand, a much higher percentage of R.D. respondents (n = 78, 44%) performed this activity monthly or "other" than non-R.D.'s (n = 1, 11%).

Concerning activity six, 44 percent (n = 82) of respondents never performed this activity, 36 percent (n = 67) performed it monthly or "other", and 20 percent (n= 38) performed it daily/weekly. With regard to job title, thirty-three percent (n = 3) of educators and an equal 25 percent of both consultants (n = 12) and administrators (n = 8) performed this activity daily/weekly, while even less of the clinical dietitians did. On the other hand, more clinical dietitian respondents (n = 41, 41%) performed this activity monthly or "other" than administrators (n = 12, 38%), consultants (n = 12, 25%) and educators (n = 2, 22%). Forty-nine percent (n = 23) of the consultant respondents, an equal 44 percent of both clinical dietitians (n = 44) and educators (n = 44), and 35 percent (n = 35) of administrators never performed this activity.

In relation to activity six and place of employment, a much higher percentage of respondents employed by a doctor's office, weight loss center or corporation (n = 11, 41%) performed this activity daily/weekly than respondents employed in other areas. Most of the respondents employed by hospitals (n = 48, 44%) performed this activity monthly or "other" and 38 percent (n = 41) never performed this activity. The majority of respondents employed in private practice (n = 17, 59%), employed by a sports clinic, wellness center or health club (n = 7, 54%), and employed in education (n = 5, 56%) never performed this activity. In addition, 41 percent (n = 11) employed by a doctor's office,

weight loss center or corporation and 38 percent (n = 41) employed by a hospital also never performed this activity.

Concerning activity seven, once again, the majority of respondents never performed this activity (n = 109, 58%), while 33 percent (n = 62, 33%) and only 9 percent (n = 16) performed it daily/weekly. Place of employment was the only variable significantly associated with activity seven. with the previous activity, respondents employed by hospitals (n = 48, 44%) performed more on a monthly or "other" basis than those employed in education (n = 3, 33%), employed by a sports clinic, wellness center or health club (n = 4, 31%), employed in private practice (n = 5, 17%), and employed by a doctor's office, weight loss center or corporation (n = 3, 11%). The majority of respondents in each of the employment groups never performed this activity; this included: 81 percent (n = 22) of respondents employed by a doctor's office, weight loss center or corporation; 76 percent (n = 22) employed in private practice; 61 percent (n = 8) employed by a sports clinic, wellness center or health club; 56 percent (n = 5) employed in education; and 47 percent (n = 51) of clinical dietitians.

With regard to activity eight, an almost equal percentage of respondents performed monthly or "other" (n=72, 38%) and never performed this activity (n=70, 37%). The remaining 24 percent (n=45) of respondents performed this activity daily/weekly. As previously stated, there were no

significant associations between this activity and any of the 11 selected variables.

Concerning activity nine, one more, the majority of respondents never performed (n = 130, 70%) this activity, while 27 percent (n = 51) performed it monthly or "other", and only 3 percent (n = 6) performed it daily/weekly. None of the 11 selected independent variables significantly affected activity nine.

In regards to activity ten, the majority of respondents never performed this activity (n = 125, 67%), while 18 percent (n = 34) performed it daily/weekly, and 15 percent (n = 28) performed it monthly or "other". As with activities eight and nine, none of the 11 selected variables significantly affected activity ten.

# Function Nine: Identification and Management of Extraneous Influences upon Nutrition Care

#### This function contains four activities:

- 1. Identifies programs and/or sources of outside funding related to the provision of nutrition care for individual clients/patients.
- Specifies policies and procedures to insure conformance with laws, regulations, and professional guidelines related to nutrition care.
- 3. Communicates with elected representatives about legislation affecting nutrition care of individual clients/patients.
- Informs health care team about laws, regulations and professional guidelines related to nutrition care.

Within this function, the variable job title was significantly associated with activity two (p = 0.003) (Table XIV). The other 10 selected variables were not significantly associated with this function's activities.

For the first activity, 60 percent (n = 113) of the respondents never performed this activity, 30 percent (n = 56) performed it monthly or "other", and only 10 percent (n = 18) performed it daily/weekly. There were no significant associations between the 11 independent variables and this activity.

Concerning activity two, respondents performed with similar frequencies as in activity one: 60 percent (n = 112) never performed, 27 percent (n = 50) performed monthly or "other", and 13 percent (n = 25) performed daily/weekly. With regard to job title, a higher percentage of administrative respondents (n = 5, 16%) performed this activity than those with other job titles. Similar percentages of respondents for each job title group performed this activity monthly or "other"; this included: 35 percent (n = 11) of administrators, 33 percent (n = 3) of educators, 32 percent (n = 15) of consultants, and 27 percent (n = 27) of clinical dietitians. The majority of respondents from each job title group never performed this activity; 64 percent (n = 64) of clinical dietitians, 62 percent (n = 29) of consultants, 56 percent (n = 5) of educators, and 48 percent (n = 15) of administrators.

TABLE XIV

SIGNIFICANT ASSOCIATIONS BETWEEN FUNCTION NINE AND DEMOGRAPHIC VARIABLES

Identification and Management of Extra- neous Influences Upon Nutrition Care	Variables	p	× 2	₫f
Specifies Policies and Procedures to Insure Contormance with Laws, Regulations, and Professional Guidelines Related to Nutrition Care	Job Title*	0.003	20.144	6

\*Warning: More than 20 percent of the cells have expected counts less than 5.

In regards to activity three, once again, the majority of respondents never performed this activity (n = 113, 60%), while 36 percent (n = 68) performed it monthly or "other", and 3 percent (n = 6) performed it daily/weekly. There were no significant associations between the 11 selected variables and this activity.

Concerning activity four, the same held true as for the previous three activities; the majority of respondents (n = 94, 51%) never performed this activity. The remaining respondents mostly performed on a monthly or "other" basis (n = 77, 41%) and few performed daily/weekly (n = 15, 8%). None of the 11 selected variables significantly affected this activity.

## Function Ten: Food Procurement, Production, and Service

This function contains four activities:

- Consults and reviews cycle menus for compliance with therapeutic guidelines.
- Specifies standards and reviews procedures for purchasing special food/supplemental nutrient products/nutrient solutions for modified/therapeutic diets.
- Consults in specifying standards and procedures for preparing supplemental nutrient products/nutrient solutions for modified therapeutic diets.
- 4. Establishes criteria for quality food and foodservice for clients/patients.

Within this function, the variable place of employment significantly affected activity one (p = 0.003), while R.D.

status significantly affected both activities three (p = 0.014) and four (p = 0.001) (Table XV). The remaining nine independent variables were not significantly associated with any of this function's activities.

Concerning activity one, the majority of respondents never performed this activity (n = 117, 62%), while 28 percent (n = 52) performed it monthly or "other", and only 10 percent (n = 18) performed it daily/weekly. With regard to place of employment, a higher percentage of respondents employed in education (n = 3, 33%) performed this activity daily/weekly than respondents employed elsewhere. Only 36 percent (n = 39) of respondents employed by hospitals, 24 percent (n = 7) employed in private practice, and 22 percent (n = 6) employed by a doctor's office, weight loss center or corporation performed this activity monthly or "other". All of the respondents employed by a sports clinic, wellness center or health club (n = 13, 100%) never performed this activity. In addition, the majority of respondents in the rest of the employment groups never performed this activity; this included: 78 percent (n = 21) employed by a doctor's office, weight loss center or corporation, 69 percent (n = 20) employed in private practice, 56 percent (n = 5)employed in education, and 52 percent (n = 57) employed by a hospital.

In relation to activity two, 68 percent (n = 127) of the respondents never performed this activity, 24 percent (n = 45) performed it monthly or "other", and only 8 percent

TABLE XV
SIGNIFICANT ASSOCIATIONS BETWEEN FUNCTION
TEN AND DEMOGRAPHIC VARIABLES

Food Procurement, Production, and Service	Variables	P	× 2	đf
Consults and Reviews Cycle Menus for Compliance with Thera- peutic Guidelines	Flace of Employment*	0.003	23.274	8
Consults in Specifying Standards and Procedures for Preparing Supplemental Nutrient Products Nutrient Solutions for Modified/Therapeutic Diets		0.014	8.531	2
Establishes Criteria for Quality Food and Foodservice for Client/ Patients	R.D.*	0.001	14.868	2

\*warning: More than 20 percent of the cells have expected counts less than 5.

(n = 15) never performed activity two. There were no significant associations between the 11 selected independent variables and this activity.

Concerning activity three, once again, the majority of respondents never performed (n = 111, 59%) this activity, while 29 percent (n = 54) performed it monthly or "other", and 12 percent (n = 22) performed it daily/weekly. With regard to R.D. status, the majority of R.D. respondents (n = 105, 59%) never performed this activity, while an equal 44 percent of non-R.D. respondents performed both daily/weekly and never performed. In addition, 29 percent (n = 51) of R.D. respondents performed this activity monthly or "other", while only 11 percent (n = 1) of non-R.D.'s did.

For the fourth activity, as with the other activities in function ten, the majority of respondents never performed (n = 119, 64%) this activity, while 26 percent (n = 43) performed it monthly or "other", and only 11 percent (n = 20) never performed this activity. As with the previous activity, R.D. status was significantly associated with this activity. Similarly, the majority of R.D. respondents (n = 121, 69%) never performed this activity, while 44 percent of the non-R.D. respondents performed it daily/weekly. In contrast to activity three, more non-R.D. respondents (n = 3, 33%) performed this activity monthly or "other" than R.D. respondents (n = 41, 23%).

#### Testing of the Hypotheses

The hypotheses postulated in this study included:

 $H_1$ : There will be no significant association between the frequency of role functions (activities, responsibilities, or duties) of Sports and Cardiovascular Nutritionists and the following selected demographic variables:

- 1. Age
- 2. Sex
- 3. R.D. status
- 4. Route to registration
- 5. Highest degree obtained
- 6. Place of employment
- 7. Job title
- 8. Salary
- 9. Years employed in the dietetic profession
- 10. Years employed in the area of sports and cardiovascular nutrition
- 11. Years employed in present position Based on Tables VI through XV and the discussion of Role  $\\ \text{Functions, the researcher rejected } \\ \text{H}_1 \, .$

 $H_2$ : There will be no significant associations between lifestyle practices of SCAN members and the selected demographic variables as listed in  $H_1$ . Based on the discussion of the health and fitness characteristics, the researcher rejected  $H_2$ .

 $H_3$ : There will be no significant differences in the wellness inventory scores of SCAN members based on the same

variables as in  $H_1$ . Based on Tables I and II and the discussion of the wellness inventory score, the researcher rejected  $H_3$ .

#### CHAPTER V

#### SUMMARY AND RECOMMENDATIONS

The purpose of this study was to analyze the lifestyle practices and role functions of Sports and Cardiovascular Nutritionists. A five-page questionnaire was developed to obtain the data. Copies of the questionnaire were sent to 655 randomly selected members of The ADA Practice Group, Sports and Cardiovascular Nutritionists (SCAN). A total of 213 surveys were returned, with a response rate of 33 percent. The responses were analyzed using frequencies, percentages chi square, analysis of variance (ANOVA), t-test, and Dun-can's multiple range test.

#### Characteristics of Respondents

Ninety-four percent of the respondents were female. They ranged in age from less than 25 to over 60 with the majority being between 25 to 35 years old. Half of the respondents held an M.S. degree, 46 percent held only a B.S. degree, while 4 percent held Ph.D.'s. Ninety-five percent of the respondents were R.D.'s and almost half of the respondents completed a dietetic internship as their route to registration (48%).

Seventy-four percent of the participants were either clinical or consulting dietitians and hospitals employed 55 percent of the respondents. The most popular method of obtaining specialized knowledge was attendance at seminars and workshops (81%). Sixty-nine percent of the respondents were employed full-time, and 17 percent half-time. The most prevalent salary range was between \$20,001 to \$40,000 (81%).

Thirty-nine percent of the respondents have been employed from 5 to 10 years in the dietetic profession, 34 percent for less than 5 years, and 27 percent for greater than 10 years. Sixty-seven percent have been in their present position for less than three years, and 33 percent for three years or more. The majority of the respondents have been employed in the area of SCAN for two years or less (62%). Sixty-six percent of respondents spend 25 percent or less of their time on functions related to SCAN. This may reflect the number of respondents who are not employed in this specific area.

# Health and Fitness Characteristics of the Respondents

The majority of the respondents were in the normal weight range (68%) with 16 percent above normal weight and 17 percent below. Forty-eight percent of participants did take a vitamin and/or mineral supplement. Ninety-six percent of the respondents usually ate breakfast, 92 percent ate three meals or less per day, and 45 percent ate one or

less snacks per day. The majority of respondents, 71 percent, consumed alcohol and 40 percent consumed one to two cups of coffee, tea or other caffeinated beverages per day. Seventy-six percent of the respondents were not on a diet. The majority of those on a diet were on either a low fat, low cholesterol, low sodium or a combination of the three (58%). Thirty-six percent were on a weight reducing or maintenance diet, and 7 percent were on a diabetic diet.

Fifty-two percent did not belong to a fitness/exercise center and an overwhelming majority of the respondents exercise on a regular basis (93%). Fifty percent of the respondents exercised three to four times per week, 43 percent exercised five to seven times per week, and 7 percent exercised only one to two times per week. Forty-six percent exercised for 1 hour or more, 43 percent for 31 to 59 minutes, and 11 percent for 30 minutes or less. respondents were equally divided between participation in cycling (44%) and running (44%) as the most popular physical fitness activities. Fifty-nine percent of the respondents had participated regularly in sports or other athletic activities throughout their lives. In response to a change in physical activity since being employed in the area of SCAN, 56 percent of the respondents stated that their physical activity had remained the same, 36 percent had increased, while 8 percent had decreased.

#### Wellness Inventory

Eighty-nine percent of the respondents had Wellness Inventory Scores (WIS) that reflected a healthier than average lifestyle. Nine percent had average lifestyle scores and two percent had below average, need improvement scores. The variable age significantly affected the WIS, participants who were 41 years old or older had lower WIS. The health and fitness characteristics of body weight and swimming significantly affected the WIS. With regard to body weight, those respondents who were below normal weight had a significantly higher WIS than those of above normal weight. Respondents who used swimming for exercise had a higher WIS.

#### Role Functions

Function three of the questionnaire contained 10 role functions with 47 activities, duties, or responsibilities delineated within the function groupings. The respondents stated the frequency (daily, weekly, monthly, "other", or never) with which they performed each activity and these results were analyzed in relation to the 11 demographic variables. Seven out of the 11 demographic variables had a significant effect on 41 out of a total of 47 activities within the 10 role functions. The four variables, age, salary, years employed in the dietetic profession, and years employed in present position, had no significant effect on any of the role function activities.

The variable job title had a significant effect on all of the activities in function one, two, three, four and six, and was associated with some of the activities in the other functions except for function ten. Clinical dietitians performed functions one through six on a daily basis more than those with other job titles. For function seven, the majority of respondents never perform activity three "meets with health team members to coordinate nutrition care of clients/patients," but the majority of respondents perform activity five "gives classes and lectures on nutritionrelated topics for health team members." Most of the respondents never perform function eight "strategic direction and personnel management" and function nine "identification and management of extraneous influences upon nutrition care." Administrators, on the other hand, performed function nine activity two "specifies policies and procedures to insure conformance with laws, regulations, and professional guidelines related to nutrition care" on a monthly or "other" basis.

The variable place of employment significantly affected all activities in functions one, two, three, and four and was associated with some of the activities in functions five, six and ten. Within these functions, respondents employed by a hospital or in the area of sports/cardio-vascular nutrition (sports clinics, wellness centers, health clubs) performed the activities on a daily basis more than those employed by other places, except for in function ten.

For function ten, almost all of the respondents never perform it.

The variable of highest degree obtained significantly affected all of the activities in functions two, three and four, and was associated with some of the activities in functions one, five, six, seven, eight and ten. For the above functions, respondents with only a B.S. degree performed the activities more on a daily basis than those with an M.S. degree, except for functions eight and ten. For function eight "strategic direction and personnel management," those with M.S. degrees performed it mostly on a monthly and/or "other" basis or never performed it, while most respondents with only a B.S. degree never performed it. For function ten "food procurement, production, and service," the majority of those with only a B.S. degree never performed it.

The variable sex of respondents significantly affected some of the activities in function three and eight. For function three "nutrition care implementation," more women preform these activities on a daily basis than men. For function eight "strategic direction and personnel management," most never performed it, but men performed it more on a daily/weekly, monthly and/or "other" basis.

The variable route to registration was significantly associated with some of the activities in functions six and seven. For function six "professional/educational activity and development," more CUP and internship graduates do this

daily, while most of those from advanced degree programs never do it. For function seven "health team functions," more CUP and internship graduates do these activities daily, while half of those from advanced degree programs performed them daily and the other half never did it.

The number of years employed in the area of SCAN was significantly associated with some of the activities in functions five and seven. For function five "nutrition education and referral," those employed for greater than two years performed these activities on a daily basis more than those who have been employed for two years or less. For function seven "health team functions," most of the respondents never performed these activities but those employed for greater than two to five years performed more on a monthly and/or "other" basis.

The R.D. status of respondents was significantly associated with some of the activities in functions eight and ten. For both of these functions, R.D.'s performed the activities more on a monthly and/or "other" basis or never performed them more than non-R.D.'s who performed the activities mostly on a daily basis or never performed them.

#### Testing the Hypotheses

Based on the effects of the 10 selected demographic variables (age, sex, R.D. status, route to registration, highest degree obtained, place of employment, job title, years employed in the dietetic profession, years employed in

the area of sports and cardiovascular nutrition, and years employed in present position) had on the role functions' activities, as well as the 13 lifestyle practices, the researcher rejected  $\rm H_1$  and  $\rm H_2$ . In addition, based on the effect that the variable age had on the wellness inventory score, the researcher rejected  $\rm H_3$ .

#### Recommendations

#### Questionnaire

Suggestions for future studies include the following: the questionnaire was lengthy and perhaps too complex to complete in 20 minutes; this may have contributed to the low response rate. There were actually two studies in this research: role functions and lifestyle practices. A shorter questionnaire concentrating on only one or two areas would make it possible for more accurate and detailed information to be received with a better response rate.

The frequency of the role functions should be collapsed on the questionnaire to daily/weekly, monthly, yearly, and never for ease in analysis. In addition, including a ranking of role functions by respondents as to the level of importance would aid in better understanding of responsibilities education needs. The questionnaires were mailed in October, around the time of The A.D.A. National Convention; avoiding this time of the year may have increased the response rate. Also, a follow-up mailing is recommended to increase the rate of response.

#### Other Recommendations

This study included all of the respondents, regardless of whether or not they were employed in the area of SCAN.

Narrowing future studies to only those employed in the specific area of sports/cardiovascular/wellness nutrition would be helpful in better understanding this core group of members. This could be achieved by sending a postcard to the sample population to determine which respondents are working in this area before sending research instrument.

Specifying the subject (e.g. exercise physiology) of seminars/workshops and other methods of obtaining specialized knowledge is recommended. Also more questions related to the use of vitamin/mineral supplements should be included, such as: why they use, what type, and if they promote the usage of supplements to their clients.

Further studies would be beneficial in gathering information related to members' specific interests as to why they joined SCAN. Was it for personal or professional reasons?

More specific questions need to be asked concerning education and what members feel is most important in developing standards of practice, especially in relation to the present credentialing investigation of SCAN.

In this study, educators and students were included in the sample. Their data may have skewed the role function significant association values. It is recommended in future studies to only include respondents actually working in the area of research.

#### Implications

SCAN members promote optimal health and wellness. This study found that SCAN members have a healthier than average lifestyle and that they live and participate in the health and wellness activities that they promote to their clients/patients. It would seem that these activities are a necessary part of their role when interacting with clients/patients and other health professionals.

The demand for sports and cardiovascular nutrition specialists is increasing and the SCAN Practice Group is growing rapidly. There is a need for increased research information about SCAN members to help form a basis for the definition of their roles and scope of practice. It is hoped that the information obtained from this research will be useful to educators, students, dietitians, and other health care professionals to better understand the roles, needs and future challenges of this ADA Practice Group.

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APPENDIXES

APPENDIX A

CORRESPONDENCE



### Oklahoma State University

DEPARTMENT OF FOOD, NUTRITION AND INSTITUTION ADMINISTRATION COLLEGE OF HOME ECONOMICS

STILLWATER, OKLAHOMA 74078-0337 HOME ECONOMICS WEST 425 405-624-5039

September 15, 1988

#### Dear SCAN Member:

We are conducting an "Analysis of Role Functions and Lifestyle Practices of Sports and Cardiovascular Nutritionists" and request your participation in this study. Your participation in this endeavor will help us answer some key questions which have not been answered in past research, such as 1) What functions are performed by SCAN members in their jobs? and 2) What are SCAN members' lifestyle and wellness practices? You have been chosen as one of 655 SCAN members invited to participate in this study.

The information you supply to us will be held in strict confidence. At no time will you or the facilities you serve be identified in the research results. The code number on your questionnaire is merely to assist the researcher in tabulating data and to follow-up responses.

Please take time from your busy schedule to complete this questionnaire. It will take approximately 25 minutes. Your time and effort are greatly appreciated. Please return the questionnaire on or before Friday, October 7, 1988. Kindly refold, staple, and return completed questionnaire. Postage is furnished for your convenience. Thank you for your time and professional assistance.

Sincerely,

Jenifer A. Mitchell Masters Degree Student Lea L Ebro, Ph.D., R.D. Professor, FNIA Department



APPENDIX B

RESEARCH INSTRUMENT

#### Analysis of Role Functions and Lifestyle Practices of Sports and Cardiovascular Nutritionists 1. General Information: Directions: Please check or fill in the appropriate answers. It is important that all of the questions are answered. Title of current position: Type of business or institution where employed: 2) 3) Sex: (1) female (1) under 25 (7) 51 to 55 4) Age: (4) 36 to 40 (8) 56 to 60 (2) 25 to 30 (5) 41 to 45 (6) 46 to 50 (3) 31 to 35 (9) over 60 Registration status: (1) R.D. (2) Non-R.D. Route to registration: (1) CUP (3) Advanced degree plus work experience (2) Internship (4)Other Degree(s) obtained and major emphasis: (1) Bachelors (2) Masters (3) Doctorate How did you obtain specialized sports and cardiovascular nutrition knowledge? Please check all that apply: Seminars/workshops 4) Work experience Advanced degree 5) Mass media (e.g. Journals, newsletters, etc.) 2) 3) Non-degree courses 6) Other (please specify) Present employment status: Full time (36 hours per week or more) Less than half time 1) 31 Half time or more but less than full time (20-35 hrs/week) Not employed Number of years employed in dietetic profession: 11) Number of years employed in the area of sports and cardiovascular nutrition: 12) Number of years in present position: 13) Percent of time devoted to sports and cardiovascular nutrition in your present position: 14) Salary level per year: (based on full-time) (1) Under \$20,000 (3) \$30,001 to \$40,000 (5) \$50,001 to \$60,000 (2) \$20,001 to \$30,000 (4) \$40,001 to \$50,000 (6) Over \$60,000 II. Health Information Directions. Please check or fill in the appropriate answers. It is important that you answer all of the questions. 1) According to height and weight charts, your weight falls at: (1) 11%-20% above normal (3) Normal (5) 11%-20% below normal (4) 10% below normal (2) 10% above normal 2) Do you take a vitamin and/or mineral supplement(s)? \_(1) yes (2) no 3) Are you currently taking any medications? \_(1) yes (2) no 4) Do you usually eat breakfast? (2) no \_(1) yes 5) How many meals do you eat per day? 6) How many between meal snacks do you eat per day? 7) Do you drink coffee, tea or caffeinated beverages? (2) Occasionally (1) never (3) 1-2 cups/day (4) 3-4 cups/day (5) More than 4 cups/day 8) Do you drink alcohol? (2) no Are you presently on a diet? (1) yes (2) no If yes, please specify type of diet: (2) no 10) Do you belong to a fitness/exercise center? (1) yes 11) Do you exercise on a regular basis? (2) no (1) yes If yes, please answer the following: What activities do you participate in: (please specify) (times/week and duration) How often do you exercise: 12) Have you participated regularly in sports or other athletic activities throughout your life? \_\_\_\_(1) yes \_\_\_\_(2)no If yes, please explain briefly: 13) Have you been more physically active since you began your employment in the area of sports and

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cardiovascular nutrition: (1) increased

(2) decreased \_\_\_\_\_(3) remained the same

#### III. Wellness inventory

This section was developed by John Cavendish at West Virginia University and has been documented as valid in assessing wellness practices. Please put a T if it is true for you or F if it is false for you beside each statement. It is important that you answer all the questions.

1)	Alcohol Use
-,	I drink less than two drinks a day.
	In the past year, I have not driven an automobile after having more than two drinks.
	When I'm under stress, I do not drink more than usual.
	I do not do things when I'm drinking that I later regret.
	I be not a considered an arbitrary tract regret.
~	I have not experienced any problem because of my drinking in the past.
2)	Tobacco Use
	I have never smoked cigarettes.
	I haven't smoked cigarettes in the past year.
	I do not use any form of tobacco (pipes, cigars, chewing tobacco)
	I smoke only low tar and nicotine cigarettes.
	I smoke less than one pack of cigarettes a day.
3)	Blood Pressure
	I have had my blood pressure checked within the last six months.
	I have never had high blood pressure.
	I do not currently have high blood pressure.
	I make a conscious effort to avoid salt in my diet.
	There is no history of high blood pressure in my family.
41	Weight/Body Fat
4)	According to height and weight charts, I am in the average range.
	I have not been on a weight reduction diet in the past year.
	There is no place on my body that I can pinch an inch of fat.
	I am satisfied with the way my body looks.
	None of my family, friends or health care professionals has ever urged me to lose weight.
5)	Physical Fitness
	I do some form of vigorous exercise for at least 30 minutes three times a week or more.
	My resting pulse is 80 beats a minute or less.
	I don't get fatigued easily while doing physical work.
	I engage in some recreational sport such as tennis or swimming on a weekly basis.
	I would say that my level of physical fitness is higher than most of the people in my age group.
6)	Stress/Anxiety Level
-	I find it easy to relax.
	I am able to cope with stressful events as well as or better than most people.
	I do not have trouble falling asleep or waking up.
	I rarely feel tense or anxious.
	I have no trouble completing tasks I have started.
71	Car Safety
''	
	l always use seat belts when I drive.
	l always use seat belts when I am a passenger.
	I have not had an automobile accident in the past three years.
	I have not had a speeding ticket or other moving violation for the past three years.
	I never ride with a driver who has had more than two drinks.
8)	Relationships
	I am married and living with my spouse.
	I have a lot of close friends.
	I am able to share my feelings with my spouse and/or other family members.
	When I have a problem, I have other people with whom I can talk it over.
	Given a choice between doing things by myself or with others, I usually choose to do things with
	others.
9)	Rest/Sleep
٠,	i almost always get between seven and nine hours of sleep a night.
	I wake up few, if any, times during the night.
	I feel rested and ready to go when I get up in the morning.
	Most days, I have a lot of energy.
	Even though I sometimes have a chance, I never take naps during the day.

CONTINUE TO NEXT PAGE

10)	Life Satisfaction If I had my life to live ove	•		, .		
	I've accomplished most					
	I can't think of an area in	my life that re	ally disappoint	s me.		
	As compared to the peop	alo with whom	l army up. I fo	el l've done se we	il or better than	most of
	them with my life.	DIG MILLI MITOTI	i i giew up, i ie	ei i ve done as we	ii oi bettei tiiaii i	nost of
IV. Role	Functions					
	tion lists the functions and activities					
	trition. (For more detailed definition					
	tion and Verification for Entry-level P cy with which the activity is performe					
equein	sy with which the activity is performe	d. II the land	don does not a	ippiy, piease ilidic	ate such on the	questionnaire.
		Never	Daily	Weekly	Monthly	Other (please specify frequency)
1)	Assessment of the nutritional					
	status of client/patient:					
	a) Evaluation of nutritionally					
	relevant data					
	anthropometric data					
	laboratory data     energy and intake data					
	b) Interviews with patient					-
	client to collect diet history					
	c) Analyzes nutrition needs					
	based on relevant data					
2)	Nutrition care planning:					
	a) Identifies desired goals/					
	outcomes of plan					
	b) Determines nutrient and					
	energy requirements c) Selects appropriate sources(s	e)				***************************************
	of specific nutrients	-,				
	d) Develops nutrition care plan		<del></del>			
	for client/patient and docu-					
	ments in the medical record					
3)	Nutrition care implementation:					
	a) Communicates implementa-					
	tion b) Monitors implementation			-		
	c) Documents all aspects					-
	of plan					
	d) Verifies implementation	<del></del>		-		
4)	Nutrition care evaluation:					
	<ul> <li>a) Client/patient adherence to</li> </ul>					
	tolerance of nutrition care pla	n				
	1. Monitors outcome of plan					
	2. Makes necessary adjust-					
5)	ments to plan  Nutrition Education and Referral:				-	
3)	a) Recommends nutrition					
	education					
	b) Identifies all appropriate		-			
	opportunities and settings for	•				
	learning					
	a) December and/or colocte sutrit	ion				

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education materials/exhibits

			Never	Daily	Weekly	Monthly	Other (please specify
	d)	Provides technical support for menting and maintaining nut tion education processes					frequency)
	e)	Counsels individual clients/ patients concerning nutrition concepts and desired eating habits					
	f)	Gives classes and lectures in nutrition to groups	1		<del></del>		<del></del>
	g)	Evaluates effectiveness of nutrition education events	<b> -</b>			<del></del>	
	h)	Documents individual respor	1-				
	i)	Arranges for follow-up or terminates nutrition care					
6)	anc	fessional/Educational Activity i Development:					
	a)	Use research findings and current knowledge to solve nutritional problems					
	b)	Designs applied nutrition research projects and reports results to solve nutritional problems	3				
7)	Hea	problems aith Team Functions:					<del></del>
	a)	Contributes the nutrition-related expertise to health team	ted.				
	b)	Participates in grand rounds Meets with health team mem	<u> </u>				
	c)	coordinate nutrition care of clients/patients	bers to				
	d)	Coordinates clinical dietetic activities with administrative dietetic activities		····			
	e)	Gives classes and lectures on utrition-related topics for health team members	n				
8)		ategic Direction and Personnel					
	a)	nagement: Formulates budgets for nutrition care					
	b)	Maintains system to contain of while preserving quality	costs		<del></del>		
	c)	Specifies criteria to measure quality of nutritional care	the				
	d)	Provides the nutrition experti establishing goals for the headare facility	alth				***************************************
	e)	Establishes program goals for clinical dietetics section	r a		· · · · · · · · · · · · · · · · · · ·		
	ŋ	Participates in an ongoing pr of quality assurance for patie care and for delivery of service to clients/patients	nt				41 P At a Rabbin Albertania

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		Never	Daily	Weekly	Monthly	Other (please specify frequency)
	g)	Develops orientation and training program for clinical dietetic personnel			· · ·	
	h)	Supervises and evaluates personnel in clinical dietetics section				
	i)	Develops orientation and training programs for dietetic students				
	j)	Develops clinical dietetic personnel in nutrition care area				
9)		ntification and Management of Extraneous sences upon Nutrition Care:				
	a)	Identifies programs and/or sources of outside funding related to the	•			
		provision of nutrition care for individual clients/patients				
	b)	Specifies policies and procedures to insure conformance with laws, regulations, and professional guide-				
	C)	lines related to nutrition care  Communicates with elected representatives about legislation affecting nutrition care of individual clients/			-	
	d)	patients Informs health care team about laws, regulations and professional guide-				
10)	Foo	lines related to nutrition care d Procurement, Production,	-	•		<del></del>
	and	Service:				
	a)	Consults and reviews cycle menus for compliance with therapeutic guidelines				
	b)	Specifies standards and reviews procedures for purchasing special food/supplemental nutrient products/ nutrient solutions for modified/ therapeutic diets				
	<b>c</b> )	Consults in specifying standards and procedures for preparing supplemental nutrient products/nutrient solutions for modified/				
	d)	therapeutic diets  Consults in specifying standards and procedures for preparing supplemental nutrient products/				
	e)	nutrient solutions for modified/therapeutic diets  Establishes criteria for quality food and foodservice for				, . <del></del>
		clients/patients			-	

#### V. Job Description

Directions: Please attach a copy of your current job description or write a brief description of your position.

THANK YOU FOR YOUR ASSISTANCE

#### APPENDIX C

FREQUENCIES AND PERCENTAGES OF
WELLNESS INVENTORY SCORE

### Key for Wellness Inventory Score

0 = False 1 = True

W1	=	1)	Alcohel Use
			In the past year, I have not driven an automobile after having more than two drinks.
			When I'm under stress, I do not drink more than usual.
			I do not do things when I'm drinking that I later regret.
W2	=	_	have not experienced any problem because of my drinking in the past.
W Z		Z)	Tobacco Use
			I have never smoked cigarettes.   I haven't smoked cigarettes in the past year.
			do not use any form of tobacco (pipes, cigars, chewing tobacco)
			I smoke only low tar and nicotine cigarettes.
			I smoke less than one pack of cigarettes a day.
W3	=	3)	Blood Pressure
			have had my blood pressure checked within the last six months.
			I have never had high blood pressure.
			I do not currently have high blood pressure. I make a conscious effort to avoid salt in my diet.
			There is no history of high blood pressure in my family.
W4	=	4)	Weight/Body Fet
		•	According to height and weight charts, I am in the average range.
			I have not been on a weight reduction diet in the past year.
			There is no place on my body that I can pinch an inch of fat.
			am satisfied with the way my body looks.
W5	=	•	None of my family, friends or health care professionals has ever urged me to lose weight.
"		3)	Physical Fitness  I do some form of vigorous exercise for at least 30 minutes three times a week or more.
			My method rudes is Aft heats a minute or less
			My resting pulse is 80 beats a minute or less.  I don't get fatigued easily while doing physical work.
			lengage in some recreational sport such as tennis or swimming on a weekly basis.
T 7.C			I would say that my level of physical fitness is higher than most of the people in my age group.
W6	=	6)	Stress/Anxiety Level
			I find it easy to relat.
			I am able to cope with stressful events as well as or better than most people.  I do not have trouble falling seleep or waiting up.
			I rarely feel tense or anxious.
			I have no trouble completing tasks I have started.
W7	=	מ	Car Salety
			I always use seat belts when I drive.
			always use seat belts when I am a passenger.
			have not had an automobile accident in the past three years.
			I have not had a speeding ticket or other moving violation for the past three years.  I never ride with a driver who has had more than two drinks.
W8	=		Relationships
		•	I am married and living with my socuse.
			I have a lot of close friends.
			I am able to share my feelings with my spouse and/or other family members.
			When I have a problem, I have other people with whom I can talk it over.
			Given a choice between doing things by myself or with others, I usually choose to do things with
W9	=	_	others.
WJ	_	3)	Rest/Sleep I almost always get between seven and nine hours of sleep a night.
			I wake up few, if any, times during the night.
			I feel rested and ready to go when I get up in the morning.
			Most days, I have a lot of energy.
			Even though I sometimes have a chance, I never take naps during the day.
71.0	_		
710	=	10)	Life Satisfaction
			If I had my life to live over, I wouldn't make all that many changes.
			I've accomplished most of the things that I've set out to do in my ille I can't think of an area in my ille that really disappoints me.
			I am a happy person.
			As compared to the people with whom I graw up, I feel five done as well or better than most of
			them with my life.

SAS

W1_1	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	PERCENT
0 1	2 7 206	3.3 96.7	7 213	3.3 100.0
W1_2	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0	2 25 188	11.7 88.3	25 213	11.7 100.0
W1_3	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0 1	2 15 198	7.0 93.0	15 213	7.0 100.0
W1_4	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0 1	2 16 197	7.5 92.5	16 213	7.5 100.0
W1_5	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
O 1	2 15 198	7.0 93.0	15 213	7.0 100.0
W2_1	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0 1	62 151	29 . 1 70 . 9	62 213	29.1 100.0
W2_2	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0 1	2 7 206	3.3 96.7	7 213	3.3 100.0
W2_3	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0 1	2 2 211	0.9 99.1	2 213	0.9 100.0
W2_4	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0 1	2 161 52	75.6 24.4	161 213	75.6 100.0
W2_5	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0 1	2 74 139	34.7 65.3	74 213	34.7 100.0

W3_1	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0	2 18 195	8.5 91.5	18 213	8.5 100.0
W3_2	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0	2 33 180	15.5 84.5	33 213	15.5 100.0
w3_3	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0 1	2 9 204	4.2 95.8	9 213	4.2 100.0
W3_4	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0	2 40 173	18.8 81.2	40 213	18.8 100.0
w3_5	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0 1	2 144 69	67.6 32.4	144 213	67.6 100.0
W4_1	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0	2 34 179	16.0 84.0	34 213	16.0 100.0
W4_2	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0 1	2 67 146	31.5 68.5	67 213	31.5 100.0
W4_3	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0	2 146 67	68.5 31.5	146 213	68.5 100.0
W4_4	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0 1	104 109	48.8 51.2	104 213	48.8 100.0
W4_5	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0	2 65 148	30.5 69.5	65 213	30.5 100.0

W5_1	FREQUENCY	PERCENT	FREQUENCY	PERCENT
0 1	2 32 181	15.0 85.0	32 213	15.0 100.0
W5_2	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0 1	16 197	7.5 92.5	16 213	7.5 100.0
W5_3	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0 1	2 20 193	9.4 90.6	20 213	9.4 100.0
W5_4	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0	2 86 127	40.4 59.6	86 213	40.4 100.0
W5_5	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0	2 43 170	20.2 79.8	43 213	20.2 100.0
W6_1	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0	2 78 135	36.6	78 213	36.6 100.0
		63.4	213	100.0
W6_2	FREQUENCY	63.4 PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
W6_2 			CUMULATIVE	CUMULATIVE
ö	FREQUENCY 2 38	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
ò	FREQUENCY 2 38 175	PERCENT 17.8 82.2	CUMULATIVE FREQUENCY 38 213	CUMULATIVE PERCENT  17.8 100.0
W6_3	FREQUENCY  2 38 175  FREQUENCY  2 49	PERCENT  17.8 82.2  PERCENT	CUMULATIVE FREQUENCY  38 213  CUMULATIVE FREQUENCY  49	CUMULATIVE PERCENT  17.8 100.0  CUMULATIVE PERCENT
W6_3	FREQUENCY  2 38 175  FREQUENCY  2 49 164	PERCENT  17.8 82.2  PERCENT  23.0 77.0	CUMULATIVE FREQUENCY  38 213  CUMULATIVE FREQUENCY  49 213  CUMULATIVE	CUMULATIVE PERCENT  17.8 100.0  CUMULATIVE PERCENT  23.0 100.0  CUMULATIVE
W6_3	FREQUENCY  2 38 175  FREQUENCY  2 49 164  FREQUENCY  2 129	PERCENT  17.8 82.2  PERCENT  23.0 77.0	CUMULATIVE FREQUENCY  38 213  CUMULATIVE FREQUENCY  49 213  CUMULATIVE FREQUENCY  129	CUMULATIVE PERCENT  17.8 100.0  CUMULATIVE PERCENT  23.0 100.0  CUMULATIVE PERCENT

W7_1	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0	2 21 192	9.9 90.1	21 213	9.9
W7_2	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0	2 37 176	17.4 82.6	37 213	17.4 100.0
₩7_3	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0 1	2 38 175	17.8 82.2	38 213	17.8 100.0
W7_4	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0	2 63 150	29.6 70.4	63 213	29.6 100.0
W7_5	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0	2 58 155	27.2 72.8	58 213	27.2 100.0
W8_1	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
w8_1	FREQUENCY 2 78 135	PERCENT 36.6 63.4	CUMULATIVE FREQUENCY 78 213	CUMULATIVE PERCENT
<del>.</del>	2 78 135	36.6	FREQUENCY 78	96.6
0	2 78 135	36.6 63.4	FREQUENCY 78 213 CUMULATIVE	PERCENT 36.6 100.0
W8_2	2 78 135 FREQUENCY 2 85 128	36.6 63.4 PERCENT	FREQUENCY  78 213  CUMULATIVE FREQUENCY  85	PERCENT  36.6 100.0  CUMULATIVE PERCENT
W8_2	2 78 135 FREQUENCY 2 85 128	36.6 63.4 PERCENT	FREQUENCY  78 213  CUMULATIVE FREQUENCY  85 213  CUMULATIVE	36.6 100.0 CUMULATIVE PERCENT 39.9 100.0
0 1 Wa_2	2 78 135  FREQUENCY  2 85 128  FREQUENCY  3 24 188	36.6 63.4 PERCENT 39.9 60.1	FREQUENCY  78 213  CUMULATIVE FREQUENCY  85 213  CUMULATIVE FREQUENCY	36.6 100.0 CUMULATIVE PERCENT 39.9 100.0 CUMULATIVE PERCENT
0 1 Wa_2	2 78 135 FREQUENCY 2 85 128 FREQUENCY 3 24 188	36.6 63.4 PERCENT 39.9 60.1 PERCENT	FREQUENCY  78 213  CUMULATIVE FREQUENCY  85 213  CUMULATIVE FREQUENCY  24 212  CUMULATIVE	36.6 100.0  CUMULATIVE PERCENT  39.9 100.0  CUMULATIVE PERCENT  11.3 100.0
Wa_2	2 78 135  FREQUENCY  2 85 128  FREQUENCY  3 24 188  FREQUENCY  2 11	36.6 63.4 PERCENT 39.9 60.1 PERCENT 11.3 88.7	FREQUENCY  78 213  CUMULATIVE FREQUENCY  85 213  CUMULATIVE FREQUENCY  24 212  CUMULATIVE FREQUENCY	36.6 100.0  CUMULATIVE PERCENT  39.9 100.0  CUMULATIVE PERCENT  11.3 100.0  CUMULATIVE PERCENT

W9_1	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0	64 149	30.0 70.0	64 213	30.0 100.0
W9_2	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
ó	2 39 174	18.3 81.7	39 213	18.3 100.0
w9_3	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0 1	2 50 163	23.5 76.5	50 213	23.5 100.0
W9_4	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0 1	2 24 189	11.3 88.7	24 213	11.3 100.0
W9_5	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0	2 87 126	40.8 59.2	87 213	40.8 100.0
W10_1	FREQUENCY	PERCENT	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
0	2 46 167	21.6 78.4	46 213	21.6 100.0
0 1 W10_2	46	21.6 78.4 PERCENT		21.6 100.0
1	46 167	78.4	213	100.0
1 ₩10_2 	FREQUENCY	78.4	CUMULATIVE FREQUENCY	CUMULATIVE PERCENT
1 W10_2 	46 167 FREQUENCY 2 2 54 159	78.4 PERCENT 	213  CUMULATIVE FREQUENCY 54 213  CUMULATIVE	CUMULATIVE PERCENT 25.4 100.0 CUMULATIVE
W10_2	46 167 FREQUENCY 2 54 159 FREQUENCY 2 81	78.4  PERCENT  25.4 74.6  PERCENT	CUMULATIVE FREQUENCY  54 213  CUMULATIVE FREQUENCY	CUMULATIVE PERCENT  25.4 100.0  CUMULATIVE PERCENT
W10_2	FREQUENCY  2 54 159  FREQUENCY  2 81 132	78.4  PERCENT  25.4 74.6  PERCENT  38.0 62.0	CUMULATIVE FREQUENCY  54 213  CUMULATIVE FREQUENCY  81 213	CUMULATIVE PERCENT  25.4 100.0  CUMULATIVE PERCENT  38.0 100.0
W10_2	FREQUENCY  2 54 159  FREQUENCY 2 81 132  FREQUENCY 2 11	78.4  PERCENT  25.4 74.6  PERCENT  38.0 62.0	CUMULATIVE FREQUENCY  54 213  CUMULATIVE FREQUENCY  81 213  CUMULATIVE FREQUENCY	CUMULATIVE PERCENT  25.4 100.0  CUMULATIVE PERCENT  38.0 100.0  CUMULATIVE PERCENT

### APPENDIX D

SUMMARY OF CHI-SQUARE TABLES

### Key for Summary of Chi-Square Tables

0 = False 1 = True

Sex = 1) Male; 2) Female

Frequency

of roles = 2) Daily/weekly; 3) Monthly or "other"; 4) Never

Title = 1) Clinical; 2) Consulting

3) Administrative; 4) Educator or student

Whereemp = Place of employment

1) Hospital; 2) Private practice; 3) Doctor's office, weight loss center, or other business 4) Sports clinic, wellness center, or health club; 6) University or school

Route = 1) CUP; 2) Internship; 3) Advanced degree;

4) Other

RD = 1) RD; 2) Non-RD

Yrsdiet = Years employed in dietetic profession 1) < 5 yrs; 2) 5 to 10 yrs; 3) > 10 yrs

Yrssp = Years employed in present position 1) < 3 yrs; 2) ≥ 3 yrs

Yrssport = Years employed in area of SCAN

1)  $\leq$  2 yrs; 2) 2.5 to 5 yrs; 3) > 5 yrs

Pcsport = Percent time spent on SCAN functions

1)  $\langle 25\%; 2 \rangle 25\%$  to  $70\%; 3 \rangle > 70\%$ 

Meals =  $1) \le 3$  per day; 2) > 3 per day

Snacks = 1)  $\langle$  1 per day; 2) 1 to 2.5 per day;

3) ≥ to 3 per day

Moreacr = Change in physical activity since employed in

SCAN

1) Increased; 2) Decreased; 3) Same

Typediet = 1) Diabetic; 2) Weight loss or maintenance

3) Low cholesterol, fat and/or sodium

Act 1 = Cycling Act 5 = Aerobic dancing Act 2 = Running Act 6 = Weight training

Act 3 = Walking Act 7 = Other

Act 4 = Swimming

### TABLE OF SEX BY BEST

SEX BFST	
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT 0 1	TOTAL
1 2 11 0.4 12.6	13
5.706 .195794	
0.95 5.21 15.38 84.62	6 . 16
28.57   5.39	
2 5 193	198
. 6.6 191.4 .374637 .012855	
	93.84
2.53 97.47 71.43 94.61	
TOTAL 7 204	211
	00.00

#### STATISTICS FOR TABLE OF SEX BY BFST

STATISTIC		 DF	VALUE	PROB
CHI-SQUAR		 1	6.289	0.012
WARNING:			CTED COUN	

#### TABLE OF SEX BY MEALS

#### STATISTICS FOR TABLE OF SEX BY MEALS

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	1	4.787	0.029
WARNING: 25% OF THE CELL	S HAVE EX	PECTED COLM	TS   FEE

WARNING: 25% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF SEX BY ACTS

SEX	ACT3		
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	0	ļ 1	TOTAL
1	12 8.5	4.5	13
	1.47899 5.66 92.31 8.70	2.75811 0.47 7.69 1.35	6.13
2	126 129.5	73 <b>69</b> .5	199
	.096617 59.43 63.32 91.30	. 180178 34 . 43 36 . 68 98 . 65	93.87
TOTAL	13 <b>8</b> 65.09	74 34.91	212 100.00

<b>05.0</b>	54.5.	100.00		
STATISTICS	FOR TABLE	OF SEX BY	ACT:	

STATISTIC	DF	VALUE	PRO6
CHI-SQUARE WARNING: 25% OF THE CELLS I			
THAN 5. CHI-SQUAI	RE MAY N	DT BE A VA	LID TEST.

----

### TABLE OF TITLE BY VITMIN

TITLE	VITMIN		
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	o	1	TOTAL
1	56 51.5	45 49.5	101
	.394994 27.45 55.45 53.85	410794 22.06 44.55 45.00	49.51
2	19 26.0	32 25.0	51
	1.88462 9.31 37.25 18.27	1.96 15.69 62.75 32.00	25.00
3	16 17.3	18 16.7	34
,,	.102564 7.84 47.06 15.38	. 106667 8 . 82 52 . 94 18 . 00	16.67
4	13 9.2	8.8	18
	1.59314 6.37 72.22 12.50	1.65686 2.45 27.78 5.00	8.82
TOTAL	104 50.98	100 49.02	204 100.00

### STATISTICS FOR TABLE OF TITLE BY VITMIN

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	3	8.110	0.044

## TABLE OF TITLE BY SNACKS TITLE SNACKS

TITLE	SNACKS			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	1			TOTAL
	<u> </u>	<del>•</del>	<del>•</del>	•
1	1 -51	1 44	7	102
	45.8 .596262 24.88 50.00	45.3 .036075 21.46 43.14	10.9 1.42272 3.41 6.86	49.76
	55.43	48.35	31.82	
2	17	24	10	51
	1.51462	.061817	3.74412	ļ
	8.29	11.71	4.88	24.88
	18.48	47.06 26.37	19.61 45.45	
3	·			
3	12 15.3	19 15. 1	3.6	. 34
	.695877	1.01156	. 115358	
	5.85	9.27	1.46	16.59
	35.29 13.04	55.88 20.88	8.82 13.64	
	13.04	20.00	13.64	
4	12	4	2	18
		8.0	1.9	
	1.90414	1.99269	.002414	8.78
	66.67	22.22	11.11	3.70
	13.04	4.40	9.09	
TOTAL	92	91	22	206
	44.88	44.39	10.73	100.00

### STATISTICS FOR TABLE OF TITLE BY SMACKS

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	6	13.118	0.041

### TABLE OF TITLE BY ACT7

TITLE	ACT7		
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT		1 1	TOTAL
1	74.6 0.54297	21 27.4 1.48083	102
	39.51 79.41 54.00	10.24 20.59 38.18	49.76
2	39 . 37.3 .075897	12 13.7 . 206991	51
	19.02 76.47 26.00	5.85 23.53 21.82	24.88
3	18 24.9	16 9.1	34
	1.90158 8.78 52.94 12.00	5.18612 7.80 47.06 29.09	16.59
4	12 13.2	6 4.8	18
	. 104065 5.85 66.67 8.00	.283814 2.93 33.33 10.91	8.78
TOTAL	150 73 . 17	55 26.83	205 100.00

### STATISTICS FOR TABLE OF TITLE BY ACT7

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	3	9.782	0.021

## TABLE OF WHEREEMP BY DIET

FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	0	!1	TOTAL
1	78 85.2 0.60413 38.61 70.27 50.32	33 25.8 1.99235 16.34 29.73 70.21	111 54.95
2	28 24.6 .483488 13.86 87.50 18.06	7.4 1.59448 1.98 12.50 8.51	32 15.84
3	28 23.0 1.07744 13.86 93.33 18.06	7.0 3.55325 0.99 6.67 4.26	30 14 . 85
4	9 10.7 .282666 4.46 64.29 5.81	5 3.3 .932198 2.48 35.71 10.64	14 6.93
6	12 11.5 .020869 5.94 80.00 7.74	3 3.5 .068822 1.49 20.00 6.38	15 7.43
TOTAL	155 76.73	47 23.27	202 100.00

### STATISTICS FOR TABLE OF WHEREEMP BY DIET

STATISTIC	DF	VALUE	PROB
CHI - SQUARE	4	10.610	0.031

TABLE OF WHEREEMP BY REGEX

WHEREEMP	REGEX		
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	o	. 1	TOTAL
. 1	7	104	111
	7.7 .062439 3.47 6.31 50.00	103.3 0.00465 51.49 93:69 55.32	54.95
2	3	29	32
	2.2 .275857 1.49 9.38 21.43	29.8 .020543 14.36 90.63 15.43	15.84
3	0	30	30
	2.1 2.07921 0.00 0.00 0.00	27.9 .154835 14.85 100.00 15.96	14.85
4	0	14	14
	1.0 .970297 0.00 0.00	13.0 .072256 6.93 100.00 7.45	6.93
6	4	. 11	15
	1.0 8.43008 1.98 26.67 28.57	14.0 .627772 5.45 73.33 5.85	7.43
TOTAL	14 6.93	188 93.07	202 100.00

STATISTICS FOR TABLE OF WHEREEMP BY REGEX

STATISTIC	DF	VALUE .	PROB
CHI-SQUARE	4	12.698	0.013
WARNING: 40% OF THE CELLS I THAN 5. CHI-SQUA	HAVE EX	PECTED COUNT NOT BE A VAL	S LESS

TABLE OF WHEREEMP BY ACT1

WHEREEMP	ACT 1		
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT		,,, [	TOTAL
1	64	47	111
	61.5 .097965 31.68 57.66 57.14	49.5 .121912 23.27 42.34 52.22	54.95
2	22	10	32
	17.7 1.02159 10.89 68.75 19.64	14.3 1.27131 4.95 31.25 11.11	15.84
3	13	17	30
	16.6 .793782 6.44 43.33 11.61	13.4 .987818 8.42 56.67 18.89	14.85
4	2	12	14
	7.8 4.27768 0.99 14.29 1.79	6.2 5.32334 5.94 85.71 13.33	6.93
6	11	4	- 15
	8.3 .865641 5.45 73.33 9.82	6.7 1.07724 1.98 26.67 4.44	7.43
TOTAL	112 55.45	90 44.55	202

STATISTICS FOR TABLE OF WHEREEMP BY ACT !-

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	4	15.838	0.003
CHI-3GORRE	-	15.636	0.003

TABLE OF SEX BY ACT4

SEX	ACT4		
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	0	<u> </u>	TOTAL
1	7	,6	13
	10.2	2.8 3.5833	
	3.30	2.83	6.13
	53.85 4.22	46.15 13.04	
	4.22	13.04	
2	159	40	199
	155.8 .064867	43.2	
	75.00	. 234085 18 . 87	93.87
	79.90	20.10	33.67
	95.78	86.96	
TOTAL	166	46	
	78.30	21.70	212 100.00
			.00.00

#### STATISTICS FOR TABLE OF SEX BY ACT4

STATISTIC		DF	VALUE	PROB
CHI-SQUARE		1	4.875	0.027
WARNING:	25% OF THE CELLS H			

## TABLE OF SEX BY ACT7

SEX	ACT7		
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	0	1	TOTAL
1	9.5 1.29231	7 3.5 3.51418	13
	2.83 46.15 3.87	3.30 53.85 12.28	6.13
2	149 145.5 .084422	50 53.5 .229569	199
	70.28 74.87 96.13	23.58 25.13 87.72	93.87
TOTAL	155 73.11	57 26 . 89	212 100.00

### STATISTICS FOR TABLE OF SEX BY ACT7

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	1	5.120	0.024
WARNING: 25% OF THE CELLS H THAN 5. CHI-SQUAR	AVE EXPI	ECTED COUNT OT BE A VAL	S LESS ID TEST.

### TABLE OF SEX BY MOREACE

SEX	MOREACE			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT		l 2	1 31	TOTAL
	! <u>'</u>			TOTAL
1	4.0 2.23116	3 0.8 5.68369	7 6.2 .105728	11
	0.50 9.09 1.39	1.51 27.27 20.00	3.52 63.64 6.25	5.53
2	71 68.0 .130547 35.68 37.77	12 14.2 .332556 6.03 6.38	105 105.8 .006186 52.76 55.85	188
	98.61	80.00	93.75	
TOTAL	72 36.18	15 7.54	112 56.28	199
ST	ATISTICS	FOR TABLE	OF SEX BY	MOREACR

STATISTIC	DF	VALUE	PRO6

CHI-SQUARE 2 8.490 0.014
WARNING: 33% OF THE CELLS HAVE EXPECTED COUNTS LESS
THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

### TABLE OF AGE BY LIFEEX

AGE	LIFEEX			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	o	1	TOTAL	
1	26 35.1 2.33769	50.9 1.60833	86	
	12.32 30.23 30.23	28.44 69.77 48.00	40.76	
3	38.3 188477	53 55.7 .129672	94	
	19.43 43.62 47.67	25.12 56.38 42.40	44.55	
5	19 12.6 3.20634	12 18.4 2.20596	31	
	9.00 61.29 22.09	5.69 38.71 9.60	14.69	
TOTAL	86 40.76	125 59.24	211 100.00	

STATISTICS FOR TABLE OF AGE BY LIFEEX

STATISTIC	DF	VALUE	PROB
CUT - COLLADE	2	9 676	0.008

TABLE OF RD BY MEALS

RD	MEALS			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	11	21	TOTAL	
1	184	. 11	195	
	180.8	14.2		
	.056603 89.32	.720739 5.34	94.66	
	94.36	5.64	94.00	
	96.34	73.33		
. 2	7	4	11	
	10.2	0.8		
	1.00341	12.7767		
	3.40	1.94	5.34	
	63.64	36.36		
	3.66	26.67	1	
TOTAL	191	15	206	
I G I AL	92.72	7.28	100.00	
S:	TATISTICS	FOR TABLE	OF RD BY	MEALS

STATISTIC	DF VALUE	PRO6
CHI-SQUARE	1 14.557	0.000
WARNING: 25% OF THE CELLS	HAVE EXPECTED COUNTS	LESS

WARNING: 25% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF RD BY COFFEE

RD	COFFEE						
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	0	1	] 2	] 3	4	5	TOTAL
1	0	18	52	78	40	7	195
	0.9 .946602 0.00 0.00	18.0 1E-05 8.74 9.23 94.74	53.0 .019233 25.24 26.67 92.86	76.7 .022905 37.86 40.00 96.30	38.8 .036446 19.42 20.51 97.56	7.6 .043328 3.40 3.59 87.50	94.66
2	0.1	1 1.0	3.0	3 4.3	2.2	0.4	11
	16.7807 0.49 9.09 100.00	2E-04 0.49 9.09 5.26	340941 1.94 36.36 7.14	1.46 1.46 27.27 3.70	0.49 9.09 2.44	0.49 9.09 12.50	5.34
TOTAL	0 . <b>49</b>	19 9.22	56 27 . 18	81 39.32	41 19.90	3.88	206 100.00
S	STATISTICS	FOR TABL	E OF RO B	Y COFFEE			

STATISTIC		DF	VALUE	PROB
CHI-SQUAR	-	5	20.011	0.001
WARNING:	58% OF THE CELLS I THAN 5. CHI-SQUA			

#### TABLE OF RD BY TYPEDIET

RD TYPEDIET FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT 2 3 TOTAL 2 2.9 .260462 4.55 4.76 66.67 14 14.3 .007071 31.82 33.33 93.33 26 24.8 .056277 59.09 61.90 100.00 0.1 5.4697 2.27 50.00 33.33 0.7 148485 2.27 50.00 6.67 0 1.2 1.18182 0.00 0.00 2 4.55 TOTAL 3 15 6.82 34.09 26 44 59.09 100.00

STATISTICS FOR TABLE OF RD BY TYPEDIET

STATISTIC DF VALUE PROB

CHI-SQUARE 2 7.124 0.028

WARNING: 66% OF THE CELLS HAVE EXPECTED COUNTS LESS
THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF RD BY ACTS

RD ACT6 FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT 0 1 TOTAL 156 152.4 0.0849 75.73 80.00 96.89 39 42.6 .303754 18.93 20.00 86.67 195 5 8.6 1.50505 2.43 45.45 3.11 11 5.34 TOTAL. 161 78.16 45 21.84 206 100 . 00

STATISTICS FOR TABLE OF RD BY ACTS

 STATISTIC
 DF
 VALUE
 PR08

 CHI-SQUARE
 1
 7.278
 0.007

WARNING: 25% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF RD BY LIFEEX

LIFEEX RD FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT 이 TOTAL 85 80.4 .258612 41.46 43.81 100.00 109 113.6 183184 53.17 56.19 90.83 194 94.63 0 4.6 4.56098 0.00 0.00 0.00 11 6.4 3.23069 5.37 100.00 9.17 2 11 5.37 85 41.46 TOTAL 120 58.54 205 100.00

STATISTICS FOR TABLE OF RD BY LIFEEX

STATISTIC DF VALUE PROB

CHI-SQUARE 1 8.233 0.004

WARNING: 25% OF THE CELLS HAVE EXPECTED COUNTS LESS
THAN 5. CHE-SQUARE MAY NOT BE A VALID TEST.

TABLE OF YESDIET BY ALCOHOL

YRSDIET	ALCOHOL		
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	0	1!	TOTAL
. 1	15 21.1	57 50.9	72
	1.74209 7.08 20.83 24.19	.720063 26.89 79.17 38.00	33.96
2	32 23.7	49 57.3	81
	2.91608 15.09 39.51 51.61	1.20531 23.11 60.49 32.67	38.21
3	15 17.3	44	59
	0.29463 7.08 25.42 24.19	0.12178 20.75 74.58 29.33	27.83
TOTAL	62 29.25	150 70.75	212 100.00

STATISTICS FOR TABLE OF YRSDIET BY ALCOHOL

STATISTIC	DF	VALUE	PROB
CHI - SQUARE	2	7.000	0.030

### TABLE OF YESDIET BY ACTS

YRSDIET	ACT3		
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	0	! 1!	TOTAL
1	50 47.0	22 25.0	72
	0.19335 23.47 69.44 35.97	.363184 10.33 30.56 29.73	33.60
2	59 53.5	23 28.5	82
	.562886 27.70 71.95 42.45	1.05731 10.80 28.05 31.08	38.50
3	30 38.5	29 20.5	59
	1.87755	3.52674 13.62	27.70
	50.85 21.58	49.15 39.19	27.70
TOTAL	139	74	213
	65.26	34.74	100.00

STATISTICS FOR TABLE OF YRSDIET BY ACT3

STATISTIC	DF	VALUE	PROB
CUT - COLLABE	2	7 581	0.023

TABLE OF YESDIET BY ACTS

YRSDIET	ACT6		
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT		] 1	TOTAL
1	51	21	72
	55.8 .408739 23.94 70.83 30.91	16.2 1.40504 9.86 29.17 43.75	33.80
2	71	11	82
	63.5 0.88055 33.33 86.59 43.03	18.5 3.02689 5.16 13.41 22.92	38.50
3	43 45.7	16	59
	. 160003 20 . 19 72 . 88 26 . 06	13.3 .550012 7.51 27.12 33.33	27.70
TOTAL	165 77 . 46	48 22.54	213 100.00
		~ Z . J =	,00.00

STATISTICS FOR TABLE OF YESDIET BY ACTE

STATISTIC	DF	VALUE	PROS
CHI-SQUARE	2	6.431	0.040

TABLE OF YRSSPORT BY BEST

YRSSPORT	BFST		
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	0	1	TOTAL
			•
1	. 4	126	130
	4.9 .167199	125.1	
	1.89	.006557 59.43	
	3.08	96.92	61.32
	50.00	61.76	
2	1	59	60
	2.3	57.7	
	. 705818	.027679	
	0.47	27.83	28.30
	1.67	98.33 28.92	
	12.50	20.92	L
3	3	19	22
_	0.8	21.2	
	5.6711	. 222396	
	1.42	8.96	10.38
	13.64	86.36	
	37.50	9.31	
TOTAL	8	204	212
	3.77	96.23	100.00

STATISTICS FOR TABLE OF YESSPORT BY BEST

STATISTIC	DF	VALUE	PROB
CHI - SQUARE	2	6.801	0.033

WARNING: 50% OF THE CELLS HAVE EXPECTED COUNTS LESS
THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF YRSSPORT BY REGEX

YRSSPORT	REGEX		
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	o	1	TOTAL
1		123	131
	9.2 .162757 3.76 6.11 53.33	121.8 0.01233 57.75 93.89 62.12	61.50
2	4.2	58	60
	1.17202 0.94 3.33 13.33	55.8 .088789 27.23 96.67 29.29	28.17
3	5 1.5	17	22
	7.68566 2.35 22.73 33.33	20.5 .582247 7.98 77.27 8.59	10.33
TOTAL	15	198	213
	7.04	92.96	100.00

STATISTICS FOR TABLE OF YRSSPORT BY REGEX

STATISTIC	DF	VALUE	PRO8
CHI - SQUARE	2	9.704	0.008

CHI-SQUARE 2 9.704 0.008

WARNING: 33% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF YRSSPORT BY ACT4

YRSSPORT	ACT4		
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	o	<u> </u>   1	TOTAL
1	95 102.7 .578601	36 28.3 2.10057	131
	44 .60 72 .52 56 .89	16.90 27.48 78.26	61.50
2	51 47.0 .332972	9 13.0 1.20883	60
	23.94 85.00 30.54	4.23 15.00 19.57	- 28.17
3	21 17.2 .815783	1 4.8 2.96165	22
	9.86 95.45 12.57	0.47 4.55 2.17	10.33
TOTAL	167 78.40	46 21.60	213 100.00

STATISTICS FOR TABLE OF YESSPORT BY ACT4

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	2	7.998	0.018

### TABLE OF YRSSPORT BY MOREACR

YRSSPORT	MOREA	CR		
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	1	2		
		·	3	TOTAL
'	32 42.3 2.52159	10 8.8 . 158127	75 65.8	117
	16.08 27.35 44.44	5.03 8.55 66.67	1.27164 37.69 64.10 66.96	58.79
2	24 21.7 .241876	4 4.5 .060391	32 33.8	60
	12.06 40.00 33.33	2.01 6.67 26.67	.092654 16.08 53.33 28.57	30.15
3	16 8.0 8.12142	1 1.7 .261322	5 12.4 4.40098	22
	8.04 72.73 22.22	0.50 4.55 6.67	2.51 22.73 4.46	11.06
TOTAL	72 3 <b>6</b> .18	15 7.54	112 56.28	199 100.00

STATISTICS FOR TABLE OF YESSPORT BY MOREACE

STATISTIC	DF	VALUE	PROB
CHI~SQUARE	4	17.130	0.002
WARNING: 22% OF THE CELLS H THAN 5. CHI-SQUAR	E MAY	PECTED COUNT NOT BE A VAL	S LESS ID TEST.

### TABLE OF YRSPP BY ACT1

YRSPP	ACT 1			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT				
COL PCT	0	! '!	TOTAL	
1	71 78.8	70 62.2	141	
	.767317 33.33 50.35	971391 32.86 49.65	66.20	
	59.66	74.47		
2	48 40.2 1.50266	24 31.8 1.90231	72	
	22.54 66.67 40.34	11.27 33.33 25.53	33.80	
		1 25.53   +		
TOTAL	119 55.87	94 44 . 13	213 100.00	
ST	ATISTICS	FOR TABLE	OF YRSPP	BY ACT1

STATISTIC	DF	VALUE	PRO6
CHI-SQUARE	1	5.144	0.023

### TABLE OF YESPP BY ACT2

YRSPP	ACT2		
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	o	!!	TOTAL
. 1	71 79.4 .896017	70 61.6 1.15615	141
	33.33 50.35 59.17	32.86 49.65 75.27	66.20
2	49 40.6 1.7547	23 31.4 2.26413	72
	23.00 68.06 40.83	10.80 31.94 24.73	33.80
TOTAL	120 56 . 34	93 43. <b>66</b>	213 100.00

STATISTICS	FOR	TABLE	OF	YRSPP	87	ACT2

STATISTIC	DF	VALUE	PROS
CHI-SQUARE	1	6.071	0.014

TABLE OF TITLE BY R1\_1

TITLE	R1_1			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	] 3	4	TOTAL
1	70 59.9	18 19.3	12 20.9	100
	1.70555 37.43 70.00 62.50	.081337 9.63 18.00 50.00	3.76023 6.42 12.00 30.77	53.48
2	24 28.1 .611739	9 9.0 3E-04	14 9.8 1.79777	47
	12.83 51.06 21.43	4.81 19.15 25.00	7.49 29.79 35.90	25.13
3	13 18.6	8 6.0	10 6.5	31
	1.66909 6.95 41.94	.691929 4.28 25.81	1.93257 5.35 32.26	16.58

STATISTICS FOR TABLE OF TITLE BY R1\_1

TOTAL

39 187 20.86 100.00

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	6	13.260	0.039

TABLE OF WHEREEMP BY R1\_1

WHEREEMP	R1_1			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT				
COL PCT	2	3	4	TOTAL
1	71 65.3 .500575	21 21.0 1E-05	17 22.7 1.44563	109
	37.97 65.14 63.39	11.23 19.27 58.33	9.09 15.60 43.59	58.29
2	15 17.4 0.32311	5.6 1.04649	6.0 4E-04	29
	8.02 51.72 13.39	4.28 27.59 22.22	3.21 20.69 15.38	15.51
3	12 16.2 1.07588	5.2 0.27605	11 5.6 5.11915	27
	6.42 44.44 10.71	2.14 14.81 11.11	5.88 40.74 28.21	14.44
4	10 7.8 .629503	3 2.5 .098828	0 2.7 2.71123	13
	5.35 76.92 8.93	1.60 23.08 8.33	0.00 0.00 0.00	6.95
6	5.4 .358628	0 1.7 1.73262	5 1.9 5.19609	9
	2.14 44.44 3.57	0.00 0.00 0.00	2.67 55.56 12.82	4.81
TOTAL	112 59.89	36 19.25	39 20.86	187 100.00

STATISTICS FOR TABLE OF WHEREEMP BY R1\_1

STATISTIC	DF	VALUE	PROB
CHI - SQUARE	8	20.514	0.000
WARNING . 28% OF THE CELLS	<b>UAVE EV</b>	-	TE   EEC

WARNING: 26% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

	TABLE	OF TITLE	BY R1_2	
TITLE	R1_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	J . 3		TOTAL
1	88	13.4	12.4	100
	2.5692 47.31 88.00 63.77	3.08646 3.76 7.00 28.00	4.38733 2.69 5.00 21.74	53.76
2	28 34 . 1	10 6.2	8 5.7	46
	1.10068 15.05 60.87 20.29	2.35671 5.38 21.74 40.00	0.93959 4.30 17.39 34.78	24.73
3	18 23.0	6 4.2	7 3.8	31
	1.08696 9.68 58.06 13.04	.806667 3.23 19.35 24.00	2.61594 3.76 22.58 30.43	16.67
4	6.7	1.2	3 1.1	9
	1.07355 2.15 44.44 2.90	1.08 22.22 8.00	3.19986 1.61 33.33 13.04	4.84
TOTAL	13 <b>8</b> 74 . 19	25 13.44	23 12.37	186

STATISTICS FOR TABLE OF TITLE BY R1\_2

STATISTIC	DF	VALUE	PROS
CHI-SQUARE	6	23.739	0.001

WARNING: 33% OF THE CELLS HAVE EXPECTED COUNTS LESS
THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE	OF	WHEREEMP	BY	R1	_2

WHEREEMP	R1_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	3	4	TOTAL
1	93	1 8	8	109
	81.5 1.63572 50.00 85.32 66.91	14.1 2.61497 4.30 7.34 33.33	13.5 2.2268 4.30 7.34 34.78	58.60
2	15	9	4	28
	20.9 1.67756 8.06 53.57 10.79	3.6 8.03255 4.84 32.14 37.50	3.5 .083484 2.15 14.29 17.39	15.05
3	17	1 4	6	27
	20.2 .500361 9.14 62.96 12.23	3.5 .076464 2.15 14.81 16.67	3.3 2.12132 3.23 22.22 26.09	14.52
. 4	10	2	1	13
	9.7 .008358 5.38 76.92 7.19	1.7 .062035 1.08 15.38 8.33	1.6 0.2296 0.54 7.69 4.35	6.99
6	4	1	4	9
	6.7 1.1047 2.15 44.44 2.88	1.2 .022401 0.54 11.11 4.17	1.1 7.48971 2.15 44.44 17.39	4.84
TOTAL	139 74.73	24 12.90	23 12.37	186 100.00

STATISTICS FOR TABLE OF WHEREEMP BY R1\_2

STATISTIC	DF	VALUE	PROB
CHI-SQUARE WARNING: 53% OF THE CELLS	8	27 . 886	0.000
THAN 5. CHI-SQUA			

### TABLE OF MS BY R1\_2

MS	R1_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	<b>]</b>	4	TOTAL
0	81	10	6	97
	71.9	12.8	12.3	
	1.16474	.624502	3.24014	
	42.86 83.51	5.29 10.31	3.17 6.19	51.32
	57.86	40.00	25.00	
1	59	15	18	92
•	68.1	12.2	11.7	
	1.22804	658443	3.41624	
	31.22	7.94	9.52	48.68
	64.13	16.30	19.57	
	42.14	60.00	75.00	
TOTAL	140	25	24	189
<del>-</del> .	74.07	13.23	12.70	100.00

### STATISTICS FOR TABLE OF MS BY R1\_2

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	2	10.332	0.006

### TABLE OF TITLE BY R1\_3

FREQUENCY
EXPECTED
CFLL CHI2

EXPECTED CELL CHI2 PERCENT				
ROW PCT				
COL PCT	2	3	4	TOTAL
1	94	4	1 2	100
	79.1	12.8	8.0	
	2.78844 50.27	6.08089 2.14	4.52006 1.07	53.48
	94.00	4.00	2.00	53.46
	63.51	16.67	13.33	
2	30	1 12	5	47
	37.2	6.0	3.8	
	1.3928	5.90443	.401259	
	16.04	6.42	2.67	25.13
	63.83	25.53	10.64	
	20.27	50.00	33.33	
3	19	6	6	31
	24.5	4.0	2.5	ĺ
	1.24858	1.027	4.96405	
	10.16	3.21 19.35	3.21 19.35	16.58
	12.84	25.00	40.00	
4	5	2	2	9
	7.1	1.2	0.7	
	632754 2.67	1.07	1.07	4.81
	55.56	22.22	22.22	7.01
	3.38	8.33	13.33	
TOTAL	148	24	15	187
IUIAL	79.14	12.83	8.02	100.00
			5.02	

STATISTICS FOR TABLE OF TITLE BY R1\_3

 STATISTIC
 DF
 VALUE
 PROB

 CHI-SQUARE
 6
 31.841
 0.000

WARNING: 41% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF WHEREEMP BY R1\_3

WHEREEMP	R1_3			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	<b>j</b> 3	<b>i</b> 4	TOTAL
	94		·	400
. '	86.9	10 13.4	8.7	109
**	588584 50.27 86.24 63.09	.865532 5.35 9.17 43.48	1.60264 2.67 4.59 33.33	58.29
2	17	11	1	29
	23.1	3.6 15.4904	2.3 .756088	
	9.09	5.88	0.53	15.51
	58.62 11.41	37.93 47.83	3.45 6.67	
3	19			27
3	1 a =	3.3	2.2	. 27
	. 293632 10 . 16	1.62198	10.7905 3.74 25.93	14.44
	70.37	3.70		14.44
	12.75	4.35	46.67	
4	13		0	13
	10.4	1.6	1.04278	
	6.95	0.00	0.00	6.95
	8.72	0.00	0.00	
6	6	1	2	9
	7.2	1.1	0.7	
	. 191257 3.21	.010334 0.53	1.07	4.81
	66.67 4.03	11, 11	22.22	
		4.35	13.33	
TOTAL	. 149 79.68	12.30	15 8.02	187
	,3.66	.2.30	0.02	100.00

STATISTICS FOR TABLE OF WHEREEMP BY R1\_3

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	8	39.403	0.000

WARNING: 53% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF MS BY R1\_3

MS	R1_3			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	1 3	<u> </u>	TOTAL
0	88	7	3	98
	77.4	12.9	7.7	
	1.46094	2.69474	2.90011	
	46.32	3.68	1.58	51.58
	89.80	7.14	3.06	l
	58.67	28.00	20.00	!
1	62	. 18	12	92
	72.6	12.1	7.3	
	1.55622	2.87048	3.08924	
	32.63	9.47	6.32	48.42
	67.39	19.57	13.04	i
	41.33	72.00	80.00	
TOTAL	4	+	*	400
IOIAL	150	25	15	190
	78.95	13.16	7 . 89	100.00
	STATISTIC	S FOR TAE	LE OF MS	BY R1_3

 STATISTIC
 DF
 VALUE
 PROB

 CHI-SQUARE
 2
 14.572
 0.001

### TABLE OF TITLE BY R2\_1

TITLE	R2_1			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	1 3	1 41	TOTAL
				. IOIAL
1	94 79.7	11.8	8.6	100
	2.57391 50.27 94.00 63.09	5.12471 2.14 4.00 18.18	5.02365 1.07 2.00 12.50	53.48
2	32	10	5	47
_	37.4	5.5	4.0	
	.792908	3.61452	. 238146	
	17.11	5.35	2.67	25.13
	68.09 21.48	21.28 45.45	10.64 31.25	
	1 21.40	1 40.40	31.25	
3	18	7	6	31
	24.7	3.6	2.7	
	1.81766	3.08254	4.22499	1 1 1
	9.63	3.74	3.21	16.58
	58.06 12.08	22.58 31.82	19.35 37.50	
	12.08	31.82 +	37.50	
4	5	1 1	] 3	9
	7.2	1.1	0.8	
	.657327	.003268	6.45755	
	2.67	0.53	1.60	4.81
	55.56 3.36	11.11 4.55	33.33 18.75	
	+	+	+	
TOTAL	149	22	16	187
	79.68	11.76	8.56	100.00

STATISTICS FOR TABLE OF TITLE BY R2\_1

STATISTIC	DF	VALUE	PROS
CHI-SQUARE	- 6	33.611	0.000

WARNING: 41% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF WHEREEMP BY R2\_1

WHEREEMP	R2_1			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	i 3	I 41	TOTAL
		<b>!</b>		
1	96 87.4 .839394	12.2 1.46913	9.3 2.00682	109
	51.34 88.07 64.00	4.28 7.34 38.10	2.67 4.59 31.25	58.29
2	19 23.3	9 3.3	1 2.5	29
	.780883 10.16 65.52 12.67	10.1286 4.81 31.03 42.86	.884301 0.53 3.45 6.25	15.51
3	18 21.7	3.0	7 2.3	27
	.617754 9.63 66.67 12.00	0.35131 1.07 7.41 9.52	9.52081 3.74 25.93 43.75	14.44
4	12 10.4	1.5	0 1.1	13
	.237038 6.42 92.31 8.00	. 144875 0.53 7.69 4.76	1.1123 0.00 0.00 0.00	6.95
G	5 7.2 .682214 2.67 55.56 3.33	1 1.0 1E-04 0.53 11.11 4.76	3 0.8 6.45755 1.60 33.33 18.75	9 4.81
TOTAL	150 80.21	21 11.23	16 8.56	187 100.00

STATISTICS FOR TABLE OF WHEREEMP BY R2\_1

STATISTIC	DF	VALUE	PROS
CHI-SQUARE		35.233	0.000

WARNING: 53% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF MS BY R2\_1 MS R2\_1 FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT TOTAL 87 77 9 1 06694 45 79 88 78 57 62 64 73 1 1 13652 33 68 69 57 42 38 11.3 .987443 .4.21 .8.16 .36.36 .10.7 1.05184 .7.37 .15.22 .63.64 3 8.8 3.79483 1.58 3.06 17.65 0 51.58 14 8 2 4 04232 7 37 15 22 82 35 92 TOTAL 17 190 8.95 100.00 22 11.58 STATISTICS FOR TABLE OF MS BY R2\_1

STATISTIC	OF	VALUE	PRO8
CHI-SQUARE	2	12.080	0.002

TABLE OF TITLE BY R2\_2

TITLE	R2_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	1 3	I 41	TOTAL
		<del>-</del>		
1	92 78.6	12.8	8.6	100
	2.28092 49.20 92.00 62.59	4.78214 2.67 5.00 20.83	3.60802 1.60 3.00 18.75	53.48
2	32	10	5 1	47
	36.9	6.0	4.0	
	662257	2.6101	. 238 146	
	17.11 68.09	5.35 21.28	2.67 10.64	25.13
	21.77	41.67	31.25	
3	18	8	5	31
	1.66457	4.06463	2.7	
	9.63	4.28	2.67	16.58
	58.06	25.81	16.13	
	12.24	33.33	31.25	
4	5	1 1	3 (	. 9
-	7.1	1.2	0.8	9
	608502	.020821	6.45755	
	2.67	0.53	1.60	4.81
	55.56 3.40	11.11	33.33 18.75	
	3.40			
TOTAL	147	24	16	187
	78.61	12.83	8.56	100.00

STATISTICS FOR TABLE OF TITLE BY R2\_2

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	6	29.075	0.000

WARNING: 41% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF WHEREEMP BY R2\_2

WHEREEMP	R2_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	3	4	TOTAL
1	97	·	i	
	85.7 1.49433 51.87 86.99 65.99	7 14.0 3.49198 3.74 6.42 29.17	9.3 2.00682 2.67 4.59 31.25	109 58.29
2	19	9	1	29
	22.8 .632353 10.16 65.52 12.93	3.7 7.48486 4.81 31.03 37.50	2.5 .884301 0.53 3.45 6.25	15.51
3	15	6	6	27
	21.2 1.82551 8.02 55.56 10.20	3.5 1.85413 3.21 22.22 25.00	2.3 5.89349 3.21 22.22 37.50	14.44
4	11	2	0	. 13
	10.2 .059649 5.88 84.62 7.48	1.7 .065885 1.07 15.38 8.33	1.1 1.1123 0.00 0.00 0.00	6.95
6	5	0	4	9
	7.1 .608502 2.67 55.56 3.40	1.2 1.15508 0.00 0.00 0.00	0.8 13.5478 2.14 44.44 25.00	4.81
TOTAL	147 78.61	24 12.83	16 8.5 <b>6</b>	187 100.00

### STATISTICS FOR TABLE OF WHEREEMP BY R2\_2

STATISTIC	DF	VALUE	PRO8
CHI-SQUARE	8	42.117	0.000

WARNING: 53% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

### TABLE OF MS BY R2\_2

MS	R2_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	] 3	! 4	TOTAL
0	84 76.3 .769275	10 12.9 .649839	8.8 2.59315	98
	44.21 85.71 56.76	5.26 10.20 40.00	2.11 4.08 23.53	51.58
1	64 71.7 .819445	15 12.1 0.69222	13 8.2 2.76227	92
	33.68 69.57 43.24	7.89 16.30 60.00	6.84 14.13 76.47	48.42
TOTAL	148 77 . 89	25 13 . 16	17 8 . 95	190 100.00
	STATISTIC	S FOR TAE	BLE OF MS	8Y R2_2

STATISTIC	DF	VALUE	PROB
CHI - SQUARE	2	8.286	0.016

TABLE OF TITLE BY R2\_3

TITLE	R2_3			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	1	<b>]</b> 3	! 4	TOTAL
1	94	3	1 3	100
	80.2	10.7	9.1	
	2.36937	5.53669	4.08091	
	50.27	1.60	1.60	53.48
	94.00	3.00 15.00	3.00 17.65	1
	+	+	17.65 	! •
2	33	10	4	47
	37.7	5.0	4.3	
	:586067	4.92035	.017408	
	17.65	5.35	2.14	25.13
	70.21	21.28 50.00	8.51 23.53	i
	1 22.00	1 30.00	23.53	
3	1 18	5	8	31
	24.9	3.3	2.8	
	1.89599	.855831	9.52786	
	9.63	2.67	4.28	16.58
	58.06 12.00	16.13 25.00	25.81 47.06	
	1 12.00	25.00	47.06	Į.
4	5	2	1 2	9
	7.2	1.0	0.8	
	. 682214	1.11812	1.70707	
	2.67	1.07	1.07	4.81
	55.56 3.33	10.00	22.22 11.76	
	J.JJ	+	11./6	
TOTAL	150	20	17	187
	80.21	10.70	9.09	100.00

STATISTICS FOR TABLE OF TITLE BY R2\_3

SINITSITC	DF	VALUE	PROB
CHI-SQUARE	6	33.298	0.000

WARNING: 41% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

## TABLE OF WHEREEMP BY R2\_3

WHEREEMP	R2_3			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	21	31	4	TOTAL
1	94	9	6	109
	87.4 .493216 50.27 86.24 62.67	11.7 .605919 4.81 8.26 45.00	9.9 1.54212 3.21 5.50 35.29	58.29
2	21	7	. 1	29
	23.3 .219963 11.23 72.41 14.00	3.1 4.89988 3.74 24.14 35.00	2.6 1.01567 0.53 3.45 5.88	15.51
3	17	3	7	27
	21.7 1.0017 9.09 62.96 11.33	2.9 .004367 1.60 11.11 15.00	2.5 8.41751 3.74 25.93 41.18	14,44
4	13	0	0	13
	10.4 .634474 6.95 100.00 8.67	1.4 1.39037 0.00 0.00 0.00	1.2 1.18182 0.00 0.00 0.00	6.95
6	5	1 . 1	3	9
	7.2 682214 2.67 55.56 3.33	1.0 .001456 0.53 11.11 5.00	0.8 5.81818 1.60 33.33 17.65	^ 4.81
TOTAL	150 80.21	20 10 . 70	17 9.09	187 100.00

STATISTICS FOR TABLE OF WHEREEMP BY R2\_3

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	8	27.909	0.000

WARNING: 53% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

### TABLE OF MS BY R2\_3

MS	R2_3			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	3	4	TOTAL
		·		
. 0	90 77.9	10.8	9.3	98
	1.88475	3.13965	4.2536	
	47.37	2.63	1.58	51.58
	91.84	5.10	3.06	
	59.60	23.81	16.67	
1	61	16	15	92
·	, 73.1	10.2	8.7	
	2.00767	3.3444	4.53101	
-	32.11	8.42	7.89	48.42
	66.30 40.40	17.39 76.19	16.30 83.33	
	+	/6.1 <b>5</b>		
TOTAL	151	21	18	190
	79.47	11.05	9.47	100.00

STATISTICS FOR TABLE OF MS BY R2\_3

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	2	19.161	0.000

### TABLE OF TITLE BY R2\_4

TITLE R2\_4

FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT				
COL PCT	2	3	4	TOTAL
1,	94 78.6 3.01316	12.3 5.60033	9.1 5.53091	100
	50.27 94.00 63.95	2.14 4.00 17.39	1.07 2.00 11.76	53.48
2	31 36.9 0.95709	12 5.8 6.69102	4 4.3 .017408	47
	16.58 65.96 21.09	6.42 25.53 52.17	2.14 8.51 23.53	25.13
3	17 24.4 2.22832	3.8 3.8	9 2.8 13.5601	31
	9.09 54.84 11.56	2.67 16.13 21.74	4.81 29.03 52.94	16.58
4	7.1 .608502	2 1.1 .720478	0.8 1.70707	9
	2.67 55.56 3.40	1.07 22.22 8.70	1.07 22.22 11.76	4.81
TOTAL	147 78.61	23 12.30	17 9.00	187 100.00

STATISTICS FOR TABLE OF TITLE BY R2\_4

STATISTIC	OF	VALUE	PRO6
CHI-SQUARE	•	41.004	0.000

WARNING: 41% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF WHEREEMP BY R2\_4

WHEREEMP	R2_4			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	l a	1 4	TOTAL
		<del>!</del>		-
1	96 86.3 1.09803 51.34 88.07 64.86	12.8 1.81436 4.28 7.34 36.36	9.9 2.43203 2.67 4.59	109 58.29
		+	29.41	
2	18 23.0	3.4	2.6	29
	1.06837 9.63 62.07 12.16	12.7221 5.35 34.48 45.45	1.01567 0.53 3.45 5.88	15.51
3	17 21.4	2 3.2	8 2.5	27
	.893258 9.09 62.96 11.49	0.43573 1.07 7.41 9.09	12.5286 4.28 29.63 47.06	14 , 44
4	13 10.3 .714446	0 1.5 1.52941	0 1.2 1.18182	13
	6.95 100.00 8.78	0.00 0.00 0.00	0.00 0.00 0.00	6.95
6	7.1	1.1	3 0.8	9
	1.36924 2.14 44.44 2.70	.836601 1.07 22.22 9.09	5.81818 1.60 33.33 17.65	4.81
TOTAL	148 79 . 14	22 11.76	17 9.09	187 100.00

STATISTICS FOR TABLE OF WHEREEMP BY R2\_4

STATISTIC	DF	VALUE	PRO6
CHI-SQUARE	8	45.458	0.000

WARNING: 53% OF THE CELLS HAVE EXPECTED COUNTS LESS
THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

### TABLE OF MS BY R2\_4

MS	R2_4			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	ļ 3	! 4	TOTAL
0	86 76.9 1.08876	8 12.4 1.54902	8.8 2.59315	98
	45.26 87.76 57.72	4.21 8.16 33.33	2.11 4.08 23.53	51.58
1	63 72.1 1.15977	16 11.6 1.65004	13 8.2 2.76227	92
	33.16 68.48 42.28	8.42 17.39 66.67	6.84 14.13 76.47	48.42
TOTAL	149 78.42	24 12.63	17 8.95	190 100.00

### STATISTICS FOR TABLE OF MS BY R2\_4

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	2	10.803	0.005

TABLE OF TITLE BY R3\_1

TITLE	R3_1			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	3	1 4	TOTAL
1	93	5	2	+   100
•	77.5	12.8	9.6	
	3.08238 49.73 93.00 64.14	4.78214 2.67 5.00 20.83	6.04122 1.07 2.00	53.48
2				
. 4	31 36.4	6.0	4.5	47
	.813183	5.90443	060707	
	16.58 65.96	6.42 25.53	2.14 8.51	25.13
	21.38	50.00	22.22	
3	16	5	10	31
•	24.0	4.0	3.0	"
	2.68749 8.56	.262212	16 . 4965	40.50
	51.61	16.13	5.35 32.26	16.58
	11.03	20.83	55.56	
4	5	2	2	9
	7.0	1.2	0.9	
	.560985 2.67	.618043 1.07	1.48359	4.81
	55.56	22.22	22.22	1
	3.45	8.33	11.11	
TOTAL	145	24	18	187
	77 -4	40		

STATISTICS FOR TABLE OF TITLE BY R3\_1

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	. 6	42.793	0.000

WARNING: 41% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF WHEREEMP BY R3\_1

MHEKEEMP	K3_1			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	I 31	I 41	TOTAL
1	95 84.5 1.2998 50.80	9 14.0 1.77944 4.81	5 10.5 2.87475 2.67	109
	87.16 65.52	8.26 37.50	4.59 27.78	
2	19 22.5 .540614	9 3.7 7.48486	2.8 1.14968	29
	10.16 65.52 13.10	4.81 31.03 37.50	0.53 3.45 5.56	15.51
3	14 20.9 2.29777	5 3.5 .679747	8 2.6 11.2244	27
	7.49 51.85 9.66	2.67 18.52 20.83	4.28 29.63 44.44	14 . 44
4	13 10.1	1.7	1.3	13
	.845731 6.95 100.00 8.97	1.66845 0.00 0.00 0.00	1.25134 0.00 0.00 0.00	6.95
6	7.0 1.27133	1 1.2 .020821	0.9 11.3354	9
	2.14 44.44 2.76	0.53 11.11 4.17	2.14 44.44 22.22	4.81
TOTAL	145 77 . 54	24 12.83	18 9.63	187 100.00

STATISTIC	:	DF	VALUE	PROB
CHI-SQUAR	E	8	45.724	0.000
WARNING:	53% OF THE CELLS I	HAVE EX RE MAY	PECTED COUN NOT BE A VA	TS LESS LID TEST.

STATISTICS FOR TABLE OF WHEREEMP BY R3\_1

TABLE OF MS BY R3\_1

MS	R3_1			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT		3	4	TOTAL
0	82 75.3 595171	11 13.4 .433289	5 9 3 1 97695	98
	43.16 83.67 56.16	5.79 11.22 42.31	2.63 5.10 27.78	51,58
1	64 70.7 633986	15 12.6 461547	13 8.7 2.10589	92
	33.68 69.57 43.84	7.89 16.30 57.69	6.84 14.13 72.22	48.42
TOTAL	146 76.84	26 13.68	9.47	190 100 00

STATISTICS FOR TABLE OF MS BY R3\_1

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	2	6.207	0 045

TABLE OF TITLE BY R3\_2

TITLE	R3_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	l 3		TOTAL
		<del></del>	<del>!</del>	•
1	90 76.5	7.5	16.0	100
	2.39367 48.13	2.68877 1.60	5.09711 3.74	53.48
	90.00 62.94	21.43	7.00 23.33	
2	33	5	9	47
	35.9 .240685	3.5 0.62358	7.5 0.28266	
	17.65	2.67	4.81	25.13
	70.21	10.64	19.15	1
	23.08	35.71	30.00	
3	15	6	10	31
	23.7	2.3	5.0	1
	3.1972 8.02	5.83238 3.21	5.08079	16.58
	48.39	19.35	32.26	10.38
	10.49	42.86	33.33	
4	5	0	4	9
	6.9	0.7	1.4	
	.514832	.673797	4.52533	
	2.67 55.56	0.00	2.14	4.81
	3.50	0.00	13.33	
TOTAL	143	14	30	187
	76.47	7.49	16.04	100.00

STATISTICS FOR TABLE OF TITLE BY R3\_2

STATISTIC	DF	VALUE	PROS
CHI-SQUARE	6	31.151	0.000

WARNING: 41% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF WHEREEMP BY R3\_2

WHEREEMP	R3_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	. 21	31	1 41	TOTAL
				•
1	91 83.9 .594532	8 8.2 .003154	10 16.9 2.81959	109
	48.66 83.49 63.19	4.28 7.34 57.14	5.35 9.17 34.48	58.29
2	21	5	3	. 29
	22.3 079396	2.2 3.6859 2.67	4.5 .498515 1.60	15.51
	11.23 72.41 14.58	17.24 35.71	10.34 10.34	15.51
3	16	1	10	27
	20.8	2.0	4.2	
	1.1042 8.56	. 5 16099 0 . 53	8.06967 5.35	14.44
	59.26	3.70	37.04	
	11,11	7.14	34.48	
4	. 11	0	2	13
	10.0	1.0 .973262	2.0 1E-04	
	5.88	0.00	1.07	6.95
	84.62 7.64	0.00	15.38 6.90	
6	5	0	i	. 9
ŭ	6.9	0.7	1.4	
	.537734 2.67	.673797	4.85932 2.14	4.81
	55.56	0.00	44.44	3.01
	3.47	0.00	13.79	
TOTAL	144 77.01	14 7.49	29 15.51	187 100.00

### STATISTICS FOR TABLE OF WHEREEMP BY R3\_2

STATISTIC	DF	VALUE	PRO8
CHI -SQUARE	8	24.513	0.002

WARNING: 53% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

### TABLE OF MS BY R3\_2

MS	R3_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	3	4	TOTAL
0	83 74.8 .901367	5 7.2 .683152	10 16.0 2.24359	98
	43.68 84.69 57.24	2.63 5.10 35.71	5.26 10.20 32.26	51.58
1	62 70.2 .960152	9 6.8 .727705	21 15.0 2.38991	92
	32.63 67.39 42.76	4.74 9.78 64.29	11.05 22.83 67.74	48.42
TOTAL	145 76.32	14 7.37	31 16.32	190 100.00

STATISTICS FOR TABLE OF MS BY R3\_2

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	2	7.906	0.019

TABLE OF TITLE BY R3\_3

TITLE	R3_3			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	] 3	4	TOTAL
1	93	3	4	100
	80.2 2.0381 49.73 93.00 62.00	8.0 3.14339 1.60 3.00 20.00	11.8 5.12471 2.14 4.00 18.18	53.48
2	33	7	7	47
	37.7 .586067	3.8 2.76722	5.5 .391114	
	17.65	3.74	3.74	25.13
	70.21	14.89	14.89	
	22.00	46.67	31.82	
3	19	3	9	31
	24.9 1.38394	2.5 .105986	3.6 7.85674	
*	10.16	1.60	4.81	16.58
	61.29 12.67	9.68	29.03 40.91	
	12.6/ +	20.00	+	
4	5	2	2	9
	7.2 .682214	0.7 2.26267	.836601	
	2.67	1.07	1.07	4.81
	55.56 3.33	13.33	9.09	
	3.33 +	13.33 +	3.U9 	
TOTAL	150	15	22	187
	80.21	8.02	11.76	100.00

STATISTICS FOR TABLE OF TITLE BY R3\_3

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	6	27 . 179	0.000

WARNING: 41% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF WHEREEMP BY R3\_3

WHEREEMP	R3_3			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	] 31	4	TOTAL
1	97	6	6	109
	88.0 .917009 51.87 88.99 64.24	8.2 .571961 3.21 5.50 42.86	12.8 3.63087 3.21 5.50 27.27	58.29
2	20	6	3	29
	23.4 .498638 10.70 68.97 13.25	2.2 6.7524 3.21 20.69 42.86	3.4 .049696 1.60 10.34 13.64	15.51
3	16	0	11	27
	21.8 1.54411 8.56 59.26 10.60	2.0 2.02139 0.00 0.00 0.00	3.2 19.2691 5.88 40.74 50.00	14.44
4	12	1	0	13
	10.5 .215105 .6.42 92.31 7.95	1.0 7E-04 0.53 7.69 7.14	1.5 1.52941 0.00 0.00 0.00	6.95
6	- 6	1 1	2	9
	7.3 .221022 3.21 66.67 3.97	0.7 .157924 0.53 11.11 7.14	1.1 .836601 1.07 22.22 9.09	4.81
TOTAL	151 80.75	14 7.48	22 11.76	187 100.00

STATISTICS FOR TABLE OF WHEREEMP BY R9\_3

STATISTIC	DF	VALUE	PRGS
CHI-SQUARE		38.216	0.000

WARNING: 53% OF THE CELLS HAVE EXPECTED COUNTS LESS
THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

### TABLE OF MS BY R3\_3

MS	R3_3			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	] 3	4	TOTAL
0	88	6	1 4	98
J	78.4	7.7	11.9	
	1.17551	. 389903	5.21187	
	46.32	3.16	2.11	51.58
	89 80	6.12	4.08	
	57.89	40.00	17.39	
				92
1	64	9	11.1	92
	1 25217	7.3	5.55178	
	33.68	4.74	10.00	48.42
	69.57	9.78	20.65	40.42
	42.11	60.00	82.61	
	2			
TOTAL	152	15	23	190
	80.00	7.89	12.11	100.00
			BLE OF MS	

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	2	13.997	0.001

### TABLE OF SEX BY R3\_3

SEX	R3_3			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	] 3	! 4	TOTAL
1	9.6	0.9	1.5	12
	1.35 3.16 50.00 3.95	4.44737 1.58 25.00 20.00	1.64828 1.58 25.00 13.04	6.32
2	146 142.4 .091011	12 14 . 1 . 299823	20 21.5 0.11112	. 178
	76.84 82.02 96.05	6.32 6.74 80.00	10.53 11.24 86.96	93.68
TOTAL	152 80.00	15 7.89	23 12.11	190 100.00

### STATISTICS FOR TABLE OF SEX BY R3\_3

STATISTIC	DF	VALUE	PROS
CHI-SQUARE	2	7.948	0.019

WARNING: 33% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

### TABLE OF TITLE BY R3\_4

TITLE	R3_4			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	ļ 3	4	TOTAL
1	87 70.1	7 17.1	6 12.8	100
	4.09951 46.52 87.00 66.41	5.97574 3.74 7.00 21.88	3.63922 3.21 6.00 25.00	53.48
2	24 32.9	16 8.0	7 6.0	47
	2.41937 12.83 51.06 18.32	7.87257 8.56 34.04 50.00	155313 3.74 14.89 29.17	25.13
3	15 21.7	8 5.3	8 4.0	31
, .	2.07733 8.02 48.39 11.45	1.36933 4.28 25.81 25.00	4.06463 4.28 25.81 33.33	16.58
4	5 6.3	1.5	1.2	9
	.270038 2.67 55.56 3.82	. 169413 0.53 11.11 3.13	2.94675 1.60 33.33 12.50	4.81
TOTAL	131 70.05	32 17.11	24 12.83	187 100.00

STATISTICS FOR TABLE OF TITLE BY R3\_4

STATISTIC	OF	VALUE	PROB
CHI-SQUARE	6	35.079	0.000

WARNING: 25% OF THE CELLS HAVE EXPECTED COUNTS LESS
THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

### TABLE OF WHEREEMP BY R3\_4

WHEREEMP	R3_4			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	] 3	4	TOTAL
1	86	16	7	109
	76.9 1.06656 45.99 78.90 65.15	18.7 .377177 8.56 14.68 50.00	13.4 3.06138 3.74 6.42 30.43	58.29
2	15	-11	3	29
	20.5 1.46197 8.02 51.72 11.36	5.0 7.34511 5.88 37.93 34.38	3.6 .090083 1.60 10.34 13.04	15.51
3	13	3	11	27
	19.1 1.92611 6.95 48.15 9.85	4.6 .568238 1.60 11.11 9.38	3.3 17.7572 5.88 40.74 47.83	14.44
4	13	0	0	13
	9.2 1.59314 6.95 100.00 9.85	2.2 2.2246 0.00 0.00 0.00	1.6 1.59893 0.00 0.00 0.00	6.95
6	5 6.4	1.5	1.1	9
	.288126 2.67 55.56 3.79	1.07 22.22 6.25	.720478 1.07 22.22 8.70	4.81
TOTAL	132 70.59	32 17.11	23 12.30	187 100.00

STATISTICS FOR TABLE OF WHEREEMP BY R3\_4

STATISTIC	DF	VALUE	PROS
CHI-SQUARE		40.216	0.000

WARNING: 53% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 8. CHE-SQUARE MAY NOT BE A VALID TEST.

### TABLE OF MS BY R3\_4

MS	R3_4			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT		_		
COL PCT	2	3	4	TOTAL
0	80 68.6 1.89446	12 16.5 1.22975	6 12.9 3.68657	98
	42.11 81.63 60.15	6.32 12.24 37.50	3.16 6.12 24.00	51.58
1	53 64.4 2.01801	20 15.5 1.30995	19 12.1 3.927	92
	27.89 57.61 39.85	10.53 21.74 62.50	10.00 20.65 76.00	48.42
TOTAL	133 70.00	32 16.84	25 13.16	190 100.00

## STATISTICS FOR TABLE OF MS BY R3\_4

STATISTIC	DF	VALUE	PROS
CHI-SQUARE	2	14.066	0.001

### TABLE OF SEX BY R3\_4

SEX	R3_4			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	1		1 4	TOTAL
1	8.4	2.0	1.6	12,
	1.37619 2.63 41.67 3.76	2E-04 1.05 16.67 6.25	7.41228 2.63 41.67 20.00	6.32
2	128 124.6 .092777	30 30.0 1E-05	20 23.4 .499704	178
	67.37 71.91 96.24	15.79 16.85 93.75	10.53 11.24 80.00	93.68
TOTAL	133 70.00	32 16.84	25 13.16	190 100.00

### STATISTICS FOR TABLE OF SEX BY R3\_4

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	2	9.381	0.009

#### TABLE OF TITLE BY R4\_1

TITLE	R4_1			
FREQUENCY EXPECTED CELL CHIS PERCENT ROW PCT COL PCT	1	ј з	1 4	TOTAL
1	88	6	i 6	†   100
	72.2	14.4	- 13.4	
	3.46125 47.06	4.93184	4.06178	53.48
	88.00	6.00	6.00	33.48
	65.19	22.22	24.00	!
2	26	13	8	47
	33.9	6.8	6.3	
	1.85357	5.68996 6.95	. 468954	
	55.32	27.66	4.28 17.02	25.13
	19.26	48.15	32.00	
3	16	6	9	31
-	22.4	4.5	4.1	"
	1.81863	.518947	5.6889	
	8.56 51.61	3.21	4.81	16.58
	11.85	19.35 22.22	29.03 36.00	
	÷			
4	5	. 2	. 2	9
	6.5	1.3	1.2 .527653	
	2.67	1.07	1.07	4.81
	55.56	22.22	22.22	
	3.70	7.41	8.00	
TOTAL	135	27	25	187
	72.19	14.44	13.37	100.00

STATISTICS FOR TABLE OF TITLE BY R4\_1

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	6	29.744	0.000

WARNING: 33% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

### TABLE OF WHEREEMP BY R4\_1

WHEREEMP	R4_1			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	21	J 31	l 41	TOTAL
				109
1	90 79.3 1.45163 48.13 82.57 66.18	13 15,2 ,306456 6,95 11,93 50,00	6 14.6 5.04265 3.21 5.50 24.00	58.29
2	14	11	4	29
:	21.1 2.38401 7.49 48.28 10.29	4.0 12.0414 5.88 37.93 42.31	3.9 .003902 2.14 13.79 16.00	15.51
3	15	1	11	27
·	19.6 1.0947 8.02 55.56 11.03	3.8 2.02039 0.53 3.70 3.85	3.6 15.1311 5.88 40.74 44.00	14.44
4	12	0	1	13
	9.5 .685315 6.42 92.31 8.82	1.8 1.80749 0.00 0.00 0.00	1.7 .313353 0.53 7.69 4.00	6.95
6	5 6.5 .364899 2.67 55.56 3.68	1 1.3 .050482 0.53 11.11 3.85	3 1.2 2.68321 1.60 33.33 12.00	9 4.81
TOTAL	13 <b>6</b> 72.73	26 13.90	25 13.37	187 100.00

STATISTICS FOR TABLE OF WHEREEMP BY R4\_1

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	•	45.381	0.000

WARNING: 53% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF MS BY R4\_1

MS	R4_1			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	ļ 3	. 4	TOTAL
2	84 70.1 2.7356	14.4	13.4	98
	44.21 85.71 61.76	2.05071 4.74 9.18 32.14	5.27473 2.63 5.10 19.23	51.58
1	52 65.9 2.91401 27.37	19 13.6 2.18445 10.00	21 12.6 5.61874 11.05	92 48.42
	56.52 38.24	20.65 67.86	22.83 80.77	
TOTAL	13 <b>6</b> 71.58	28 14.74	13.68	190 100,00
	STATISTIC	S FOR TAE	BLE OF MS	BY R4_1

STATISTIC	OF	VALUE	PROB
CHI-SQUARE	2	20.778	0.000

TABLE OF TITLE BY R4\_2

TITLE	R4_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	31	1 4	TOTAL
1	67.4 4.60785	16.6 5.53335	16.0 4.03211	100
	45.45 85.00 67.46	3.74 7.00 22.58	4.28 8.00 26.67	53.48
2	23 31.7	15 7.8	7.5	47
	2.37277	6.66928	0 28266	
	12.30	8.02	4.81	25.13
	48.94 18.25	31.91 48.39	19.15 30.00	
3	13	8	1 10	31
•	20.9	5.1	5.0	
	2.97859	1.59273	5.08079	
	6.95 41.94	4.28 25.81	5.35 32.26	16.58
	10.32	25.81	33.33	
4	5	1	3	9
	6.1	1.5	1.4	1
	. 186746	0.16223	1.67718	
	2.67 55.56	0.53	1.60	4.81
	3.97	3.23	10.00	
TOTAL	126	31	30	187
	67.38	16.58	16.04	100.00

STATISTICS FOR TABLE OF TITLE BY R4\_2

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	6	35 . 176	0.000

WARNING: 25% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

## TABLE OF WHEREEMP BY R4\_2 WHEREEMP R4\_2

WHEREEMP	R4_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT				
COL PCT	2	3	4	TOTAL
1	86 74.0	14 18.1	9 16.9	109
	1.93658 45.99 78.90 67.72	.916515 7.49 12.84 45.16	3.69558 4.81 8.26 31.03	58.29
2	11 . 19.7 3.83882	12 4.8 10.7608	6 4.5 .502082	29
	5.88 37.93 8.66	6.42 41.38 38.71	3.21 20.69 20.69	15.51
3	14 18.3 1.02573	4.5 1.3696	11 4.2 11.085	27
	7.49 51.85 11.02	1.07 7.41 6.45	5.88 40.74 37.93	14.44
4	11 8.8 .533904	2.2 0.6191	1 2.0 .512064	13
	5.88 84.62 8.66	0.53 7.69 3.23	0.53 7.69 3.45	6.95
6	6. 1	1.5	1.4	9
	.202413 2.67 55.56 3.94	. 172982 1.07 22.22 6.45	1.07 22.22 6.90	4.81
TOTAL	127 67.91	31 16.58	29 15.51	187 100.00

# STATISTICS FOR TABLE OF WHEREEMP BY R4\_2

STATISTIC	DF	VALUE	PROS
CHI-SQUARE		37 . 433	0.000

WARNING: 53% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

## TABLE OF MS BY R4\_2

MS	R4_2				
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	<u> </u> 3	! 4	TOTAL	
0	77	1 11	10	98	
	66.0	16.0	16.0		
	1.82574	1.55695	2.24359		
	40.53	5.79	5.26	51.58	
	78.57	11.22	10.20		
	60.16	35.48	32.26		
1	51				
•	62.0	15.0	15.0	92	
	1.94481	1.65849	2.38991		
	26.84	10.53	11.05	48.42	
	55.43	21.74	22.83		
	39.84	64.52	67.74		
TOTAL	128	31	31	190	
	67.37	16.32	16.32	100.00	
	STATISTIC	CS FOR TAI	BLE OF MS	BY R4_2	

STATISTIC	DF	VALUE	PROB
CHT-SQUARE	2	11 619	0.003

### TABLE OF TITLE BY R5\_1

1116	KD_1			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	1	] 3	4	TOTAL
. 1	77	20	3	100
	61.5	26.2	12.3	
	3.90802 41.18	1.46851	7.0312 1.60	53.48
	77.00	20.00	3.00	33.48
	66.96	40.82	13.04	
	<del>•</del>			_
2	28.9	17	_ 6	47
	831958	12.3	5.8 .008316	
	12.83	9.09	3.21	25.13
	51.06	36.17	12.77	
	20.87	34.69	26.09	i
3	<b>†</b>	<b>+</b>	<b>†</b>	l 31
3	11	8.1	3.8	31
	3.41116	. 433725	10.04	
	5.88	5.35	5.35	16.58
	35.48	32.26	32.26	
	9.57	20.41	43.48	1
4	1 3	2	i 4	9
-	5.5	2.4	1.1	-
	1.16085	.054434	7.56106	1
	1.60	1.07	2.14	4.81
	33.33	22.22	44.44	1
	2.61	4.08	17.39	!
TOTAL	115	49	23	187
	61.50	26.20	12.30	100.00

### STATISTICS FOR TABLE OF TITLE BY R5\_1

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	6	37 . 69 1	0.000

WARNING: 25% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF WHEREEMP BY R5\_1

WHEREEMP	R5_1			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT				
COL PCT	2	3	4	TOTAL
1	73 67.6	29 28.6	12.8	109
·	.428877 39.04 66.97 62.93	.006732 15.51 26.61 59.18	2.64463 3.74 6.42 31.82	58.29
2	14 18.0	13 7.6	2 3.4	29
	.884667 7.49 48.28 12.07	3.8389 6.95 44.83 26.53	1.07 6.90 9.09	15.51
3	15 16.7	3 7.1	3.2	27
	. 182571 8.02 55.56 12.93	2.34698 1.60 11.11 6.12	10.6765 4.81 33.33 40.91	14.44
4	10 8.1	3.4	1.5	13
	.464702 5.35 76.92 8.62	.048489 1.60 23.08 6.12	1.52941 0.00 0.00 0.00	6.95
6	4 5.6 .448788	2.4 .782325	4 1.1 8.16993	9
	2.14 44.44 3.45	0.53 11.11 2.04	2.14 44.44 18.18	4.81
TOTAL	116 62.03	49 26.20	22 11.76	187 100.00

STATISTICS FOR TABLE OF WHEREEMP BY R5\_1

STATISTIC	DF	VALUE	PROS
**			
CHI-SQUARE	8	33.038	0.000

WARNING: 40% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

### TABLE OF MS BY R5\_1

MS	R5_1			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	ļ 3	ļ . 41	TOTAL
0	68 60.3 .970428	24 25.3	6 12.4 3.28711	98
	35.79 69.39 58.12	12.63 24.49 48.98	3.16 6.12 25.00	51.58
1	49 56.7 1.03372	25 23.7 .068374	18 11.6 3.50149	92
	25.79 53.26 41.88	13.16 27.17 51.02	9.47 19.57 75.00	48.42
TOTAL	117 61.58	49 25.79	24 12.63	190 100.00

### STATISTICS FOR TABLE OF MS BY R5\_1

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	2	8.925	0.012

# TABLE OF TITLE BY R5\_2

TITLE	R5_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	i	3	4	TOTAL
1	80	17	3	100
•	63.6	23.5	12.8	
	4.20779	1.81191 9.09	7.53547 1.60	53.48
	80.00	17.00	3.00	35.40
	67.23	38.64	12.50	Į .
2	24	17	6	47
	29.9	11.1	6.0	
	1.16745	3.1918 9.09	2E-04 3.21	25.13
	51.06	36.17	12.77	25.15
	20.17	38.64	25.00	
3	1 12	8	11	l 31
·	19.7	7.3	4.0	١.
	3.02681	.068311	12.3912	
	6.42 38.71	4.28 25.81	5.88 35.48	16.58
	10.08	18.18	45.83	
4	·			9
•	5.7	2.1	1.2	9
	1.2987	.006536	7.00693	
	1.60	1.07	2.14	4.81
	33.33 2.52	22.22 4.55	16.67	1
	1 2.52	+		
TOTAL	119	44	24	187
	63.64	23.53	12.83	100.00

STATISTICS FOR TABLE OF TITLE BY R5\_2

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	6	41.713	0.000

WARNING: 25% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF WHEREEMP BY R5\_2

WHEREEMP	R5_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	! 3	1 4	I TOTAL
	<u></u>	<del></del>		
1	76 69.9 .523894	25 25.6 .016325	13.4 2.18025	109
	40.64 69.72 63.33	13.37 22.94 56.82	4.28 7.34 34.78	58.29
2	14 18.6 1.14181	13 6.8 5.59077	3.6 .688284	29
	7.49 48.28 11.67	6.95 44.83 29.55	1.07 6.90 8.70	15.51
3	16 17.3 .101512	2 6.4 2.98257	9 3.3 9.71216	27
ż	8.56 59.26 13.33	1.07 7.41 4.55	4.81 33.33 39.13	14.44
4	10 8.3 .329425	3.1 001131	1.6	13
	5.35 76.92 8.33	1.60 23.08 6.82	0.00 0.00 0.00	6.95
6	5.8	2.1	1.1	9
	.545771 2.14 44.44 3.33	.589869 0.53 11.11 2.27	7.56106 2.14 44.44 17.39	4.81
TOTAL	120 64 / 17	23.53	23 12 30	187 100.00

STATISTICS FOR TABLE OF WHEREEMP BY R5\_2

STATISTIC	DF	VALUE	PRO8
CHI - SQUARE	8	33.564	0.000

WARNING: 40% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SOUARE MAY NOT BE A VALID TEST.

## TABLE OF MS BY R5\_2

MS	R5_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	,	1 4	TOTAL
0	70 62.4 .922923	21 22.7 .126555	7 12.9 2.69474	98
	36.84 71.43 57.85	11 05 21 43 47.73	3.68 7.14 28.00	51.58
. 1	51 58.6 983114	23 21.3 134809	18 12.1 2.87048	92
	26.84 55.43 42.15	12.11 25.00 52.27	9.47 19.57 72.00	48.42
TOTAL	121 63.68	44 23.16	25 13.16	190 100.00
	STATISTIC	S FOR TAE	BLE OF MS	8Y R5_2

STATISTIC	DF	VALUE	PROB
CHI - SQUARE	2	7 733	0.021

TABLE OF TITLE BY R5\_3

TTI	F	25	3

STATISTICS FOR TABLE OF TITLE BY R5\_3

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	6	17.075	0.009

WARNING: 41% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF TITLE BY R5\_4

TITLE	R5_4			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	] 3	l 41	TOTAL
1	81	14	5	100
	73.3	17.6	9.1	
	.817288 .43.32 81.00	753725 7.49 14.00	1.84091 2.67 5.00	53.48
	59.12	42.42	29.41	
2	30 34.4	12 8.3	4.3	47
	. 570754	1.65582 6.42	. 123791 2.67	25.13
	16.04 63.83	25.53	10.64	25.13
	21.90	36.36	29.41	
3	18	7	6	31
	0.9773	5.5	2.8 3.59238	
	9.63	3.74	3.21	16.58
	58.06	22.58	19.35 35.29	
	13.14	21.21	35.29	
4	. 8	0	1 . !	9
	6.6	1.58824	0.8	
	4.28	0.00	0.53	4.81
	88.89 5.84	0.00	11.11 5.88	
TOTAL	137	33	17	187
TOTAL	73.26	17.65	9.09	100.00

STATISTICS FOR TABLE OF TITLE BY R5\_4

STATISTIC	DF	VALUE	PROS
CHI-SQUARE	6	12.688	0.048

WARNING: 33% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF YRSSPORT BY R5\_4

FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL. PCT 2 3 4 TOTAL  1 79 19 16 114   232134 .032323 2.5037   41.58 10.00 8.42 60.00   69.30 16.67 14.04 60.00   56.83 57.58 88.89    2 47 7 7 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	YRSSPORT	R5_4			
83.4 19.8 10.8 232134 10.8 232134 .032323 2.5037 41.58 10.00 8.42 60.00 69.30 16.67 14.04 56.83 57.58 88.89 22 47 9.6 5.2 1.13678 682108 3.40245 24.74 3.68 0.53 65.45 12.73 1.82 33.81 21.21 5.56 23.81 21.21 5.56 24.74 3.68 0.53 1.82 33.81 21.21 5.56 28.95 33.81 21.21 5.56 29.35 28.95 33.81 21.21 5.56 29.35 29.35 29.35 21.21 5.56	EXPECTED CELL CHI2 PERCENT ROW PCT	2	3	4	TOTAL
83.4   19.8   10.8   22.9134   .032323   2.5037   41.58   10.00   8.42   60.00   69.30   16.67   14.04   56.83   57.58   88.89   2	1	79	19	16	114
41.58 10.00 8.42 60.00 69.30 16.67 14.04 88.89 2 47 7 1 5.2 1.3678 682108 3.40245 24.74 3.68 0.53 85.45 12.73 1.82 33.81 21.21 5.56 3 15.4 3.68 0.53 61.90 33.38 4.76 6.84 3.68 0.53 61.90 33.38 4.76 6.84 3.68 0.53 61.90 33.38 4.76 9.35 21.21 5.56		83.4	19.8	10.8	
69.30   16.67   14.04   66.83   57.58   88.89   2   47   7   1   55   68.89   2   40.2   9.6   5.2   1.13678   682108   3.40245   24.74   3.68   0.53   28.95   33.81   21.21   5.56   3   15.4   3.6   0.53   15.4   3.6   0.53   15.4   3.6   0.53   6.84   3.68   0.53   61.90   33.38   4.76   9.35   21.21   5.56					
56.83   57.58   88.89					60.00
2					
40. 2 9.6 5.2 1.13678 682108 3.40245 24.74 3.68 0.53 28.95 33.81 21.21 5.56 3 1.82 0.381 3.68 3.68 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0		36.63	37.58	88.89	Į.
1.13678 .682108 3.40245 24.74 3.68 5.45 12.73 1.82 33.81 21.21 5.56 33 28.95 33.81 21.21 5.56 2.0 0.3635 3.08171 .492119 6.84 3.68 0.53 61.90 33.33 4.76 9.35 21.21 5.56	2	47	7	1 1	55
24.74 3.68 0.53 28.95 85.4 21.73 1.82 33.81 21.21 5.56 33 15.4 3.68 0.53 2.0 0.3655 3.08171 .492119 6.84 3.68 0.53 61.90 33.33 4.76 9.35 21.21 5.56		40.2.	9.6	5.2	
85.45 12.73 1.82 33.81 21.21 5.56 3 13 7 1 21 15.4 3.6 2.0 0.3635 3,08171 492119 6.84 3.68 0.53 61.90 33.33 4.76 9.35 21.21 5.56					
33.81 21.21 5.56 33 13 7 1 21 3.6 2.0 3.63 3.08171 492119 6.84 3.68 0.53 61.90 33.33 4.76 9.35 21.21 5.56					28.95
3 13 7 1 21 15.4 3.6 2.0 0.3635 3.08171 492119 6.84 3.68 0.53 61.90 33.33 4.76 9.35 21.21 5.56					
15.4 3.6 2.0 0.3635 3,08171 .492119 6.84 3.68 0.53 61.90 33.33 4.76 9.35 21.21 5.56		33.81	21.21	3.36	Į.
0.3635 3,08171 492119 6.84 3.68 0,105 61.90 33.33 4.76 9.35 21.21 5.56	3	13	7	1	21
6.84 3.68 0.53 11.05 61.90 33.33 4.76 9.35 21.21 5.56		15.4	3.6	2.0	
61.90 33.33 4.76 9.35 21.21 5.56					
9.35 21.21 5.56					11.05
TOTAL 139 33 18 190		9.35	21.21	5.56	Į.
	TOTAL	139	33	18	190
73.16 17.37 9.47 100.00	_			9.47	

STATISTICS FOR TABLE OF YESSPORT BY R5\_4

STATISTIC	DF	VALUE	PROS
CHI-SQUARE	4	11.927	0.018
WARNIAMO			

WARNING: 22% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

## TABLE OF YRSSPORT BY R5\_5

YRSSPORT	R5_5			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	<b>j</b> 3:	4	TOTAL
1	74 78.0	30 29.4 .012245	10 6.6 1.75152	114
,	205128 38.95 64.91 56.92	15.79 26.32 61.22	5.26 8.77 90.91	60.00
, 2	45 37.6 1.44277	10 14.2 1.2343	0 3 2 3 18421	55
-	23.68 81.82 34.62	5.26 18.18 20.41	0.00 0.00 0.00	28.95
3	11	9 5.4	1.2	21
	.789666 5.79 52.38 8.46	2.37206 4.74 42.86 18.37	0.0383 0.53 4.76 9.09	11.05
TOTAL	130 68 . 42	49 25.79	11 5.79	190 100.00

STATISTICS FOR TABLE OF YESSPORT BY R5\_5

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	4	11.030	0.026

WARNING: 22% OF THE CELLS HAVE EXPECTED COUNTS LESS
THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF TITLE BY R5\_7

TITLE	K5_/			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	3	. 4	TOTAL
1	94	4	2 1	100
	82.4 1.64723 50.27 94.00 61.04	10.7 4.19119 2.14 4.00 20.00	7.0 3.52726 1.07 2.00 15.38	53.48
2	35	7	5	47
	38.7	5.0	3.3	
	18.72	0.77461	.918771 2.67	25.13
	74.47	14.89	10.64	
	22.73	35.00	38.46	
3	19	6	6	31
	25.5	3.3	2.2	
	1.66996	2.17357	6.85979	
	10.16 61.29	3.21 19.35	3.21 19.35	16.58
	12.34	30.00	46.15	
	<del>-</del>	<del></del>		
4	7.4	1.0	0.6	9
	268908	4.31257	.625668	
	3.21	1.60	0.00	4.81
	66.67	33.33	0.00	
	3.90	15.00	0.00	!
TOTAL	154	20	13	187
	82.35	10.7 <b>0</b>	6.95	100.00

STATISTICS FOR TABLE OF TITLE BY R5\_7

STATISTIC		OF	VALUE	PROB
CHI-SQUARE		6	27.324	0.000
WARNING: 41% O	F THE CELLS	MAVE EVE	ECTED COM	

WARNING: 41% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF WHEREEMP BY R5\_7

WHEREEMP	R5_7			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	3	4	TOTAL
1	97 90.3 .489825	8 11.1 .853717	7.6 1.68904	109
	51.87 88.99 62.58	4.28 7.34 42.11	2.14 3.67 30.77	56.29
2	22 24.0 .172695	4 2.9 .37 <b>66</b> 51	3 2.0 .480234	29
	11.76 75.86 14.19	2.14 13.79 21.05	1.60 10.34 23.08	15.51
3	18 22.4 .857098	3 2.7 .024017	6 1.9 9.05649	27
	9.63 66.67 11.61	1.60 11.11 15.79	3.21 22.22 46.15	14.44
4	11 10.8 .004681	2 1.3 .349196	0 0.9 .903743	13
	5.88 84.62 7.10	1.07 15.38 10.53	0.00	6.95
6	7 7.5 .028352	2 0.9 1.28871	0.6 0.6	9
	3.74 77.78 4.52	1.07 22.22 10.53	0.00 0.00 0.00	4.81
TOTAL	155 82.89	19 10.1 <b>6</b>	13 6.95	187 100.00

STATISTICS FOR TABLE OF WHEREEMP BY R5\_7

STATISTIC	OF	VALUE	PROB
CHI-SQUARE		17.200	0.028
WARNING: 53% OF THE CELL	S HAVE EX	PECTED COUN	TS LESS

WARNING: 53% OF THE CELLS HAVE EXPECTED COUNTS LESS
THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF TITLE BY R5\_8

TITLE	R5_8			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	] 3	4	TOTAL
1	56	42	1 2 1	100
	49.2	44.9	5.9	100
	0.94047	. 189786	2.56235	
	29.95 56.00	22.46 42.00	1.07 2.00	53.48
	60.87	50.00	18.18	
			·	
2	24	19 21.1	2.8	47
	.033263	.211337	0.55194	
	12.83	10.16	2.14	25.13
	51.06	40.43	8.51	
	26.09	22.62	36.36	
3	7	20	4 1	31
	15.3	13.9	1.8	
	4.46417 3.74	2.65017	2.59772	16.58
	22.58	64.52	12.90	16.30
	7.61	23.81	36.36	
4	5	3	1 1	
•	4.4	4.0	0.5	•
	.073943	. 268971	.418301	
	2.67	1.60	0.53	4.81
	55.56 5.43	33.33	9.09	
	j 5.43	j 3.57	+	ļ •
TOTAL	92	84	11	187
	49.20	44.92	5.88	100.00

#### STATISTICS FOR TABLE OF TITLE BY R5\_8

STATISTIC	DF	VALUE	PROB
CHI - SQUARE	6	14.962	0.021

WARNING: 41% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

## TABLE OF TITLE BY RG\_1

TITLE	R6_1			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	ļ g	ļ <b>4</b>	TOTAL
1	64	20	16	100
•	51.9	27.3	20.9	'~
	2.83578	1.93939	1.13049	
	34.22 64.00	10.70 20.00	8.56 16.00	53.48
	65.98	39.22	41.03	<b>[</b>
2				
4	21 24.4	16 12.8	10 9.8	47
	.468514	. 789813	.003994	
	11.23	8.56	5.35	25.13
	44.68	34.04	21.28	l
	21.65	31.37	25.64	<u>!</u>
3	9	11	11	31
	16.1	8.5	6.5	1
	3.11746	. 766373	3.18071	1
	4.81	5.88	5.88	16.58
	29.03 9.28	35.48 21.57	35.48 28.21	!
	3.20	21.57	20.21	!
4	3	4	2	9
	4.7	2.5	1.9	1
	. 596284 1 . 60	.973064 2.14	1.07	
	33.33	44.44	22.22	4.61
	3.09	7.84	5.13	
TOTAL		·		
IUIAL	97 51.87	51 27.27	20.86	187
			-0.00	

STATISTICS FOR TABLE OF TITLE BY RG\_1

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	6	15.810	0.015

WARNING: 25% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF TITLE BY RG\_2

TITLE	R6_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	<b>]</b> 3	4	TOTAL
1	73	18	9	100
	1 55271 39.04 73.00 61.86	21.4 .537374 9.63 18.00 45.00	15.5 2.73112 4.81 9.00 31.03	53.48
2	28	12	7.3	47
	. 29.7 .092662 14.97 59.57 23.73	10.1 0.37688 6:42 25.53 30:00	.011441 3.74 14.89 24.14	25.13
3	13	6.6	10	31
	19.6 2.20092 6.95 41.94 11.02	282629 4 28 25 81 20 00	5.60838 5.35 32.26 34.48	16.58
4	4	2	3	9
	5.7 0.49647 2.14 44.44 3.39	1.9 .002911 1.07 22.22 5.00	1.4 1.844 1.60 33.33 10.34	4.81
TOTAL	118 63.10	40 21.39	29 15.51	187 100.00

#### STATISTICS FOR TABLE OF TITLE BY RG\_2

STATISTIC	OF	VALUE	PROB
CHI-SQUARE	•	15.737	0.015

WARNING: 25% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF WHEREEMP BY RG\_2

WHEREEMP	R6_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	1 3		TOTAL
1	76 68.8 .757735 40.64 69.72	20 23.9 .635921 10.70 18.35	13 16.3 .675705 6.95	109
	64.41	48.78	46.43	
2	15 18.3	6.4	3 4.3	29
	.594907 8.02 51.72 12.71	3.38857 5.88 37.93 26.83	.414906 1.60 10.34 10.71	15.51
3	14	5.9	9 4.0	27
	.541514 7.49 51.85 11.86	.622586 2.14 14.81 9.76	4.81 33.33 32.14	14.44
4	8.2	2.9	1.9	13
	.077394 4.81 69.23 7.63	2.14 30.77 9.76	1.94652 0.00 0.00 0.00	6.95
6	5.7 0.49647	2 2.0 4E-04	3 1.3 2.02 <b>6</b> 17	9
	2.14 44.44 3.39	1.07 22.22 4.88	1.60 33.33 10.71	4.81
TOTAL	118 63.10	41 21.93	28 14.97	187 100.00

STATISTICS FOR TABLE OF WHEREEMP BY R6\_2

STATISTIC	DF	VALUE	PROS
CHI-SQUARE		18.721	0.016

WARNING: 40% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

## TABLE OF ROUTE BY R6\_2

ROUTE	R6_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	ј з	4	TOTAL
1	25	9	3	37
	23.0 180232 14.37 67.57 23.15	7.7 .236253 5.17 24.32 25.00	6.4 1.79012 1.72 8.11 10.00	21.26
2	58	17	10	85
	52.8 520712 33.33 68.24 53.70	17.6 0.01954 9.77 20.00 47.22	14.7 1.4787 5.75 11.76 33.33	48.85
3	17		13	38
	23.6 1.83913 9.77 44.74 15.74	7.9 0.00242 4.60 21.05 22.22	6.6 6.34646 7.47 34.21 43.33	21.84
4		2	. 1	14
	8.7 .054735 4.60 57.14 7.41	2.9 .277504 1.15 14.29 5.56	2.4 1.04236 2.30 28.57 13.33	8.05
TOTAL	108 62 : 07	36 20.69	30 17 24	174 100.00

#### STATISTICS FOR TABLE OF ROUTE BY R6\_2

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	6	13 788	0.032

## TABLE OF MS BY RG\_2

MS	R6_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	] 3		TOTAL
0	69 61.4	22 21.1	7 15.5	98
	0.94626 36.32 70.41 57.98	.034377 11.58 22.45 53.66	4.64035 3.68 7.14 23.33	51.58
1	50 57.6 1.00797	19 19.9 .036619	23 14.5 4.94298	92
	26.32 54.35 42.02	10.00 20.65 46.34	12.11 25.00 76.67	48.42
TOTAL	119 62.63	41 21.56	. 30 15.79	190 100.00
	STATISTIC	S FOR TAB	LE OF MS	BY R6_2

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	2	11.600	0.003

TABLE OF YRSSPORT BY R7\_2

YRSSPORT	R7_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	3	4	TOTAL
1	16 18.6	35 38.4 .301042	63 57.0 .631579	114
	.363441 8.42 14.04 51.61	18.42 30.70 54.69	33.16 55.26 66.32	60.00
2	9 9.0 8E-05	26 18.5 3.01495	20 27.5 2.04545	55
	4.74 16.36 29.03	13.68 47.27 40.63	10.53 36.36 21.05	28.95
3	6 3.4 1.93323	7.1 2.34601	12 10.5 .214286	21
	3.16 28.57 19.35	1.58 14.29 4.69	6.32 57.14 12.63	11.05
TOTAL	31 16.32	64 33.68	95 50.00	190 100.00

STATISTICS FOR TABLE OF YESSPORT BY R7\_2

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	4	10.850	0.028

#### TABLE OF TITLE BY R7\_3

TITLE	R7_3			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	3	4	TOTAL
1	78	14	8	100
	67.4 1.67396 41.71 78.00 61.90	18.7 1.18858 7.49 14.00 40.00	13.9 2.50682 4.28 8.00 30.77	53.48
2	27	10	10	47
	31.7 .688206	8.8 . 164573	6.5 1.83754	
	14.44	5.35	5.35	25.13
	57.45	21.28	21.28	
	21.43	28.57	38.46	
3	16	8	7	31
	20.9	5.8	4.3	
	1.14372 8.56	.832554 4.28	1.67865 3.74	16.58
	51.61	25.81	22.58	
	12.70	22.86	26.92	Į
4	5	3	1	9
	6.1	1.7	1.3	
	. 186746	1.02735	.050482 0.53	4.81
	2.67 55.56	33.33	11.11	4.01
	3.97	8.57	3.85	
TOTAL	126	35	26	187
	67.38	18.72	13.90	100.00

STATISTICS FOR TABLE OF TITLE BY R7\_3

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	6	12.979	0.043

WARNING: 25% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CMI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF PCSPORT BY R7\_3

PCSPORT	R7_3			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	<b>)</b> 3	1 4	TOTAL
1	77 81.5	19	25 17.2	121
7 .2	.250164 40.53 63.64 60.16	0.48546 10.00 15.70 54.29	3.54307 13.16 20.66 92.59	63.68
2	27	12	_ 1	40
	26.9 1E-04	7.4 2.91128	5.7 3.86014	
	14.21 67.50 21.09	6.32 30.00 34.29	0.53 2.50 3.70	21.05
3	24	4	1	29
	1.0196	5.3	4.1 2.36371	
	12.63	2.11	0.53	15.26
	82.76 18.75	13.79 11.43	3.45 3.70	
TOTAL	128	35	27	190
	67.37	18.42	14.21	100.00

STATISTICS FOR TABLE OF PCSPORT BY R7\_3

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	4	14.771	0.005

#### TABLE OF TITLE BY R7\_5

TITLE	R7_5			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	] 3	4	TOTAL
1	67	. 17	16	100
	54.5 2.84379	19.8	25.7 3.64178	
	35.83	9.09	8.56	53.48
	67.00 65.69	17.00 45.95	16.00 33.33	
2	22		17	.47
	25.6 .515796	9.3	2.0194	
	11.76	4.28	9.09	25.13
	46.81	17.02	36.17	
	21.57	21.62	35.42	ļ.
3	10	8	13	31
	16.9	6.1	8.0	
	2.82307 5.35	.567866 4.28	3.19579 6.95	16.58
	32.26	25.81	41.94	16.58
	9.80	21.62	27.08	
4	3	i 4	2	. 9
	4.9	1.8	2.3	
	.742424	2.76573	.041642	
	1.60	2.14	1.07	4.81
	33.33 2.94	10.81	22.22 4.17	
TOTAL	102	37	48	187
	54 . 55	19.79	25.67	100.00

#### STATISTICS FOR TABLE OF TITLE BY R7\_5

STATISTIC	DF	VALUE	PROS
AUT 601106			
CHI-SQUARE	6	19.731	0.003

WARNING: 25% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF ROUTE BY R7\_5

ROUTE	R7_5			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	] . 3	4	TOTAL
	23	10	1 4	37
	20.4	7.2	9.4	•
	13.22	1.06136	3.0664 2.30	21.26
	62.16	5.75 27.03	10.81	21.26
	23.96	29.41	9.09	
2	49	17	19	85
-	46.9	16.6	21.5	
	.094346	.009195	0.28944	
	28.16	9.77	10.92	48.85
	57.65	20.00	22.35	
	51.04	50.00	43.18	
3	16	4	18	38
	21.0	7.4	9.6	
	1.17604	1.58009	7 . 3269	
	9.20	2.30 10.53	10.34	21.84
	16.67	11.76	47.37 40.91	
	+			
4	8	3	3	14
	7.7	2.7	3.5	
	.009852	.025548	1.72	8.05
	4.60 57.14	1.72	21.43	8.05
	8.33	8.82	6.82	
	÷		·	
TOTAL	96 55.17	34 19.54	44 25 . 29	174
	JJ. 1/	19.54	25.29	100.00

#### STATISTICS FOR TABLE OF ROUTE BY R7\_5

STATISTIC	DF	VALUE	PROS
CHI - SOUARE	6	15.049	0.020

## TABLE OF MS BY R7\_5

MS	R7_5			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	3	I 41	TOTAL
0	53.6 1.63249	18 19.1 .061596	25.3 2.7085	98
	33.16 64.29 60.58	9.47 18.37 48.65	8.95 17.35 34.69	51.58
1	41 50.4 1.73896	19 17.9	32 23.7	92
	21.58 44.57 39.42	065613 10.00 20.65 51.35	2.88514 16.84 34.78 65.31	48.42
			·	•
TOTAL	104 54.74	37 19 . 47	49 25.79	190 100 . 00

#### STATISTICS FOR TABLE OF MS BY R7\_5

STATISTIC	DF	VALUE	PROB
CHI - SQUARE	2	9.092	0.011

#### TABLE OF TITLE BY RS\_1

TITLE	R8_1			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	3	4	TOTAL
1	45	17	38	100
	35.8 2.34753 24.06 45.00 67.16	15.0 .274333 9.09 17.00 60.71	49.2 2.54873 20.32 38.00 41.30	53.48
2	7	6	34	47
	16.8 5.74938	7.0 .152935	23.1 5.11652	
	3.74	3.21	18.18	25.13
	14.89	12.77	72.34	
	10.45	21.43	36.96	!
3	14	3	14	31
	11.1	4.6 .580651	15.3	
	7.49	1.60	7.49	16.58
	45.16	9.68	45.16	
	20.90	10.71	15.22	!
4	1	2	6	9
	3.2	1.3	4.4	
	1.53472	1.07	3.21	4.81
	11.11	22.22	66.67	1.31
	1.49	7.14	6.52	
TOTAL	67	28	92	187
	35.83	14.97	49.20	100.00

## STATISTICS FOR TABLE OF TITLE BY R8\_1

STATISTIC		DF	VALUE	PROS
CHI - SQUARE	 	 6	20.035	0.003
WARNING:				UNTS LESS VALID TEST.

#### TABLE OF WHEREEMP BY RB\_1

WHEREEMP	. R8_1			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	3	1 4	TOTAL
1	39.1 7.35363 29.95 51.38	17 16.9 5E-04 9.09 15.60	36 53.0 5.47589 19.25 33.03	109
	83.58	58.62	39.56	
2	3 10.4	4.5	22 14.1	29
	5.25656 1.60 10.34 4.48	.054996 2.14 13.79 13.79	4.40862 11.76 75.86 24.18	15.51
3		4	19	27
•	9.7 3.32775 2.14 14.81 5.97	4.2 .008366 2.14 14.81 13.79	13.1 2.61441 10.16 70.37 20.88	14.44
4	3	2	8	13
	4.7 .590016 1.60 23.08 4.48	2.0 1E-04 1.07 15.38 6.90	6.3 .442856 4.28 61.54 8.79	6.95
•	3.2 1.53472 0.53 11.11 1.49	2 1.4 261622 1.07 22.22 6.90	4.4 .599459 3.21 66.67 6.59	9 4.81
TOTAL	67 35 . 83	29 15.51	91 48.66	187 100.00

STATISTICS FOR TABLE OF WHEREEMP BY RG\_1

STATISTIC	DF	VALUE	PROS
CHI-SQUARE	•	31.930	0.000

WARNING: 46% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARRE MAY NOT BE A VALID TEST.

TABLE OF EMPLOY BY R8\_1

EMPLOY	R8_1		_	
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	l 3	1 4	l TOTAL
		,		IUIAL
. 1	58 49.2 1.5773	23 21.0 .194748	55 65.8 1.78163	136
	30.85 42.65 85.29	12.23 16.91 79.31	29.26 40.44 60.44	72.34
2	7 11.6	4.9	21 15.5	32
	1.80792 3.72 21.88 10.29	0.17755 2.13 12.50 13.79	1.96052 11.17 65.63 23.08	17.02
3	2 6.1	2.6	14 8.2	17
	2.79946 1.06 11.76 2.94	1.00368 0.53 5.88 3.45	4.04773 7.45 82.35 15.38	9.04
4	1.1	0.5	1 1.5	3
	.006675 0.53 33.33	.623685 0.53 33.33 3.45	. 140772 0.53 33.33	1.60
	1.4/	3.45	1.10	Į.
TOTAL	68 36 . 17	29 15.43	91 48.40	188 100.00

STATISTICS FOR TABLE OF EMPLOY BY R8\_1

STATISTIC	DF	VALUE	PRO6
CHI-SQUARE	6	16.122	0.013

WARNING: 41% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF WHEREEMP BY RB\_2

WHEREEMP	R8_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT	21	31		TOTAL
COL PCT				
1	9 7.0 .574928	76 69.4 .634934	24 32.6 2.28784	109
	4.81 8.26 75.00	40.64 69.72 63.87	12.83 22.02 42.86	58.29
2	1.9	17 18.5 .114644	12 8.7 1.26577	29
	1.86096 0.00 0.00 0.00	9.09 58.62 14.29	6.42 41.38 21.43	15.51
3	1.7	14 17.2	12 8.1	27
	309781 0.53 3.70 8.33	.589226 7.49 51.85 11.76	1.89509 6.42 44.44 21.43	14.44
4	0 0.8	9 8.3	3.9	13
	0.00 0.00 0.00	.063936 4.81 69.23 7.56	.002938 2.14 30.77 7.14	6.95
6	0.6	5.7	2.7	9
	3.50347 1.07 22.22 16.67	1.2987 1.60 33.33 2.52	.631695 2.14 44.44 7.14	4.81
TOTAL	12 6.42	119 63.64	56 29.95	187 100.00

STATISTICS FOR TABLE OF WHEREEMP BY R8\_2

STATISTIC	DF	VALUE	PRO6
CHI-SQUARE	8	15.868	0.044

WARNING: 40% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF MS BY R8\_2

MS	R8_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	] 3	4	TOTAL
0	7	69	22	98
	6.7 .012955	61.4	29.9	
	3.68	36.32	11.58	51.58
	7.14	70.41	22.45	31.36
	53.85	57.98	37.93	
1	6	50	36	92
	6.3	57.6	28.1	-
	0.0138	1.00797	2.23114	
	3.16	26.32	18.95	48.42
	6.52	54.35	39.13	
	46.15	42.02	62.07	
TOTAL	13	119	58	190
	6.84	62.63	30.53	100.00

STATISTICS FOR TABLE OF MS BY R8\_2

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	2	6.307	0.043

#### TABLE OF TITLE BY R8\_3

TITLE R8\_3 FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT TOTAL 0 1.6 1.60428 0.00 0.00 0.00 14 20.9 2.25356 7.49 14.00 35.90 100 53.48 0.8 .754011 0.00 0.00 0.00 12 9.8 0.49281 6.42 25.53 30.77 35 36.4 .057203 18.72 74.47 24.14 2 47 25.13 3 0.5 12.5941 1.60 9.68 100.00 8 6.5 .364331 4.28 25.81 20.51 20 24.0 .678145 10.70 64.52 13.79 31 16.58 0 0.1 .144385 0.00 0.00 4.81 TOTAL 39 20.86 187

#### STATISTICS FOR TABLE OF TITLE BY RO\_3

STATISTIC	DF	VALUE	PRO6
CHI-SQUARE	6	26.333	0.000

WARNING: 41% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF RD BY R8\_3

RD	R8_3			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT				
COL PCT	2	3	4	TOTAL
1	3.8 3.8 .856542	40 38.1 .099509	134 134.1 1E-04	176
	1.08 1.14 50.00	21.62 22.73 100.00	72.43 76.14 95.04	95.14
2	0.2 16.7502	0 1.9 1.94595	7 6.9 .002879	9
	1.08 22.22 50.00	0.00	3.78 77.78 4.96	4.86
TOTAL	2.16	40 21.62	141 76.22	185 100.00

#### STATISTICS FOR TABLE OF RD BY R6\_3

STATISTIC	DF	VALUE	PRO8
CHI-SQUARE	2	19.655	0.000

WARNING: 50% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF SEX BY R8\_3

SEX	R8_3			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	] 3	. 4	TOTAL
1	2	3	7	12
	12.086	2.5	9.2 0.53498	
	1.05	1.58	3.68	6.32
	16.67	25.00	58.33	0.32
	50.00	7.50	4.79	
2	2	37	139	178
	3.7	37.5	136.8	
	.814784	.005988	.036066	
	1.05	19.47	73.16	93.68
	1.12	20.79	78.09	
	50.00	92.50	95.21	
TOTAL		40	146	190
	2.11	21.05	76.84	100.00

### STATISTICS FOR TABLE OF SEX BY R8\_3

STATISTIC	DF	VALUE	PROS
MT - 5014 DF		13.567	0.001
CMI-SQUARE	2	13.56/	0.001

WARNING: 50% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF EMPLOY BY R8\_3

EMPLOY	R8_3			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	21	i 3i	41	TOTAL
. 1	2.9 .003911	27 28.9 129553	106 104.2 .032141	136
	1.60 2.21 75.00	14.36 19.85 67.50	56.38 77.94 73.61	72.34
2	0 0.7	10 6.8	22 24.5	32
	.680851 0.00 0.00 0.00	1.49601 5.32 31.25 25.00	.257166 11.70 68.75 15.28	17.02
3	0	3.6	15	17
	0.4 .361702 0.00 0.00 0.00	.722904 1.06 11.76 5.00	.300688 7.98 88.24 10.42	9.04
4	1	1	2.3	3
	0.1 13.7305 0.53 33.33 25.00	0.6 .204965 0.53 33.33 2.50	.733058 0.53 33.33 0.69	1.60
TOTAL	4 2.13	40 21.28	144 7 <b>6</b> .60	188 100.00

#### STATISTICS FOR TABLE OF EMPLOY BY R8\_3

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	 6	18.653	0.005

WARNING: 58% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF TITLE BY RG\_4

TITLE	R8_4			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	] 3	i 4)	TOTAL
1	11	20	69	100
	15.0 1.05433 5.88 11.00 39.29	21.9 .169036 10.70 20.00 48.78	63.1 0.55135 36.90 69.00 58.47	53.48
2	5	9	33	47
	7.0	10.3	29.7	
	2.67	4.81	17.65	25.13
	10.64 17.86	19.15 21.95	70.21 27.97	
3	9	8	14	31
	4.6	6.8	19.6	
	4.81	4.28	7.49	16.58
	29.03	25.81	45.16	Į.
	32.14	19.51	11.86	!
4	3	4	2	9
	1.3	2.08166	5.7 2.38348	ł
	1.60	2.14	1.07	4.81
	33.33	9.76	1.69	
	10.71	j 9./6	+	!
TOTAL	28	41	118	187
	14.97	21.93	63.10	100.00

#### STATISTICS FOR TABLE OF TITLE BY R8\_4

STATISTIC	OF	VALUE	PROB
CHI-SQUARE	6	15.284	0.018

WARNING: 25% OF THE CELLS HAVE EXPECTED COUNTS LESS
THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

## TABLE OF SEX BY R8\_4

SEX	R8_4			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT				
COL PCT	2	3	4!	TOTAL
1	1.9 5.08918	0 2.6 2.58947	7 7.5 .035397	12
	2.63 41.67 16.67	0.00	3.68 58.33 5.88	6.32
2	25 28.1	41 38.4	112 111.5	178
	343091 13 16 14 04 83 33	. 174571 21.58 23.03 100.00	.002386 58.95 62.92 94.12	93.68
TOTAL	30 15.79	41 21.58	119 62.63	190 100.00

## STATISTICS FOR TABLE OF SEX BY R8\_4

STATISTIC	DF	VALUE	PROB
CHI-SQUARE	2	8 234	0.016

CHI-SQUARE 2 G.L..

WARNING: 33% OF THE CELLS HAVE EXPECTED COUNTS LESS
THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF RO BY R8\_5

RD	R8_5			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	ļ <u>3</u>	. 4	TOTAL
1	16	78	82	176
	18 . 1 . 238355	75.2 . 107562	82.8 .007118	
	8.65	42.16	44.32	95.14
	9.09 84.21	44.32 98.73	46.59 94.25	
2	3	1	5	9
	0.9	3.8	. 139201	
	1.62	0.54	2.70	4.86
	33.33	11.11	55.56	.;
	15.79	1.27	5.75	
TOTAL	19	79	87	185
	10.27	42.70	47.03	100.00

10.27	42.70	47.00	100.00
STATISTICS	FOR TABLE	OF RD 8	BY R8_5

STATISTIC	DF	VALUE	PROS
CHI-SQUARE	2	7.257	0.027

WARNING: 50% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF TITLE BY R6\_7

TITLE	R8_7			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT				
COL PCT	2	3	4	TOTAL
1	8.6 1.47802	43 33.2 2.92331	52 58.3 .678495	100
	2.67 5.00 31.25	22.99 43.00 69.35	27.81 52.00 47.71	53.48
		09.35		
2	4.0	15.6	35 27.4	47
	. 238146	4.72736 3.74	2.11073 18.72	25.13
	10.64	14.89	74.47	201.10
	31.25	11.29	32.11	
3	4	9	18	31
,	2.7	10.3	18.1	
	.684664	. 158928	3E-04	
	12.90	4.81	9.63 58.06	16.58
	25.00	14.52	16.51	
	<b></b>			
4	0.8	3.0	5.2	9
	1.9645	9E-05	.295938	
	1.07	1.60	2.14	4.81
	22.22	33.33	44.44	
	12.50	4.84	3.67	
TOTAL	16	62	109	187
	8.56	33.16	58.29	100.00

#### STATISTICS FOR TABLE OF TITLE BY R8\_7

STATISTIC	;	OF	VALUE	PROB
CHI-SQUAR	E	6	15.260	0.018
WARNING:	33% OF THE CELLS F THAN 5. CHI-SQUAR			

#### TABLE OF WHEREEMP BY RB\_7

WHEREEMP	R8_7			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT				
COL PCT	2	3	4	TOTAL
1	10 9.3 0.04868	48 36.7 3.46373	51 63.0 2.26915	109
	5.35 9.17 62.50	25.67 44.04 76.19	27.27 46.79 47.22	58.29
2	2 2.5 .093352	5 9.8 2.32889	22 16.7 1.64649	29
£	1.07 6.90 12.50	2.67 17.24 7.94	11.76 75.86 20.37	15.51
3	2 2.3 .041642	9.1 4.08567	22 15.6 2.63199	27
	1.07 7.41 12.50	1.60 11.11 4.76	11.76 81.48 20.37	14.44
4	1 1.1 .011338	4.4 .032915	8 7.5 .032238	13
	0.53 7.69 6.25	2.14 30.77 6.35	4.28 61.54 7.41	6.95
6	0.8	3 3.0	5 5.2	9
	.068665 0.53 11.11 6.25	3E-04 1.60 33.33 4.76	.007532 2.67 55.56 4.63	4.81
TOTAL	16 8.56	63 33.69	108 57.75	187 100.00

STATISTICS FOR TABLE OF WHEREEMP BY RB\_7

STATISTIC	DF	VALUE	PROS
CHI ~ SQUARE	8	16.763	0.033

WARNING: 40% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF WHEREEMP BY R8\_8

WHEREEMP	R8_8			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT				
COL PCT	2	3	4	TOTAL
1	35 26.8	51 41.4	23 40.8	109
	2.49991 18.72 32.11 76.09	2.23384 27.27 46.79 71.83	7.76715 12.30 21.10 32.86	58.29
2	7.1	11.0	18 10.9	29
	3.69441 1.07 6.90 4.35	.367179 4.81 31.03 12.68	4.70192 9.63 62.07 25.71	15.51
3	6.6	10.3	16 10.1	27
	1.05073 2.14 14.81 8.70	1.0312 3.74 25.93 9.86	3.43605 8.56 59.26 22.86	14.44
4	3.2	4.9	4.9	13
	.201205 2.14 30.77 8.70	1.74623 1.07 15.38 2.82	.935541 3.74 53.85 10.00	6.95
6	2.2	3.4	3.4	9
	.665595 0.53 11.11 2.17	.587691 1.07 22.22 2.82	2.0547 3.21 66.67 8.57	4.81
TOTAL	46 24.60	71 37.97	70 37 . <b>43</b>	187 100.00

STATISTICS FOR TABLE OF WHEREEMP BY R8\_8

STATISTIC	DF	VALUE	PROB
CHI-SQUARE		32.973	0.000
WARNING: 40% OF THE CELLS THAN 5. CHI-SQUA	HAVE EX	PECTED COUNT	TS LESS LID TEST.

# TABLE OF WHEREEMP BY R8\_10

WHEREEMP	R8_10			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	1 3		TOTAL
1	31 19.8 6.30901 16.58	16.9 .048318 8.56	62 72.3 1.46156 33.16	109 58.29
	28.44 91.18	14.68 55.17	56.88 50.00	
2	5.3 2.03135	4.5 .054996	19.2 19.2 .739123	29
	1.07 6.90 5.88	2.14 13.79 13.79	12.30 79.31 18.55	15.51
3	4.9 3.11279	4 . 2 .008366	17.9 .937196	27
	0.53 3.70 2.94	2.14 14.81 13.79	11.76 81.48 17.74	14.44
4	0 2.4 2.36364	2.0 .480234	10 8.6 .220817	13
	0.00 0.00 0.00	1.60 23.08 10.34	5.35 76.92 8.06	6.95
6	0 1.6 1.63636	1.4 .261622	6.0 .178488	9
	0.00 0.00 0.00	1.07 22.22 6.90	3.74 77.78 5.65	4.81
TOTAL	34 18 . 18	29 15.51	124 66.31	187 100.00
SIAI	ISTICS FO	R TABLE O	F WHEREEM	P BY R8_10

 STATISTIC
 DF
 VALUE
 PR08

 CHI-SQUARE
 8
 19.844
 0.011

CHI-SQUARE 8 19.844 0.011
WARNING: 46% OF THE CELLS HAVE EXPECTED COUNTS LESS
THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF TITLE BY R9\_2

TITLE	R9_2			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	į 3	4	TOTAL
1	12 13.4	17 26.7	71 59.9	100
	140184 6.42 12.00 48.00	3.54657 9.09 17.00 34.00	2.05974 37.97 71.00 63.39	53.48
2	6 6.3	15 12.6	26 28.1	. 47
	.012784 3.21 12.77 24.00	0.4711 8.02 31.91 30.00	0.16417 13.90 55.32 23.21	25.13
3	7 4.1	15 8.3	9 18.6	31
	1.96761 3.74 22.58 28.00	5.43393 8.02 48.39 30.00	4.92946 4.81 29.03 8.04	16.58
4	1.2	3 2.4	6 5.4	9
	1.20321 0.00 0.00 0.00	.146417 1.60 33.33 6.00	.068946 3.21 66.67 5.36	4.81
TOTAL	25 13.37	50 26.74	112	187

STATISTICS FOR TABLE OF TITLE BY R9\_2

STATISTIC	DF	VALUE	PROS
CHI-SQUARE	6	20.144	0.003

WARNING: 25% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF WHEREEMP BY R10\_1

WHEREEMP	R10_1			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	3	4	TOTAL
1.	13 10.5	39 30.9	57 67.6	109
	.599522 6.95 11.93 72.22	2.12743 20.86 35.78 73.58	1.66646 30.48 52.29 49.14	58.29
2	2	7 8.2	20 18.0	29
	2.8 .224394 1.07 6.90	. 180865 3.74 24.14 13.21	.224739 10.70 68.97 17.24	15.51
3	0	6	21	27
	2.6 2.59893 0.00 0.00 0.00	7.7 .356809 3.21 22.22 11.32	16.7 1.07912 11.23 77.78 18.10	14.44
4	0	3.7	13	- 13
	1.3 1.25134 0.00 0.00 0.00	3.68449 0.00 0.00 0.00	3.02107 6.95 100.00 11.21	6.95
6	0.9	2.6	5.6	.9
**	5.2552 1.60 33.33 16.67	.942836 0.53 11.11 1.89	.060857 2.67 55.56 4.31	4.81
TOTAL	18 9.63	53 28.34	11 <b>6</b> 62.03	187 100.00

STATISTICS FOR TABLE OF WHEREEMP BY RIO\_1

STATISTIC	DF	VALUE	PROS
CHI-SQUARE	8	23.274	0.003

WARNING: 40% OF THE CELLS HAVE EXPECTED COUNTS LESS
THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

TABLE OF RD BY R10\_3

RD	R10_3		_	
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	<b>]</b> 3	4	TOTAL
1	20	51	105	176
	22.8	49.5 .047303	103.7	
	10.81	27.57	56.76	95.14
	11.36 83.33	28.98 98.08	59.66 96.33	
2	·	·	1 A	9
•	1.2	2.5	5.3	•
	6.87127	925029	. 320032	
	2.16 44.44	0.54	2.16 44.44	4.86
	16.67	1.92	3.67	
TOTAL	24	52	109	185
· - · · · •	12.97	28.11	58.92	100.00

#### STATISTICS FOR TABLE OF RD BY R10\_3

STATISTIC	DF	VALUE	PROS
CHI-SQUARE	2	8.531	0.014

WARNING: 33% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

#### TABLE OF RD BY R10\_5

RD	R10_5			
FREQUENCY EXPECTED CELL CHI2 PERCENT ROW PCT COL PCT	2	] 3	4	TOTAL
1	14	41	121	176
	17.1 .570031	41.9	117.0	
	7.57	.017646 22.16	. 135627	
	7.95	23.30	65.41 68.75	95.14
	77.78	93.18	98.37	
		33.10	1 30.37	
2	4	3	1 2	9
	0.9	2.1	6.0	
	11.1473	. 345086	2.65226	
	2.16	1.62	1.08	4.86
	44.44	33.33	22.22	
	22.22	6.82	1.63	
TOTAL	18	44	123	185
	9.73	23.78	66.49	100.00
		200	UU. 40	100.00

STATISTICS	FOR	TABLE	OF	RD	BY	R 10_5
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STATISTIC	DF	VALUE	PRO6
CHI-SQUARE	2	14.868	0.001

WARNING: 33% OF THE CELLS HAVE EXPECTED COUNTS LESS THAN 5. CHI-SQUARE MAY NOT BE A VALID TEST.

# VITA

#### Jenifer Ann Mitchell

#### Candidate for the Degree of

#### Master of Science

Thesis: ANALYSIS OF ROLE FUNCTIONS AND LIFESTYLE PRACTICES

OF SPORTS AND CARDIOVASCULAR NUTRITIONISTS

Major Field: Food, Nutrition and Institution Administration

### Biographical:

Personal Data: Born in Nuremburg, Germany, June 8, 1962, the daughter of Robert and Marcia Mitchell.

Education: Graduated from Cottonwood High School, Salt Lake City, Utah, in May, 1980; received Bachelor of Science degree in Nutrition and Food Sciences from Utah State University in 1986; completed requirements for Master of Science degree at Oklahoma State University in December, 1989.

Professional Experience: Six-month advanced degree qualifying experience, St. Anthony Hospital, Oklahoma City, Oklahoma, June 1989-December 1989; WIC Nutritionist, Southeastern Utah District Health Department, Price, Utah, September 1989-present; Clinical Dietitian, Castleview Hospital, Price, Utah, September 1989-present.

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