A QUALITY OF WORK LIFE ASSESSMENT OF DIETITIANS IN BUSINESS AND INDUSTRY

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TABLE OF CONTENTS

Chapter Page

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Creating improved quality of work life is the objective of the good society and is also the objective of a productive society (Rosow, 1979). According to an article in Industry Week ("A people oriented productivity plan," 1980), quality of work life and productivity are two of industry's most absorbing issues. A prevailing thought is that high satisfaction leads to high productivity (Bowditch and Buono, 1982). It is likely that more managers will look to quality of work life programs to help improve the attitudes and morale of their work forces, since recent national surveys have shown a general decline in job satisfaction (Wacker and Nadler, 1980; Staines and Quinn, 1979).

To date, there has been only one study conducted concerning quality of work life of dietitians (Leche, 1984). Agriesti-Johnson and Broski (1982) conducted the most recent study of job satisfaction of dietitians in the United States; however, job satisfaction is only one portion of assessing quality of work life (Lawler and Ozley, 1979). Dietitians in Business and Industry (DIBI) were not classified as a category in the Agriesti-Johnson and Broski study. This study concerns the DIBI practice group of the American Dietetic Association (ADA). Dietitians, for the most part, are employed by the health care industry. Dowling (1981) found that dietitians employed in private sector corporations felt that

> . . . a strong and positive profit orientation was considered essential for industry positions but the dietitians believed that most dietetic practitioners viewed profit as negative and unprofessional (p. 70).

At this point in time, it is unusual for dietitians to work for business and industry where there is a profit orientation rather than a service orientation. Surveying the quality of work life of DIBI gives us insight as to how dietitians with a service orientation function in an environment other than healthcare.

Bowditch and Buono (1982, p. 133) remind us that "Quality of work life assessments are not panaceas to organizational problems. Rather, such efforts can only serve to identify some major concerns and point to areas that require attention."

Purpose and Objectives

The purpose in this study was to assess the quality of work life of DIBI. Objectives were to study quality of work life (QWL) scores in relation to age, sex, marital status, highest degree obtained, R.D. status, salary, employment status, time away from home due to work, position title, type of business or industry, and number of personnel supervised. Scores for each dimension of QWL (company, actual work on present job, pay and benefits, opportunities for promotion, supervision on present job, people on your present job, general job satisfaction, job in general, and the performance constraint measure) were also studied. Information gained from this study can hopefully assist human resource managers, managers, and dietitians alike in improving the QWL for these dietitians.

Hypotheses

The 18 hypotheses postulated for this study are based on the following selected personal variables:

1. Age
2. Sex
3. Marital status
4. Highest degree obtained
5. R.D. status
6. Salary
7. Employment status
8. Time spent away from home
9. Position title

Institutional variables studied were:

1. Type of business or industry
2. Number of people supervised

In this study, QWL encompassed nine dimensions:

1. Company (CO)
2. Actual work on present job (AWPJ)
3. Pay and benefits (PB)
4. Opportunities for promotion (OFP)
5. Supervision on present job (SOPJ)
6. People on your present job (POPJ)
7. General job satisfaction (GJS)
8. Job in general (JIG)
9. Performance constraint measure (PCM)

The 18 hypotheses were as follows:

H_1 - There will be no significant difference in the QWL:CO scores based on selected personal variables.

H_2 - There will be no significant difference in the QWL:CO scores based on selected institutional variables.

H_3 - There will be no significant difference in the QWL:AWPJ scores based on selected personal variables.

H_4 - There will be no significant difference in the QWL:AWPJ scores based on selected institutional variables.

H_5 - There will be no significant difference in the QWL:PB scores based on selected personal variables.

H_6 - There will be no significant difference in the QWL:PB scores based on selected institutional variables.

H_7 - There will be no significant difference in the QWL:OFP scores based on selected personal variables.

H_8 - There will be no significant difference in the QWL:OFP scores based on selected institutional variables.

H_9 - There will be no significant difference in the QWL:SOPJ scores based on selected personal variables.

H_{10} - There will be no significant difference in the QWL:SOPJ scores based on selected institutional variables.

H_{11} - There will be no significant difference in the QWL:POPJ scores based on selected personal variables.

H_{12} - There will be no significant difference in the QWL:POPJ scores based on selected institutional variables.

H_{13} - There will be no significant difference in the QWL:GJS scores based on selected personal variables.

H_{14} - There will be no significant difference in the QWL:GJS scores based on selected institutional variables.

H_{15} - There will be no significant difference in the QWL:JIG scores based on selected personal variables.

H_{16} - There will be no significant difference in the QWL:JIG scores based on selected institutional variables.

H_{17} - There will be no significant difference in the QWL:PCM scores based on selected personal variables.

H_{18} - There will be no significant difference in the QWL:PCM scores based on selected institutional variables.

Limitations and Assumptions

Since this study is limited to the ADA Practice Group of DIBI, results cannot be considered representative of all dietitians. It is assumed that dietitians practicing in business and industry belong to this practice group and therefore we have a representative sample of dietitians practicing in business and industry. It is also assumed that respondents completed the questionnaire according to their actual work situation rather than what they perceived as ideal. It is further assumed that the added portion of the questionnaire did not affect the validity of the Job Descriptive Index (JDI) (Smith, Kendall, and Hulin, 1969), which provided the base for the questionnaire.

Definition of Terms

Quality of Work Life (QWL): No single definition of quality of of work life has been universally accepted. QWL is a very broad concept. The following definition is considered true in this study.

Comprehensive survey-based programs often include questions on the following quality of work life issues:

1. Overall organization (feelings and commitment)
2. Compensation issues (pay and benefits)
3. Job security
4. Management (policies)
5. Immediate supervisor (relations with)
6. Advancement issues.
7. Co-worker and interpersonal
8. The job itself (characteristics, demand satisfaction) (Bowditch and Buono, 1982).

The research instrument reflects these QWL dimensions.

Dietitians in Business and Industry (DIBI): A practice group of the ADA with a membership listing of 1,213 (February, 1984).

Company: The organization that employs the respondent.

Actual Work on Present Job: The nature of the work itself (Smith, Kendall, and Hulin, 1969).

Pay and Benefits: The details of remuneration (Smith, Kendall, and Hulin, 1969).

Opportunities for Promotions: Opportunities available for advancement and the fairness of the promotional system.

Supervision on Present Job: The characteristics of the person responsible for overseeing the respondent.

People on Your Present Job: The attributes of co-workers encountered on the job or the people met in connection with work (Smith, Kendall, and Hulin, 1969).

General Job Satisfaction: Feelings a worker has about his job (Smith, Kendall, and Hulin, 1969).

Job in General: Overall feelings about the work performed and feelings about what the work is like most of the time.

Performance Constraint Measure: A measure of situational resource variables relevant to performance--a type of frustration index (Peters and O'Connor, 1980).

CHAPTER II

REVIEW OF THE LITERATURE

In the review of literature, it appears that many of the QWL programs in effect are in the manufacturing industries. The major thrust seems to be toward worker participation in decision making. Managers involved with QWL programs stress that each organization is different and each QWL program must be unique. There is no "one size fits all." Instruments used to measure QWL are generally not published and often are confidential.

The 1970's saw the emergence of the QWL movement (Scobel, 1980). Scobel believes it is because the nature of work life remains humdrum for those who work, and there remains emptiness in the work life for many people.

The Meaning of QWL

There is no universally accepted definition of QWL. It means different things to different people. In the review of literature, many different definitions of QWL were found. These definitions came from experts in the field, corporations, and from institutions. The definitions will be presented according to author, sponsoring institutions, or corporation.

Richard E. Walton

Richard Walton (1974) provided the first comprehensive definition

of the concept of QWL in the Harvard Business Review (Heyel, 1982). Walton felt QWL encompassed eight conceptual categories. The first was adequate and fair compensation--does the pay meet socially determined standards? A safe and healthy environment is also important. Employees should not be exposed to working conditions that are unduly hazardous or unhealthy. Workers should be able to use and develop their skills and knowledge. Opportunities for advancement should be available. Social integration is another dimension in Walton's definition. This includes freedom from prejudice, a sense of community, interpersonal openness, and the absence of class differences in the organization. The final three dimensions are: protection of worker rights, a balance between work and the remainder of the employee's life, and social relevance. Walton points out that people from different subcultures and lifestyles will have different definitions of a high QWL. Walton gives three ways to accommodate different preferences: work assignments can be tailored to meet individual preferences, work can be organized differently from one work unit to the next, and employees can choose which style suits them best, and the most feasible idea is to encourage organizations to develop consistent patterns of work life and provide prospective employees with sufficient information to choose an organization that is a good fit for them.

Edward M. Glaser

Glaser is president of the Human Interaction Research Institute of Los Angeles, California. Glaser (1976) believes QWL recently has come to mean more than job security, good working conditions, adequate

and fair compensation, equal employment opportunity, or job enlargement. He believes that the essential component of any QWL program is the opportunity for employees at any level to influence their working environments and to have some say over what goes on in connection with their work. An essential condition for a QWL program is a style of participative management that allows employees to participate when they have pertinent ideas on matters that affect them. Glaser also lists other elements involved in QWL improvement programs: management commitment concerning employee participation, continuous job training, restructuring jobs so the employee is responsible for identified output, advancement opportunity, supervisory training in the new management style, open communication, feedback and financial incentives where feasible, select personnel who will strive for excellence, evaluate and analyze results, then revise efforts toward continued improvement.

Gordon L. Lippitt

Lippitt (1978) believes that QWL refers to the degree at which work provides an opportunity for an employee to satisfy personal needs such as surviving with some security, interacting with others, having a sense of personal usefulness, being recognized for achievement, and having the opportunity to improve one's skills and knowledge. Lippitt listed 10 conditions which must be met for organizational changes such as QWL to take place: the organization must be committed to a set of values, dissatisfaction with status quo must exist, open communication, team work approach, organizational renewal must be in the hands of line management, work units must be flexible as tasks change,

management must experiment and take risks in coping with new issues, organization must be thought of as a sociotechnical system, management must vary leadership style with situations, management must be willing to commit resources, and accept the impact employee decision making has on the traditional managerial role.

General Motors

General Motors Corporation (GM) has become a leader in applying behavioral sciences to improve its employees' QWL (Miller, 1978). QWL projects are underway in most North American operations and in many overseas operations as well (Fuller, 1980a). For GM, the objective of the QWL process is to make work effective, challenging, and involving (Fuller, 1980b). To GM, QWL means: more employee involvement in the factory and in the office; improved relationships, especially between supervisors and employees; better union-management cooperation; more effective design of jobs and organizations; and improved integration of people and technology (Fuller, 1980b, 1980c, and 1980d). Fuller also suggests that there are other, more basic considerations in a successful approach to QWL. The first is that QWL is a process. It is using resources, especially human resources, efficiently. It is developing an awareness and understanding of the needs of others and a willingness to be more responsive. QWL is also improving the way things get done to assure the long-term success of the organization. GM's current view of QWL has evolved over the years. Their planned and organized approach began in 1969. In 1970, the GM car assembly plant at Tarrytown, New York, was known as having one of the poorest labor relations and production records in GM (Guest, 1979). In seven

years, the plant turned around to become one of the company's better run sites. A key development occurred in 1973. GM and the United Auto Workers established a National Committee to improve the QWL (Fuller, 1980a, 1980b, and 1980c). In 1977, management and the union jointly initiated a three day training program for all employees at the Tarrytown, New York, plant. The program provided employees with problem solving skills. It was also an opportunity for management and the union to tell employees how their jobs related to others in the plant. This time (1977) the employee morale at Tarrytown was high, absenteeism had dropped, the number of grievances had decreased, and it was one of the best performing GM assembly plants.

Guest (1979) provided us with 12 principles that have been learned from GM, Tarrytown, and other QWL experiments:

1. Management must be competent in running the business as a profit-making enterprise.

2. The union must be strong and the members must trust its leadership.

3. Management has to be the first party to initiate change.

4. QWL should not be used by either the union or management to circumvent the labor-management agreement.

5. Top management and union officials must be committed to supporting QWL.

6. Middle management and front-line supervisors must know what is taking place and feel they have a say in the change process.

7. The QWL program should not be used to increase productivity by speeding up the employee's work pace.

8. A program should be voluntary for participants.

9. A QWL program should be flexible and started on a small scale.

10. Any misunderstandings in the developing program should be solved before going on.

11. Opportunities must be available for employees to use communication and problem solving skills in the job situation.

12. QWL efforts must be on-going and able to continue regardless of changes in the personnel in the organization.

GM has also developed a measurement instrument called "The Quality of Your Work Life in General Motors" (Miller, 1978). The survey provides an assessment of a number of different areas of work life, such as the physical work environment, pay, the development and utilization of employee skills, employee involvement and influence, and supervisory and work-group relationships (Fuller, 1980c). GM feels the surveys can help them evaluate their progress in improving QWL and in assessing the effectiveness of specific projects.

George W. Bohlander

Bohlander (1979), an assistant professor of management at Arizona State University, believes that quality of work programs are designed to improve the nature of work while contributing to organizational effectiveness and efficiency. He believes that quality of work innovations are intended to satisfy the intrinsic needs of the employee. He lists the following as the most popular quality-of-work programs: flextime, job enrichment, management by objectives, staggered hours, sociotechnical systems, job rotation, and job enlargement. These programs are adopted with the intent of improving productivity,

updating management practices, and reducing absenteeism, turnover, and morale problems. They are also introduced with the purpose of humanizing the work environment.

Bohlander believes that there are three problem areas that cause QWL programs to fail. The three areas are: managerial attitudes, union influence, and the restrictiveness of industrial engineering. The success of quality of work programs depends on overcoming these barriers. The change strategy is based on the belief that foreknowledge reduces errors and increases program success. To alleviate problems with managerial attitudes that cause QWL programs to fail, the organization must: assess managerial assumptions about employees (theory X or Y), determine management leadership styles, evaluate the organizational attitude toward a job change program, evaluate superior-subordinate relationships, determine how aware management is of the program, and determine cause of any negative attitudes that surface.

To alleviate problems with union influence that cause programs to fail, the organization must assess the current union-management relationship, involve the union in planning, share cost saving gains with employees, and make any contract changes before implementing the program. To overcome the restrictiveness of industrial engineering, the organization should evaluate the quality of work program, establish measurable criteria, monitor program progress through a pilot study and allow it to run three to six months, and expand the program to other employees on a selective basis.

Clark Sutton Associates

Sutton is a management consultant ("Boosting employee job

satisfaction: What management can do," 1979). When he conducts employee attitude surveys, he uses 14 criteria to measure the QWL. The 14 dimensions include: management practices, job stress, work itself, job challenge, supervision, respect for individual, personal development, use of employee ideas, communications, quality of work group, adequacy of compensation, job security, efficiency of operations, and physical working conditions. Sutton conducted studies in cooperation with the American Institute for Research in the Behavioral Sciences (AIR), a Washington, D.C., organization, and compared his findings with data already available at AIR.

Sutton conducted employee attitude surveys for six financial institutions, then compared the findings with other businesses. As a result, managers were able to actually develop programs designed to improve working conditions and employee job satisfaction.

ASTD Quality of Work Life Task Force

The American Society for Training and Development (ASTD) established a Quality of Work Life Task Force in 1979 to determine to what extent the ASTD should become involved in the QWL movement (Skrovan, 1980). The task force developed a definition for QWL to have as a foundation for the Task Force's efforts:

> Quality of Work Life is a process for work organizations which enables its members at all levels to actively participate in shaping the organization's environment, methods and outcomes. This value-based process is aimed toward meeting the twin goals of enhanced effectiveness of the organization and improved quality of work life at work for employees (p. 29).

Paul S. Goodman

Goodman (1980) believes QWL projects are distinguished by two definitional characteristics. Goodman (p. 487) believes "They attempt to restructure multiple dimensions of the organization and to institute a mechanism which introduces and sustains change over time." Restructuring multiple dimensions of the organization means to change the organization as a total system rather than just one of its parts. Goodman reports that the focus of the multidimensional change is generally to provide greater democratization of the workplace, greater control for the worker over his environment, and greater joint labor and management problem solving. A mechanism which introduces and sustains change over time means that a mechanism internal to the organization is created to diagnose organizational problems, introduce changes, monitor changes, and then make adjustments. Institutionalization of the change process is the purpose of this mechanism.

Goodman (1980) identified 10 reasons why QWL does not remain in effect over time: the sponsor leaves, new workers not trained in QWL principles, no feedback mechanism, QWL program in only part of the organization, tension between labor and management due to unbounded projects, conflicts in work values, lack of total system commitment to the QWL effort, decrease in attractiveness of rewards, sudden changes in demand, costs or products, and problems created by the QWL project with the union.

Work in America Institute

Jerome M. Rosow is president of the Work in America Institute,

which was founded in 1975 to advance productivity and the quality of working life in the United States (Rosow, 1981). The Work in America Institute identified issues most critical and important to track: pay, employee benefits, job security, alternative work schedules, occupational stress, participation, and democracy in the workplace.

Rosow (1981) discusses each of these factors and their contribution to the QWL. Most workers cite good wages as the most important aspect of their jobs. American workers have raised their expectations concerning benefits. They now feel entitled to benefits that were once part of the bargaining process. Job security is fundamental to QWL for the individual employee. Everyone wants a reasonable degree of security. Since the beginning of the 1970's, industry has been experimenting with new kinds of work schedules. Flextime, staggered hours, part-time employment, and the reduced work week are among the alternatives available. Increased application of these alternatives can be anticipated during the current decade. Occupational mental health programs to deal with stress are beginning to emerge as an important aspect of working life. Most Americans feel they have a right to take part in decisions affecting their jobs; therefore, participation is an important QWL issue. This issue also ties in with democracy in the workplace. American workers expect condition within the workplace to be compatible with political and social conditions in other aspects of their lives. Rosow (1981, p. 52) believes that ". . . in the decade ahead, one of the nation's greatest challenges will be to advance the quality of working life, while at the same time nurturing a healthy work ethic and using human resources productively.

Len Nadler

Nadler (1981) states that QWL has not been defined to the point where there is general agreement; therefore, he presents his own definition. According to Nadler, QWL is concerned with improving the workplace, bringing improved humanity into the work situation, and creating an environment where employees will find work personally satisfying and economically rewarding. Nadler does not believe QWL can be measured, since it is so subjective; however, he acknowledges that surveys are being used to determine attitudes, and believes that perhaps that is sufficient.

Graphic Controls Corporation

Lawler and Mirvis (1981) reported on the QWL measurement programs at the Graphic Controls Corporation. Graphic Controls worked with the Institute for Social Research of the University of Michigan for five years to measure QWL. Graphic Controls decided that more information was needed about employees' expectations concerning pay and benefits. The company approached the Institute for Social Research for assistance in preparing a survey questionnaire. Besides questions on pay and benefits, questions on other concerns of QWL were also included. In their study, QWL focused on characteristics of the organization, the workplace, and the work itself that influenced employee satisfaction, well-being, and behavior on and off the job. These QWL factors were measured on the basis of a confidential survey. The Graphic Controls QWL audit focused on broadly shared criteria of QWL: safety, wages, equal employment practices, and promotions. Records from 1975

through 1977 were audited, with incidents of accidents and promotions expressed as rates. Supervision, evaluation and reward practices, and the opportunities for employees to give suggestions, air grievances, and participate in decision making was assessed. The audit addressed employees' satisfaction with pay, job security, accomplishments, other aspects of work, satisfaction with their lives, and their outlook about their employment future. The survey results were published as part of a special report. The report gave a brief summary of the project, a description of the measures, guidance on how to read the figures, and the findings. Overall, over 90% were satisfied with their jobs.

The Encyclopedia of Management

According to The Encyclopedia of Management (Heyel, 1982), QWL is viewed as including work place democracy, increased worker participation, and at the same time, productivity improvement through optimized human input. The Encyclopedia of Management also presented a 10-part approach to QWL from Jerome M. Rosow, president of the Work in America Institute. Rosow redefined and expanded on Walton's (1974) definition. The 10 elements are: adequate and fair pay, benefits, a safe and healthy environment, job security, free collective bargaining, employee growth and development, social integration and teamwork, employee participation, democracy at work, and work as a balanced part of the entire lifestyle.

Efforts to improve QWL offer benefits for the organization as well as for the individual. Increased individual and group commitment to the organization is seen. Also evident is greater self-esteem for

workers and production groups, increased involvement on the job, strengthened ties to the work group and to the organization, and enhanced personal dignity.

National Forum

The Phi Kappa Phi Journal, National Forum, devoted their entire Spring, 1982 issue to "The Quality of Work Life." Tuttle (1982, p. 6) stated that "The term 'quality of working life' is, without a question, a broad 'umbrella' under which many diverse interests can gather." He believes that efforts to operationalize the QWL concept have taken three basic directions. QWL can either be viewed as a process, as a set of outcomes or results, and as a combination of the two.

Tuttle (1982) presented a definition of QWL as a process by Ted Mills, founder of the American Center of Quality of Working Life. According to Mills, QWL is an attempt to

> . . . provide people at work (managers, supervisors, rank and file workers) with structured opportunities to become actively involved in a new interpersonal process of problem solving toward both a better way of working and a more effective work organization, the payoff from which includes the best interests of employees and employers in equal measure (p. 6).

An outcome oriented view of QWL defines QWL as an employee's reactions to his work environment. If a worker has positive feelings toward his job, is motivated to stay on his job and perform well, and feels his working life fits well with his private life, then he can be said to have a high quality of working life. The third view combines both outcome and process views. Tuttle believes that the process view more appropriately defines QWL, since it offers ideas that are unique. He feels that the outcome view of QWL is simply job satisfaction.

K. M. Sweeney, President, American Center for QWL

Sweeney (1982) believes that QWL designates a group of ideas and practices aimed at involving workers in making the organization successful. He views QWL as a process, a way of involving employees at all levels of the organization in problem solving and finding ways to do things better. To Sweeney, involvement means giving employees authority to make decisions about production processes that affect their jobs.

J. L. Bowditch and A. F. Buono

Bowditch and Buono (1982), in their book Quality of Work Life Assessment, considered the following as QWL dimensions:

1. Overall organization (feelings and commitment)
2. Compensation issues (pay and benefits)
3. Job security
4. Management (policies)
5. Immediate supervisor (relations with)
6. Advancement issues
7. Co-worker and interpersonal relations
8. The job itself (characteristics, demand, satisfaction)

This definition is the most comprehensive and formed the basis or core with which the QWL of DIBI was assessed. In addition, a research instrument with most of these dimensions was found which was appropriate to use with the educational level of the sample chosen in the study.

Consolidated Definition

Table I displays a brief consolidated list of QWL dimensions found in the 16 definitions presented. The number to the right of the dimension represents the frequency with which that dimension appeared in the definitions.

Job Satisfaction of Dietitians

There has only been one study conducted concerning the "quality of work life" of dietitians. Leche (1984) studied the QWL of dietitians with management responsibilities in health care delivery systems. This is not unusual, considering the vagueness and broadness of the concept of QWL.

Job satisfaction is considered to be a surrogate measure of QWL (Lawler and Ozley, 1979; Goodman, 1980). Other surrogate measures of QWL are: productivity (Goodman, 1980), absenteeism, turnover, accidents, and mental well-being (Lawler and Ozley, 1979). According to Staines and Quinn (1979), job satisfaction is associated with employment conditions and is an indicator of the well-being of workers. Roberts and Savage (1973) feel that there are several obvious reasons for measuring job satisfaction: a growing concern with human assets of the corporation, the belief that satisfaction contributes to job performance, evidence that satisfaction is negatively related to absenteeism and turnover, and also the desire by managers to know how their employees feel about their jobs.

There have been several studies analyzing job satisfaction of of dietitians, and there is a growing interest in this area

TABLE I

CONSOLIDATED LIST OF QWL DIMENSIONS

Dimension	Out of 16
Employee Participation in Decision Making	8
Glaser, 1976; Fuller, 1980a, 1980b, and 1980d; "Boosting . . . can do," 1979; Skrovan, 1980; Rosow, 1981; Heyel, 1982; Tuttle, 1982; Sweeney, 1982	
Compensation and Benefits	7
"Boosting . . . can do," 1979; Rosow, 1981; Nadler, 1981; Lawler and Mirvis, 1981; Heyel, 1982; Bowditch and Buono, 1982; Walton, 1974	
Job Security	4
"Boosting . . . can do," 1979; Rosow, 1981; Heyel, 1982; Bowditch and Buono, 1982	
Safety	4
Walton, 1974; "Boosting . . . can do," 1979; Lawler and Mirvis, 1981; Heyel, 1982	
Supervision and a Good Relationship With Employees	3
Fuller, 1980a, 1980b, and 1980d; Bowditch and Buono, 1981; "Boosting . . . can do," 1979	
Work Itself	3
Tuttle 1982; Bowditch and Buono, 1982; "Boosting . . . can do," 1979	
Opportunity for Employee to Satisfy Personal or Intrinsic Needs	3
Lippit, 1978; Bohlander, 1979; Nadler, 1981	
Personal Development	3
Walton, 1974; "Boosting . . . can do," 1979; Heyel, 1982	

TABLE I (Continued)

Dimension	Out of 16
Promotion	3
Walton, 1974; Lawler and Mirvis, 1981; Bowditch and Buono, 1982	
Work as Balanced Part of Lifestyle	3
Walton,.1974; Heyel, 1982; Tuttle, 1982	
Good Union-Management Cooperation	2
Fuller, 1980a, 1980b, 1980d; Heyel, 1982	
Management Practices and Policies	2
"Boosting . . . can do," 1979; Bowditch and Buono, 1982	
Job Stress	2
"Boosting . . . can do," 1979; Rosow, 1981	
Equal Employment Opportunity	2
Walton, 1974; Lawler and Mirvis, 1981	
Respect for Individual	2
Walton, 1974; "Boosting . . . can do," 1979	
Effective Job Design	1
Fuller, 1980a, 1980b, 1980d	
Integration of People and Technology	1
Fuller, 1980a, 1980b, 1980d	
Job Challenge	1
"Boosting . . . can do," 1979	
Quality of Work Group	1
"Boosting . . . can do," 1979	

TABLE I (Continued)

Dimension	Out of 16
Efficiency of Operation	1
"Boosting . . . can do," 1979	
Restructure Multiple Dimensions of the Organization	1
Goodman, 1980	
Mechanism Which Sustains Change Over Time	1
Goodman, 1980	
Alternative Work Schedules	1
Rosow, 1981	
Improving the Work Place	1
Nadler, 1981	
Teamwork	1
Heyel, 1982	
Feelings and Commitment toward Organization	1
Bowditch and Buono, 1982	
Social Relevance	1
Walton, 1974	
Co-Worker and Interpersonal Relations	1
Bowditch and Buono, 1982	

(Agriesti-Johnson and Broski, 1982). Studies that have specifically involved dietitians include: Tansiongkun and Ostenso, 1968; Myrtle, 1978; Broski and Cook, 1978; Calbeck, Vaden, and Vaden, 1979; Stone, Vaden, and Vaden, 1981; and Agriesti-Johnson and Broski, 1982. Other closely related studies have included public health nutritionists (Vermeersch, Feeney, Wesner, and Dahl, 1979) and hospital food service directors (McNeil, Vaden and Vaden, 1981).

Each of these studies will be reviewed relative to the samples, research instruments used, and discussion of findings. It is interesting to note that DIBI have not been included in any of these studies.

Wisconsin Hospital Dietitians

Tansiongkun and Ostenso (1968) surveyed 125 hospital dietitians with respect to their feelings towards 15 psychologic needs and the degree to which these needs were met or not met in their positions. Questionnaires were mailed to 173 ADA members employed in Wisconsin hospitals, and 125 replied (72%). Respondents were classified according to position: chief or only dietitian, administrative dietitian, and therapeutic dietitian. The instrument used was Part I of the Management Position Questionnaire (Porter, 1961). It assessed how well the dietitians' positions met five categories of psychological needs: security, social, esteem, autonomy, and self-actualization. Results indicated that a highly significant trend toward greater job satisfaction emerged as the managerial level increased.

California Administrative and Clinical Dietitians

Myrtle (1978) reported data on job satisfaction from a limited

sample of dietitians in California that attended a dietetic workshop. Sixty-nine dietitians participated in the study: 47 administrative dietitians, 15 clinical dietitians, and 7 "other" dietitians. Myrtle asked the dietitians what they liked the most and the least about their jobs and what were the toughest problems they faced on the job. Results indicated that dietitians like the parts of their jobs that require patient interaction or require them to work with people. Overall, managing people and routing duties were the two most frequently mentioned items disliked by these dietitians. Clinical dietitians mentioned most frequently their "lack of status." "Managing people" was most frequently identified by both groups of dietitians as a problem. The second was "using time effectively" for administrative dietitians and "receiving professional acceptance" for the clinical dietitians.

Ohio Medical Dietitians

Broski and Cook (1978) compared the job satisfaction of medical dietitians with that of the physical therapists, occupational therapists, and medical technologists. The subjects were recent graduates (1971-1976) of The Ohio State University School of Allied Medical Professions. Eighty-eight out of 103 medical dietitians responded; however, only 68 responses were complete and hence analyzed.

The instrument used in this survey was the Job Descriptive Index (JDI) developed by Smith, Kendall, and Hulin (1969). The JDI is comprised of five subscales measuring satisfaction with: work on the job, supervision, co-workers, present pay, and opportunities for promotion.

Broski and Cook (1978) found that dietitians reported the lowest total satisfaction score and reported the least satisfaction with all job facets studied except pay, when compared with physical therapists, occupational therapists, and medical technologists. The researchers also compared the scores with national norms provided by the authors of the JDI and found that dietitians' scores were in the bottom third of the scores of all those with similar levels of education.

Full-Time Hospital Dietitians

Calbeck, Vaden, and Vaden (1979) studied relationships between selected demographic variables and job satisfaction and work values of hospital dietitians. Their sample consisted of full-time hospital dietitians that were members of the ADA. They were classified in four specialties: foodservice management, clinical, generalist, and management. Out of 430, 323 responded (75%), but only 258-280 were usable. The research was limited to a nine, midwestern state area in order to make comparisons with other studies.

The instrument was composed of three sections. The first section contained questions concerning biographical information about the respondent and information about the employing hospital. The second section consisted of the JDI (Smith, Kendall, and Hulin, 1969). The third section of the instrument was a work values scale adapted by Swartz and Vaden (1978) from a study of occupational values (Kilpatrick, Cummings, and Jennings, 1964).

Calbeck, Vaden, and Vaden (1979) compared the mean JDI scores of the dietitians with foodservice workers from Martin and Vaden's (1978) research. They found that dietitians were more satisfied with the

work itself, supervision, pay, and co-workers. On promotion, the foodservice employees had a slightly higher mean score; however, the difference was not significant. The dietitians' overall job satisfaction was also significantly greater than that of the foodservice workers. Directors of dietetics were significantly more satisfied with their work than were clinical, administrative, or generalist dietitians. Generalists were the next most satisfied, yet their mean score was not significantly different from the administrative or clinical dietitians. Calbeck, Vaden, and Vaden felt that chief dietitians were expected to have higher levels of satisfaction because of the broader variety of responsibilities, greater scope of their positions, and autonomy.

Public Health Nutritionists

Vermeersch et al. (1979) studied productivity improvement and job satisfaction among public health nutritionists. Their sample was 38 nutritionists from state and local health agencies in California who attended a workshop sponsored by the California Conference of Local Health Department Nutritionists. The workshop was on productivity improvement, stress management, and the enhancement of job satisfaction for public health nutritionists, and lasted two-and-one-half days.

The instrument used to assess job satisfaction was a worksheet, where each nutritionist identified job activities that caused dissatisfaction and stress. In a group exercise, they examined these activities and suggested ways in which stress and dissatisfaction could be reduced.

Vermeersch et al. (1979) found that nutritionists experience substantially less satisfaction and more stress than other groups. The percentage of time public health nutritionists experienced excitement and boredom did not differ greatly from other groups. Nutritionists did appear to gain a disproportionate share of discomfort at the expense of comfort in their jobs.

Hospital Food Service Directors

McNeil, Vaden, and Vaden (1981) studied the job satisfaction of hospital food service directors. Their sample came from both the ADA and the American Society for Hospital Food Service Administrators (ASHFSA) in an effort to determine if differences because of sex could be found. Total responses numbered 308 (66%); however, usable responses numbered 299: 143 male and 156 female.

The Job Dimensions Blank (Schletzer, 1965; Robinson, 1973) was used to measure general satisfaction with professional jobs by assessing reactions to a number of job components. The respondents rated 62 aspects of their jobs by checking one of the following: satisfied, dissatisfied, not sure, or not applicable. Another section of the instrument obtained biographical information and information about the employing hospital.

McNeil, Vaden, and Vaden (1981) found that there were no significant differences between the male and female administrators when their mean job satisfaction scores were compared. Data indicated that the position of department director in hospital food service is one that is relatively satisfying. Job satisfaction levels were higher for administrators that were professionally qualified dietitians, than for

those administrators that were not dietitians. Those employed in large hospitals, and who were in the older age group, were more satisfied. Administrators who were more experienced found less job frustration.

Dietitians Less Than 30 Years Old

Stone, Vaden, and Vaden (1981) studied career motivation and satisfaction among young dietitians (less than 30 years old at the time). The sample consisted of female dietitians employed half-time or more with 1950-1955 birthdates. The research instrument was sent to 500 dietitians and 395 usable questionnaires were included in the analysis.

A five-part instrument was developed by the researchers. Part I included questions designed to measure the following: career selection, career involvement, professional identification, and psychological success. Part II included questions pertaining to professional involvement. Parts III and IV were adapted from the Job Dimensions Blank (Schletzer, 1965; Robinson, 1973), and included measures of career satisfaction and components important in a career. Part V requested demographic information.

Stone, Vaden, and Vaden (1981) found that young dietitians seemed most satisfied with the opportunity to use their abilities to serve others. Autonomy and task variety also appeared to be satisfying aspects of dietetic careers. The young dietitians were least satisfied with their career prestige, earnings, and opportunities for promotion. Those with advanced degrees were less satisfied than those with bachelor's degrees. Overall, the career satisfaction of young dietitians appeared to be relatively high.

Dietitians in the United States

Agriesti-Johnson and Broski (1982) surveyed 1,019 members of the ADA to determine the level of job satisfaction of dietitians in the United States. Six hundred and three questionnaires were returned, and 529 were used for analysis. Dietitians were classified as teachers, administrative heads of units, administrative, clinical, generalist, research, consultant, community dietitians, and dietitians in private practice and others combined.

The JDI (Smith, Kendall, and Hulin, 1969) was used to obtain job satisfaction scores. When compared with norms provided by Smith et al., JDI scores were low, and few significant differences were found among types of dietitians. There were no significant differences between total JDI scores and marital status, age, years in present position, employment status, place of employment, or level and types of responsibilities. There were differences reported, however, in some of the JDI subscores. "Other" dietitians were better satisfied with work than were clinical dietitians or generalists, and community dietitians were more satisfied with their work than generalists were. Clinical dietitians were more satisfied with the supervision that they received than "other" dietitians, consultants, and teachers. Consultants scored higher in satisfaction with pay than clinical dietitians or researchers. "Other" dietitians were better satisfied with opportunities for promotion than clinical dietitians and researchers. Overall, the dietitians who responded were most satisfied with the supervision they received and least satisfied with opportunities for promotion.

Dietitians With Management Responsibilities in Health Care Delivery Systems

Leche (1984) studied the QWL of dietitians with management responsibilities in health care delivery system. Research questionnaires were sent to 400 dietitians in the ADA practice group. Data from 168 (42%) were analyzed. The research instrument used was a modification of the instrument used in the DIBI study being reported. The instrument included a section designed to gather demographic information, a section concerned with satisfaction with the organization (Warr and Routledge, 1969), the long version of the JDI (Smith, Kendall, and Hulin, 1969), a performance constraint measure (Peters and O'Connor, 1980), and a section on general job satisfaction (Hackman and Oldham, 1975, 1980).

Leche (1984) found that consultants, "others," and directors thought more positively about their work than did generalist dietitians. Older dietitians were more content with current pay and benefits.

CHAPTER III

METHODS AND PROCEDURES

Quality of work life is an elusive term. As a measure it has been used predominately in the manufacturing industry and is practically nonexistent in the healthcare industry. The purpose in this study is to assess the QWL of dietitians in Business and Industry. Details concerning the research design; sample; data collection, which includes instrumentation, procedure, and scoring; and data analysis are included in this chapter.

Research Design

The status survey was the research design used in this study. The purpose in status survey research is to describe, analyze, and interpret conditions that exist. It involves comparison or contrast and attempts to discover relationships between variables (Best, 1981). Deductive reasoning was used to develop generalizations from the facts obtained. The research in this investigation was carried out by way of a mailed questionnaire.

In this study, the dependent variables were the scores obtained from the instrument used to assess QWL. The independent variables included personal and institutional variables.

Sample

The study sample was drawn from a population comprised of the membership listing of the ADA practice group of "Dietitians in Business and Industry" (N = 1,213). A simple random sample of 600 was selected to be mailed the research questionnaire. Generalization of results was limited to DIBI.

Data Collection

Instrumentation

Since there is no standard definition of QWL, there are no standard procedures for measuring QWL dimensions (Lawler and Mirvis, 1981). According to Nadler (1981, p. 33), "QWL, as contrasted with productivity, is very subjective and cannot be measured." Therefore, due to the unavailability of an acceptable instrument, the researcher, with the aid of class members in a graduate class in foodservice systems management, developed an appropriate instrument to measure the QWL of Dietitians in Business and Industry.

The research instrument (Appendix A) consisted of two parts: general information and QWL assessment. Part I, the general information portion, requested biographical information about the respondent and information about the employing business or industry. Part II, the QWL assessment, was developed from a variety of sources. Part II obtained information about nine QWL dimensions: company, actual work on present job, pay and benefits, opportunities for promotion, supervision on present job, people on your present job, general job satisfaction, job in general, and a performance constraint measure. Ways

to measure these nine dimensions were obtained from four different sources.

The "company" subscale was developed from the "Opinion Scale for Managers' Job Satisfaction" (Warr and Routledge, 1969). This subscale deals with attitudes of the company itself and its policies. Management practices and policies ("Boosting employee job satisfaction: What management can do," 1969; Bowditch and Buono, 1982) and feelings and commitment toward the organization (Bowditch and Buono, 1982) have been identified as relevant QWL issues.

Pay and benefits, supervision on present job, opportunities for promotion, people on present job, and actual work on present job are five facets of job satisfaction and are from the JDI (Smith, Kendall, and Hulin, 1969). The job in general portion is an 18 item subscale developed to supplement the JDI (Smith, n.d.). There is a short and long version of the JDI. The long version contains 41 additional items and the JIG subscale and is copyrighted by Bowling Green State University, 1975, 1983. The long version was used in this study. The right to reproduce the JDI was purchased, and Dr. P. C. Smith approved format changes (Smith, 1983). The JDI has been described by several researchers as the most carefully constructed measure of job satisfaction (Johnson, Smith, and Tucker, 1982). It appears to be a popular measure among dietitians also. Broski and Cook, 1978; Calbeck, Vaden, and Vaden, 1979; Agriesti-Johnson and Broski, 1982; and Leche, 1984; all have used the JDI with dietitians. Martin and Vaden (1978) used the JDI with food service employees.

To complete the QWL questionnaire, respondents were asked to write Y (Yes), ? (undecided), or N (No) next to each item, depending

on whether or not the item described his or her job (Johnson, Smith, and Tucker, 1982). To provide continuity, the remainder of the instrument was also designed in the same format, with the exception of one dimension, which was assessed using a Likert-type scale. The JDI is reliable, and both convergent and discriminant validity are satisfactory (Smith, Kendall, and Hulin, 1969; Johnson, Smith, and Tucker, 1982). Normative standards are available for comparison purposes from the authors of the JDI (Smith, Kendall, and Hulin, 1969). All the previous studies mentioned, with the exception of Leche (1984), compared their results with the norms. A drawback, however, is that the closest norm to compare to dietitians is males with 15 years of education. Another drawback is that the norms are based on the original JDI, the short version. Literature supports the importance of these five subscales of the JDI as dimensions of QWL ("Boosting employee job satisfaction: What management can do," 1979; Rosow, 1981; Nadler, 1981; Lawler and Mirvis, 1981; Heyel, 1982; Bowditch and Buono, 1982; Walton, 1974; Tuttle, 1982; Fuller, 1980b, 1980c, and 1980d).

The "Performance Constraint Measure" subscale was based on situational resource variables relevant to performance as described by Peters and O'Connor (1980). This subscale was included because literature indicated that people tend to perform better and are happier at work when constraints are absent as compared to when they are present (Peters and O'Connor, 1980). This subscale has also been described as a frustration index (Peters, O'Connor, and Rudolf, 1980). One statement was added by the researcher to the measure: "Do you feel there is a conflict of interests between your job responsibilities and your standards of professional responsibility as an ADA

member?" This statement was added to determine if this situation imposed a constraint on DIBI (whose position may make demands contrary to standards of the profession).

The "General Job Satisfaction" subscale came from the JDS (Hackman and Oldman, 1975, 1980). Both the internal consistency reliability of the scales and the discriminant validity of the items of the JDS are satisfactory (Hackman and Oldham, 1975). Normative data for several job families, including professionals, are available (Hackman and Oldham, 1980). A Likert-type scale was utilized for this subscale ranging from one to seven, where one represented "disagree strongly," four was "neutral," and seven was "agree strongly."

The newly designed instrument was reviewed by graduate faculty from Oklahoma State University's Department of Food, Nutrition and Institution Administration and the Department of Statistics for content validity, clarity, format, and ability to analyze statistically. Changes were adopted in accordance with suggestions.

Procedure

A cover letter (Appendix A) was developed to accompany the instrument explaining the research and providing instructions for completion of the questionnaire. The cover letter and questionnaire were printed on light blue bond paper and reproduced at the Oklahoma State University Engineering Duplicating Services. The questionnaires were folded into thirds and stapled shut, with the address label purchased from ADA visible. They were mailed first class, and business reply mail was utilized on the return mailing; only those which were returned were paid for. The 600 questionnaires were mailed on March 1,

1984, and respondents were asked to return them on or before March 15, 1984. Unfortunately, due to time and financial constraints, no follow-up letters or questionnaires were mailed.

Scoring

The QWL dimensions were scored as follows:

	Points
Yes to a positive item	3
No to a negative item	3
? to any item	1
Yes to a negative item	0
No to a positive item	0

The answer key may be found in Appendix A. Total possible points for each dimension were as follows:

	Subscale	Maximum Score
JDI:	Work	75
	Pay and Benefits	60
	Promotions	48
	Supervision	78
	Co-workers	78
	Job in general	54
Added Dimensions:		
	Company	36
	Performance Constraint	30
	General Job Satisfaction	35

In the original short version of the JDI, all the maximum scores conveniently added up to 54; however, with the long version, this does

not occur. The norms and other studies utilizing the JDI generally compare means and sometimes medians, but all are based on 54. Smith has not yet published norms based on the long version of the JDI. In order to compare our results with the norms and the results of other researchers, the mean scores were adjusted by multiplying by 54 and dividing by the maximum score for each dimension. The validity and reliability are perhaps compromised by this action, but until norms are provided by Smith for the more current long version of the JDI, this appears to be the most logical way to make comparisons. Scores will not have to be adjusted to compare with Leche's (1984) results, however, since basically the same instruments were used.

Data Analysis

The questionnaires were graded, then the data was transcribed and coded onto computer data sheets. Information from the coding sheets was then keypunched onto computer cards, which provided the researcher direct access to the mainframe computer (IBM 3081D). Appropriate programs were selected and data were analyzed using the Statistical Analysis System (SAS) (Helwig and Council, 1979). Standard statistical procedures, including frequency tables, t-test, analysis of variance (ANOVA), and Duncan's Multiple Range Test were used to analyze the data (Steel and Torrie, 1980). The designated significance level was 10%.

CHAPTER IV

RESULTS AND DISCUSSION

The purpose in this study was to assess the quality of work life of Dietitians in Business and Industry. Data was obtained using the research instrument described in Chapter III, "Methods and Procedures." The questionnaires were mailed to 600 randomly selected members of the ADA practice group: "Dietitians in Business and Industry." Total response from DIBI members was 42% (N = 253). Sixty of those respondents were not currently employed in dietetics in business and industry. Their characteristics can be found in Appendix C. Of the 193 remaining questionnaires, 166-184 were usable for analysis, varying because some respondents did not or were not able to complete each dimension.

Characteristics of Survey Participants

Age, Sex, and Marital Status

Forty-one percent (N = 75) of the respondents were in the 31 to 40 years of age group, 31% (N = 57) were 30 years old or less, 20% (N=37) were in the 41 to 50 age group, and the remaining 7% (N = 13) were 51 and older (Figure 1). Ninety-seven percent (N = 178) of the respondents were female, while the remaining 3% (N = 5) were males. Fifty-five percent (N = 101) were married, 30% (N = 55) were single,

and the remaining 15% (N = 27) were either divorced, separated, or widowed.

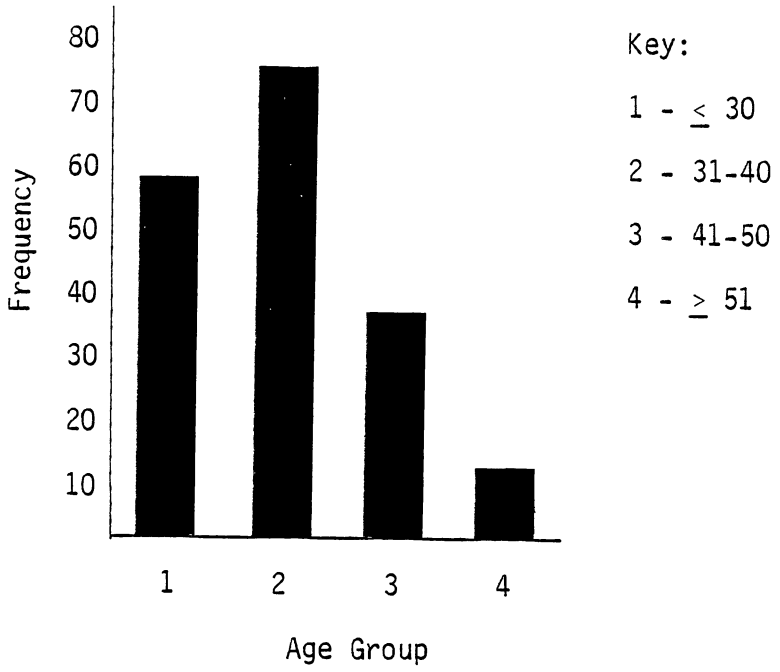


Figure 1. DIBI Respondents by Age Group

Highest Level Degree Obtained and Major

Fifty-one percent (N = 92) of the respondents had obtained an advanced degree, while 49% (N = 89) had earned a bachelor's degree. Sixty-one percent (N = 92) majored in dietetics or nutrition, 12% (N = 18) majored in some type of foodservice management, while 9% majored in both management or business administration (N = 14) and education (N = 13). Three percent (N = 5) listed nutrition communications as

their major, and the remaining 2% (N = 3) fell into the "other" category (Appendix C).

R. D. Status

Eighty-nine percent (N = 163) responded that they were R.D.'s. Eleven percent (N = 21) were non R.D.'s. It was assumed that those who left the question blank were not registered dietitians.

Number of Years in Dietetic Profession, Business and Industry, and Present Job

Twenty-seven percent (N = 51) of the DIBI members that responded had been in the dietetic profession from less than one to five years, 25% (N = 47) from 6 to 10 years, 19% (N = 35) from 11 to 15 years, 16% (N = 30) for more than 20 years, and 14% (N = 26) for 16 to 20 years. The number of years employed in business and industry for 32% (N = 60) of the respondents was three to five years. Twenty-four percent (N = 46) had been employed for less than one to two years, and the same number for greater than 10 years. The remaining 20% (N = 38) fell into the 6 to 10 year category.

Forty-four percent (N = 38) had only been in their present jobs for less than one to two years. Thirty-six percent (N = 69) had been in their jobs for three to five years, 14% (N = 26) for 6 to 10 years, and the remaining 6% (N = 12) for greater than 10 years.

Position Title

The position titles, their frequency of response, and their percentage of respondents can be seen in Table II. Due to the wide

variety of position titles of DIBI members, "other" was the predominant title of 17% (N = 32) of the respondents. Appendix C lists titles that were included in the "other" category. Dietitians/nutritionists ranked second with 12% (N = 22). Managers and assistants, food service directors and assistants, and directors each had 11% with 20 respondents each.

TABLE II

POSITION TITLES

Position Title	Frequency	Percentage*
"Other"	32	17
Dietitian/Nutritionists	22	12
Managers and Assistants	20	11
Directors	20	11
Food Service Directors and Assistants	20	11
Presidents and Vice-Presidents	17	9
Sales Representatives	16	9
Marketing Related	14	8
District/Territory Managers	12	7
Consultants	11	6

*Sum not equal to 100 due to round-off error.

Position Title of Supervisor

The position titles of the supervisors of the respondents, their frequency, and percentage can be found in Table III. The predominant title of supervisors was vice-president, with 18% (N = 35). The second and third ranking titles were director (15%, N = 29), and district manager (12%, N = 23).

TABLE III

POSITION TITLES OF SUPERVISORS

Supervisor's Title	Frequency	Percentage*
Vice-President	35	18
Director	29	15
District Manager	23	12
Manager	21	11
Non-Applicable	20	11
"Other"	18	9
President	16	8
Sales Manager	10	5
Administrator	9	5
Food Service Director/Manager	5	3
Associate Director	4	2

*Sum not equal to 100 due to round-off error.

Employment Status

Ninety-three percent (N = 172) of the respondents were employed at least 35 hours per week. Three percent each were employed 20 to 34 hours per week (N = 6) and less than 20 hours per week (N = 6).

Annual Salary

Twenty-four percent (N = 44) of the DIBI respondents made an annual salary between $25,000 to $29,000, and 24% (N = 43) made $40,000 and above (Figure 2). Seventeen percent (N = 31) made from $20,000 - 24,999; 14% (N = 26) from $30,000 - 34,999; 9% (N = 17) from $35,000 - 39,999; 7% (N = 13) from $15,000 - 19,999; and only 4% (N = 8) made below $14,999. Unfortunately, the questionnaire did not ask how far above $40,000 the highest salaries were.

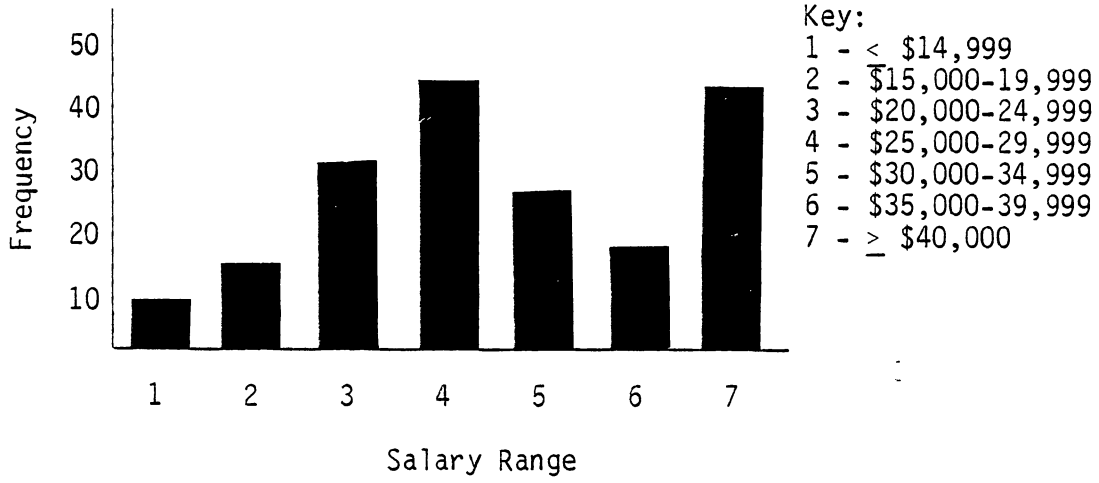


Figure 2. DIBI Respondents by Salary

Time Away From Home

Contrary to the researchers' expectations, 23% (N = 43) of the respondents never had to spend nights away from home due to their job. Nineteen percent (N = 35) were in the "other" category (Appendix C); 17% (N = 31) were away from home twice per month; 14% (N = 26), twice per week; 14% (N = 25), once per month; 8% (N = 14), once per week; 4% (N = 8), four times per week; and 1% (N = 1) were away from home five times per week due to work.

Characteristics of the Institutions

Type of Business or Industry

The type of business or industry that the respondents worked for can be found in Table IV, along with their frequency of occurrence and their percentage of the total. Due to the variety of types of business and industry that employ DIBI members, "other" was the predominant type, with 22% (N = 41), and is listed in Appendix C. Food-service management companies employed 17% (N = 32) of the respondents and 12% (N = 22) worked for food product manufacturers.

Number and Type of Employees Supervised

Forty percent (N = 73) of the DIBI members that responded do not supervise any employees (Figure 3). Eighteen percent (N = 32) supervise 21 employees or more, 10% (N = 19) supervise 6 to 10, 9% each supervise one employee (N = 16) or three to five employees (N = 16), 7% each supervise two employees (N = 7) or 11 to 20 employees (N = 7).

TABLE IV

TYPE OF BUSINESS OR INDUSTRY

Type of Business or Industry	Frequency	Percentage*
"Other"	41	22
Foodservice Management Company	32	17
Food Product Manufacturer	22	12
Pharmaceutical Company	18	10
Food Brokers and Distributors	16	9
Own Business	14	8
Marketing, Advertising, or P. R.	9	5
Independent Foodservice Operation	8	4
Equipment Design, Service, or Sales	5	3
Restaurant Management	5	3
Hospital Management Company	4	2
Publishing Company	3	2
Retail Food Chain	2	1
Food Service Facility Design	2	1
Computer Services	1	1
Consumer Affairs	1	1
Weight Control Company	1	1

*Sum not equal to 100 due to round-off error.

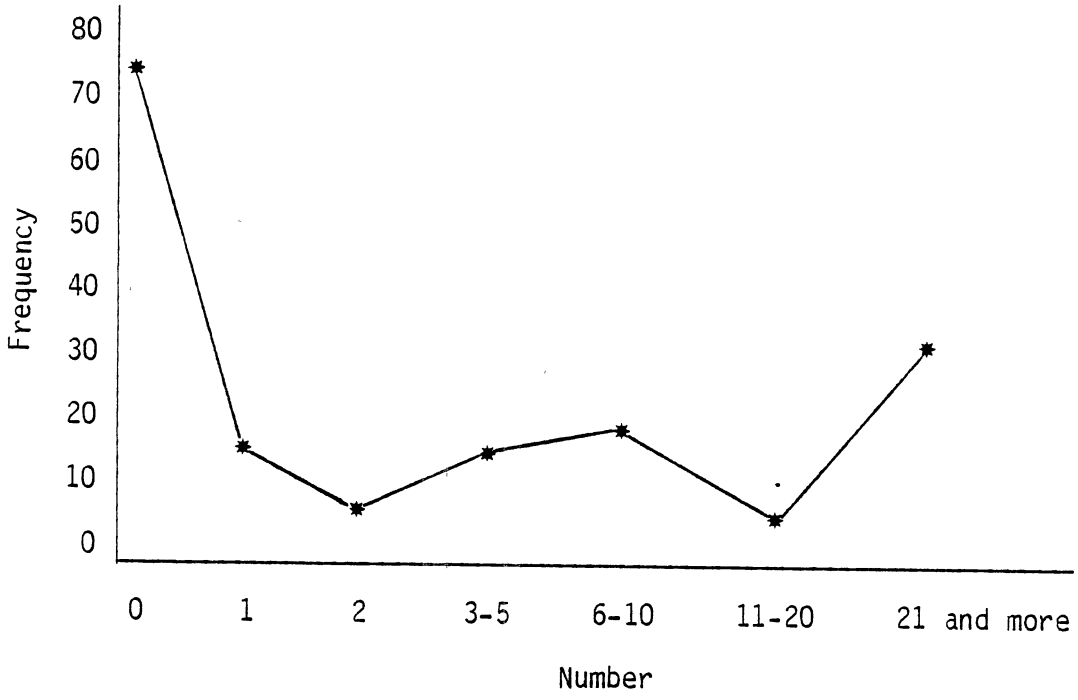


Figure 3. Number of Employees Supervised

Thirty-nine percent (N = 73) of the respondents answered "non-applicable" to type of employees supervised. Twenty-one percent (N = 39) supervised employees that fell into the "other" category. This included technicians, sales representatives, foodservice managers, foodservice specialists, and others (Appendix C). Fifteen percent (N = 28) supervised dietitians, 14% (N = 26) supervised foodservice workers, 7% (N = 13) supervised home economists, while 5% (N = 10) supervised clerical workers.

QWL of Dietitians in Business and Industry

The QWL scores under various assumptions is illustrated in Table V. The figures listed in the "Maximum Score" column were derived by

TABLE V

QWL EXPECTED SCORES UNDER VARIOUS ASSUMPTIONS AND MEAN SCORES

Scale	N[a]	Maximum Score	Expected Scores Under Assumption of Response Set					
			Indifference	Yes	No	Balance Attitude	Mean Scores	Adjusted Means[b]
JDI								
Work (AWPJ)	184	75	25	33	42	37.5	51.36 ± 11.95[c]	36.98 ± 8.60
Pay (PB)	182	60	20	30	30	30.0	41.73 ± 12.21	37.56 ± 10.99
Promotions (OFP)	171	48	16	24	24	24.0	24.19 ± 11.40	27.21 ± 12.83
Supervision (SOPJ)	166	78	26	42	36	39.0	60.51 ± 17.69	41.89 ± 12.25
Co-workers (POPJ)	178	78	26	36	42	39.0	63.80 ± 14.86	44.17 ± 10.29
Job in General (JIG)	182	54	18	27	27	27.0	46.05 ± 9.71	46.05 ± 9.71
Added Dimensions								
Company	183	36	12	18	18	18.0	28.34 ± 7.88	42.51 ± 11.82
Performance Constraint	184	30	10	21	9	15.0	21.99 ± 6.34	39.58 ± 11.41
General Job Satisfaction	177	35	~~7.75~~ 11.66	21	14	17.5	26.80 ± 6.05	41.35 ± 9.33

[a]Unequal N's due to nonresponse on some dimensions.

[b]Adjusted to 54 for comparison purposes.

[c]Standard deviation.

multiplying the number of items of each dimension by three points (Smith, Kendall, and Hulin, 1969), with the exception of the General Job Satisfaction (GJS) score, which utilized a Likert-type scale. The GJS dimension maximum score was determined by multiplying the five questions times the seven possible points (two questions involved reverse scoring). The indifference column scores were one-third of the maximum scores. This was also the score that a person would make if they answered every item with a question mark (Smith, Kendall, and Hulin, 1969). The scores in the yes and no columns represented the possible points of positively and negatively phrased items. The balance attitude was one-half of the total score and was the statistically expected score from a "balanced attitude" resulting in equal probabilities of endorsing favorable and unfavorable items (Smith, Kendall, and Hulin, 1969). The mean scores and standard deviations were adjusted by multiplying by 54 and dividing by the maximum score in order to compare results with norms and other similar studies.

QWL: Company (CO)

The QWL dimension, company, dealt with how individuals felt about the organization that employed them. According to the 183 DIBI members that answered items concerning the company dimension, they were satisfied with the companies they work for. The mean score was 28.34, with a standard deviation of 7.88. The expected score from a balanced attitude was 18.0, and the maximum score was 36.

The variables of highest degree, R. D. status, time away from home, and number of people supervised did not significantly ($p \geq .10$) affect company scores. The variables of age ($p = .0190$), marital

status (p = .0083), salary (p = .0001), employment status (p = .0223), position title (p = .0015), type of business or industry (p = .0463) (Table VI), and sex (p = .0048) (Table VII), however, affected company scores significantly.

TABLE VI

ANALYSIS OF VARIANCE (ANOVA) RESULTS FOR COMPANY DIMENSION BY PERSONAL AND INSTITUTIONAL VARIABLES

Source	df	Mean Squares	F	P*
Age	3	203.83	3.40	0.0190
Error	177	59.98		
Total	180			
Marital status	2	292.78	4.92	0.0083
Error	179	59.53		
Total	181			
Salary	6	313.24	5.83	0.0001
Error	175	53.76		
Total	181			
Employment Status	2	233.90	3.89	0.0223
Error	180	60.18		
Total	182			
Position Title	9	177.34	3.16	0.0015
Error	173	56.10		
Total	182			
Type of Business or Industry	16	100.69	1.72	0.0463
Error	166	58.37		
Total	182			

*Only those significant at the .10 level are listed.

TABLE VII

T-TEST PROCEDURE FOR COMPANY DIMENSION AND SEX

Sex	N	Mean	Standard Error	t	p*
Male	5	30.40	0.40	3.00	0.0048
Female	177	28.24	0.60		

*Significant (t-test) at the .10 level.

DIBI who are less than 30 years old (N = 56) had a mean company score (25.54) less than mean company scores of other age groups: 31-40 (N = 76, $\overline{X}$ = 29.59), 41-50 (N = 35, $\overline{X}$ = 29.46) and 51 or more years (N = 13, $\overline{X}$ = 29.14). Although p = .0190, the Duncan Multiple Range Test (Table VIII) did not show a significant difference between the groups, due to unequal N's.

Married respondents (N = 100, $\overline{X}$ = 29.78) were significantly happier with their company than single respondents (N = 54, $\overline{X}$ = 25.70 (Table VIII). Those in the divorced, separated, or widowed category (N = 28, $\overline{X}$ = 28), however, were not significantly different from either the single or married respondents (Table VIII).

Respondents whose annual salaries were $40,000 or above (N = 45, $\overline{X}$ = 32.20), $35,000 - 39,999 (N = 17, $\overline{X}$ = 30.12), and $30,000 - 34,999 (N = 26, $\overline{X}$ = 29.89) were significantly happier with the companies they worked for (Table VIII) than were those who made $15,000- 19,999

TABLE VIII

DUNCAN MULTIPLE RANGE TEST FOR COMPANY DIMENSION SCORES AND PERSONAL AND INSTITUTIONAL VARIABLES

Variables	N	Mean	Grouping*
Age			
31-40 years	76	29.59	A
41-50 years	35	29.46	A
51 or more years	13	29.14	A
Less than 30 years	56	25.54	A
Marital Status			
Married	100	29.78	A
Divorced, Separated, or Widowed	28	28.00	AB
Single	54	25.70	B
Salary			
$40,000 or above	45	32.20	A
$35,000-39,999	17	30.12	A
$30,000-34,999	26	29.89	A
Less than $14,999	8	28.25	AB
$25,000-29,999	44	27.52	AB
$15,000-19,999	13	23.54	B
$20,000-24,999	29	23.21	B
Employment Status			
Employed at least 35 hr/wk	172	28.61	A
Employed less than 20 hr/wk	6	28.50	A
Employed 20-34 hr/wk	5	18.80	B
Position Title			
President or Vice-President	17	34.53	A
Director	21	30.62	AB
Sales Representative	16	30.56	AB
Marketing Related	14	29.36	ABC
Manager or Assistant	20	28.70	BC
District/Territory Manager	12	28.08	BC
Consultant	9	27.89	BC
Food Service Director or Assistant	20	27.50	BC
"Other"	31	25.94	BC
Dietitian/Nutritionist	23	23.49	C

TABLE VIII (Continued)

Variables	N	Mean	Grouping*
Type of Business or Industry			
Weight Control Company	1	36.00	A
Consumer Affairs	1	36.00	A
Computer Services	1	36.00	A
Own Business	13	34.62	AB
Food Service Facility Design	2	32.50	AB
Pharmaceutical Company	18	31.17	AB
Independent Food Service Operation	8	29.75	AB
Food Product Manufacturer	21	29.48	AB
Food Brokers and Distributors	17	29.24	AB
Marketing, Advertising, or P. R.	9	27.33	AB
"Other"	40	26.93	AB
Foodservice Management Company	33	26.52	AB
Equipment Design, Service/Sales	5	26.20	AB
Retail Food Chain	2	25.00	AB
Restaurant Management	5	23.80	AB
Hospital Management Company	4	22.25	AB
Publishing Company	3	20.33	B

*Means with the same letter are not significantly different at the .05 level. Data shown for significant findings only ($p \leq .10$).

(N = 13), $\overline{X}$ = 23.54) and $20,000 - 24,999 (N = 29, $\overline{X}$ = 23.21). Those who made less than $14,999 (N = 8, $\overline{X}$ = 28.25), and $25,000 - 29,999 (N = 44, $\overline{X}$ = 27.52) were not significantly different from the other two groups. Those employed at least 35 hours per week (N = 172, $\overline{X}$ = 28.61) and less than 20 per week (N = 6, $\overline{X}$ = 28.50) were significantly happier with their company (Table VIII) than those employed 20-34 hours per week.

The Duncan Multiple Range Test for mean separation indicated three different groupings for position titles (Table VIII).

Presidents or vice-presidents were significantly happier ($N = 17$, $\overline{X} = 34.53$) with their organization than were managers or assistants ($N = 20$, $\overline{X} = 28.70$), district/territory managers ($N = 12$, $\overline{X} = 28.08$), consultants ($N = 9$, $\overline{X} = 27.89$), food service directors or assistants ($N = 20$, $\overline{X} = 27.50$), "others" ($N = 31$, $\overline{X} = 25.94$), and dietitians/nutritionists ($N = 23$, $\overline{X} = 23.49$). There were no significant differences, however, between president or vice-presidents and directors ($N = 21$, $\overline{X} = 30.62$), sales representatives ($N = 16$, $\overline{X} = 30.56$), and marketing related positions ($N = 14$, $\overline{X} = 29.36$). The marketing related position was the only position title which was not significantly different from all the other titles. There were also no significant differences in the means of directors, sales representatives, marketing personnel, managers, district managers, consultants, food service directors, and "others." "Dietitians" scored significantly lower than did presidents, directors, and sales representatives, but not significantly different from marketing personnel, managers, district managers, consultants, food service directors, and "others."

There were 17 types of business and industry identified. Weight control company, consumer affairs, and computer services all had one respondent each and the mean for each was the maximum score of 36. These three individuals were happier with their companies than were the three respondents who worked for a publishing company ($\overline{X} = 20.33$). Otherwise, there were no significant differences (Table VIII) between the weight control company, consumer affairs, and computer services and the other 13 types of business or industry. Due to the small cell sizes, however, generalizations cannot be made. People who had their

own businesses (N = 13) did have the next highest mean score ($\overline{X}$ = 34.62).

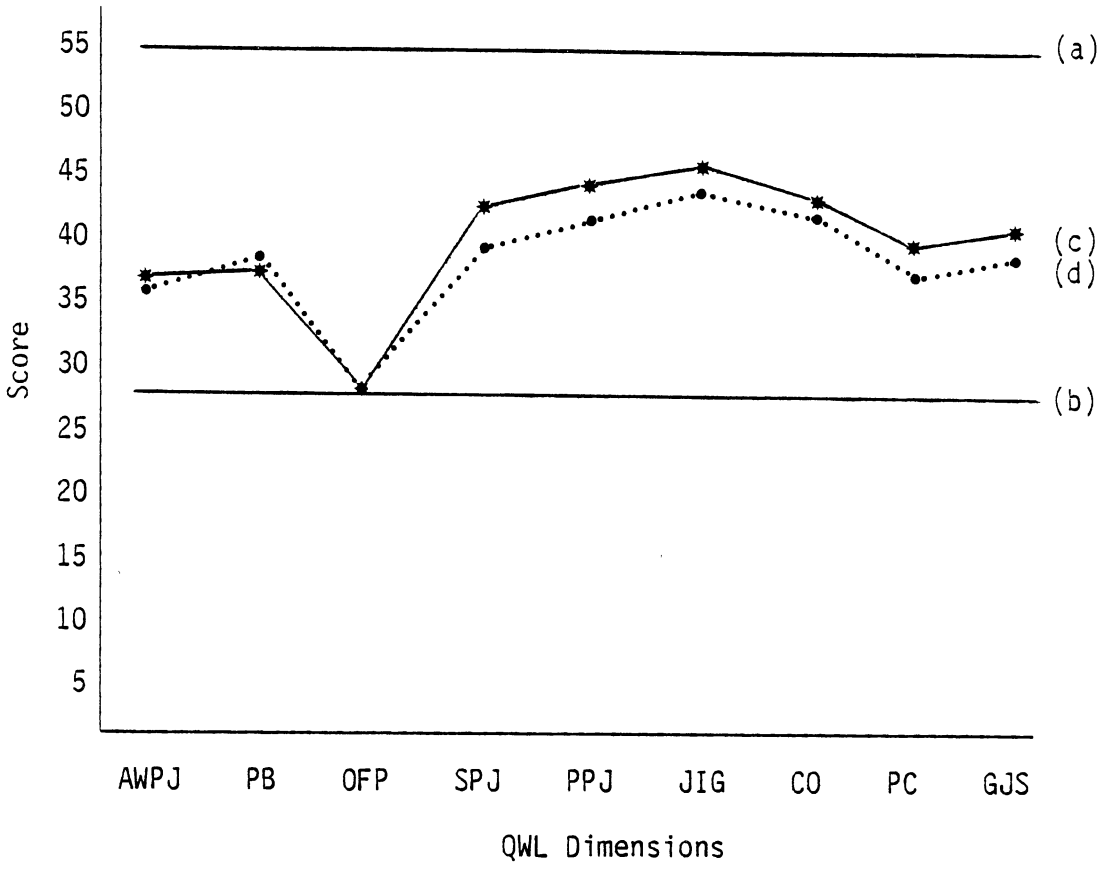
Males scored higher (N = 5, $\overline{X}$ = 30.40) than did females (N = 177, $\overline{X}$ = 28.24) on the company dimension, with an observed significance level of p = .0048 (Table VII). When comparing adjusted means to dietitians with management responsibilities in healthcare delivery systems (N = 168, $\overline{X}$ = 41.01) (Leche, 1984), DIBI (N = 183, $\overline{X}$ = 42.51) scored slightly higher on the company dimension (Figure 4).

QWL: Actual Work on Present Job (AWPJ)

The QWL dimension, actual work on present job, dealt with the nature of the work itself (Smith, Kendall, and Hulin, 1969). According to the 184 respondents that answered the AWPJ section, they were satisfied with their work. The mean score for the group was 51.36 (Table V), with a maximum of 75 points and the balance attitude score being 37.5.

The variables of sex, marital status, highest degree earned, R. D. status, employment status, time away from home, type of business or industry, and number of people supervised did not significantly (p > .10) affect satisfaction with actual work on the present job. The variables of age (p = 0.0200), salary (p = 0.0009), and position title (p = 0.0113), however, affected work scores significantly (Table IX).

Respondents aged 51 and above (N = 37, $\overline{X}$ = 55.46) and 41-50 (N = 37, $\overline{X}$ = 54.89) were significantly happier with their work than were those less than 30 (N = 57, $\overline{X}$ = 47.86). No difference was found between those aged 31-40 (N = 75, $\overline{X}$ = 51.79) and the other age groups (Table X). In two previous studies, researchers also found that older



Key:

AWPJ - Actual Work on Present Job
PB - Pay and Benefits
OFP - Opportunities for Promotion
SPJ - Supervision on Present Job
PPJ - People on Present Job
JIG - Job in General
CO - Company
PC - Performance Constraint Measure
GJS - General Job Satisfaction

(a) - Maximum Score = 54
(b) - Balance Attitude Score = 27
(c) - Adjusted Mean Scores in Present Study (Table V)
(d) - Adjusted Mean Scores for Management Dietitians (Leche, 1984)

Figure 4. Comparison of QWL Mean Scores With Management Dietitians

foodservice employees and hospital dietitians were happier with their work than were younger employees (Martin and Vaden, 1978; Calbeck, Vaden, and Vaden, 1979).

TABLE IX

ANALYSIS OF VARIANCE (ANOVA) RESULTS FOR ACTUAL WORK ON PRESENT JOB DIMENSION BY PERSONAL VARIABLES

Source	df	Mean Squares	F	P*
Age	3	463.60	3.36	0.0200
Error	178	138.14		
Total	181			
Salary	6	521.11	3.99	0.0009
Error	175	130.74		
Total	181			
Position Title	9	328.97		
Error	174	133.20		
Total	183			

*Only those significant at the .10 level are listed.

Respondents earning annual salaries below $14,999 (N = 8, $\overline{X}$ = 55.88), $40,000 and above (N = 43, $\overline{X}$ = 55.30), $35,000 - 39,999 (N = 17, $\overline{X}$ = 54.53), and $30,000 - 34,999 (N = 26, $\overline{X}$ = 53.85) were happier with their present jobs than those making $15,000 - 19,999 (N = 13, $\overline{X}$ = 45.77) or $20,000 - 24,999 (N = 31, $\overline{X}$ = 44.29) (Table X). Those

with an annual salary of $25,000 - 29,999 (N = 44, $\overline{X}$ = 50.91) were not, however, significantly different from any of the other categories.

TABLE X

DUNCAN MULTIPLE RANGE TEST FOR ACTUAL WORK ON PRESENT JOB SCORES AND PERSONAL AND INSTITUTIONAL VARIABLES

Variables	N	Mean	Grouping*
Age			
51 and above	13	55.46	A
41-50	37	54.89	A
31-40	75	51.79	AB
Less than 30	57	47.86	B
Salary			
Below $14,999	8	55.88	A
$40,000 and above	43	55.30	A
$35,000 - 39,999	17	54.53	A
$30,000 - 34,999	26	53.85	A
$25,000 - 29,999	44	50.91	AB
$15,000 - 19,999	13	45.77	B
$20,000 - 24,999	31	44.29	B
Position Title			
President or Vice-President	16	57.81	A
Marketing Related	14	57.21	AB
Director	21	55.95	ABC
District/Territory Manager	11	54.64	ABCD
Consultant	13	52.85	ABCD
Food Service Director or Assist.	20	50.60	ABCD
"Other"	31	48.42	BCD
Dietitian/Nutritionist	22	48.23	BCD
Manager or Assistant	20	47.00	CD
Sales Representative	16	46.69	D

*Means with the same letter are not significantly different at the .05 level.

Most of those earning less than $14,999 annually were working part-time and this could explain why they had the highest scores on the AWPJ dimension. Perhaps they have flexible scheduling and control over their work situation. Working a part-time job may also be meeting personal individual needs.

There are 10 position titles and the Duncan Multiple Range Test (Table X) yielded four different groupings of differences between means. Presidents or vice-presidents (N = 16, $\overline{X}$ = 57.81) were significantly happier with their work than were "others" (N = 31, $\overline{X}$ = 48.42), dietitians/nutritionists (N = 22, $\overline{X}$ = 48.23), managers or assistants (N = 20, $\overline{X}$ = 47.00), or sales representatives (N = 16, $\overline{X}$ = 46.69). Those with marketing related titles (N = 14, $\overline{X}$ = 57.21) were happier than managers and sales representatives. Directors (N = 21, $\overline{X}$ = 55.95) were happier than sales representatives, also. No significant differences were noted between the means of presidents, marketing related personnel, directors, district/territory managers (N = 11, $\overline{X}$ = 54.64), consultants (N = 13, $\overline{X}$ = 52.85), or food service directors and assistants (N = 20, $\overline{X}$ = 50.60). There were also no significant differences found between district/territory managers, consultants, food service directors, "others," "dietitians," managers, and sales representatives.

The authors of the JDI (Smith, Kendall, and Hulin, 1969) provided norms for each subscale for comparison. The norms were based on a sample of almost 2,000 male and more than 600 female workers in business and industry from across the United States. Norms were stratified by variables such as education, income, community prosperity, and length of job tenure. Mean adjusted scores were presented in Table

their corresponding percentile rankings from the normative data. The norms used were stratified by sex and education level. As the percentile rankings indicated, the actual work on present job scores fell at the twenty-third percentile when compared with males with 15 or more years of education and at the thirty-eighth percentile when compared with females with nine or more years of education. When comparing the DIBI adjusted mean work score (36.98) with similar studies (Table XII and Figure 5), however, the researcher found that DIBI's scored higher than medical dietitians (N = 68, $\overline{X}$ = 33.53) (Broski and Cook, 1978), dietitians in the United States (N = 529, $\overline{X}$ = 35.55) (Agriesti-Johnson and Broski, 1982), and management dietitians (Figure 4) (N = 168, $\overline{X}$ = 35.67) (Leche, 1984). Only hospital dietitians (N = 258-280, $\overline{X}$ = 40.14) scored higher than DIBI members.

QWL: Pay and Benefits (PB)

The QWL dimension, pay and benefits, dealt with the details of remuneration (Smith et al., 1969). The respondents in this study (N = 182) appeared to be satisfied overall with their pay and benefits, as the mean score for this dimension was 41.73 of a possible 60 points (Table V). The expected score from a balanced attitude was 30 points.

The variables of marital status, highest degree, R. D. status, unemployment status, time away from home, and number of people supervised did not significantly ($p > .10$) affect respondents' satisfaction with their pay and benefits. Variables that did significantly affect the pay and benefits scores were: age ($p = .0539$), salary ($p = .0001$), position title ($p = .0010$), type of business or industry ($p = .0193$) (Table XIII) and sex ($p = .0917$) (Table XIV).

TABLE XI

NORMATIVE COMPARISONS OF SAMPLE MEAN SCORES
BY JDI SUBSCALES

JDI Subscale	Mean Scores DIBI[a] (N = 166-184)	Percentile Ranks of Scores (Men, 15 or More Years of Education)[b]	Percentile Ranks of Scores (Women 9 or More Years of Education)[b]
Work	37.0	23rd	38th
Co-workers	44.2	33rd	45th
Supervision	41.9	35th	45th
Promotion	27.2	60th	75th
Pay	37.6	50th	65th

[a]Adjusted to 54 for comparison purposes.

[b]Normative source: Smith, Kendall, and Hulin, 1969.

Respondents aged 51 and above (N = 12, $\bar{X}$ = 45.92) were significantly happier with their pay and benefits than those less than 30 years of age (N = 57, $\bar{X}$ = 38.18) (Table XV). Those in the age range of 41-50 years of age (N = 37, $\bar{X}$ = 43.73) and 31-40 (N = 73, $\bar{X}$ = 42.60) were not significantly different from either those 51 and above or those less than 30. Calbeck, Vaden, and Vaden (1979) also found that older dietitians were happier with pay and benefits than younger ones.

Salary had the most significant (p = .0001) effect on satisfaction with pay and benefits. The Duncan Multiple Range Test (Table XV)

TABLE XII

COMPARISON WITH SIMILAR STUDIES OF MEAN SUBJECT RESPONSE TO FIVE OF THE JDI/QWL DIMENSIONS*

Study		Work	Supervision	Co-Workers	Promotion	Pay
Dietitians in Business and Industry (N = 166-184)	$\bar{X}$	36.98	41.89	44.17	27.21	37.56
	SD	8.60	12.25	10.29	12.83	10.99
Medical Dietitians[a] (N = 68)	$\bar{X}$	33.53	36.90	37.21	8.35	15.97
	SD	11.76	13.40	13.75	6.46	6.15
Hospital Dietitians[b] (N - 258-280)	$\bar{X}$	40.14	40.59	44.25	20.50	35.04
	SD	8.56	12.62	9.78	15.03	11.50
Dietitians in the United States[c] (N = 529)	$\bar{X}$	35.55	35.91	33.12	17.72	28.14
	SD	11.20	12.27	13.14	6.35	6.32
Management Dietitians[d] (N = 168)	$\bar{X}$	35.67	39.11	41.46	27.24	38.37
	SD	10.35	13.16	12.52	13.63	9.55

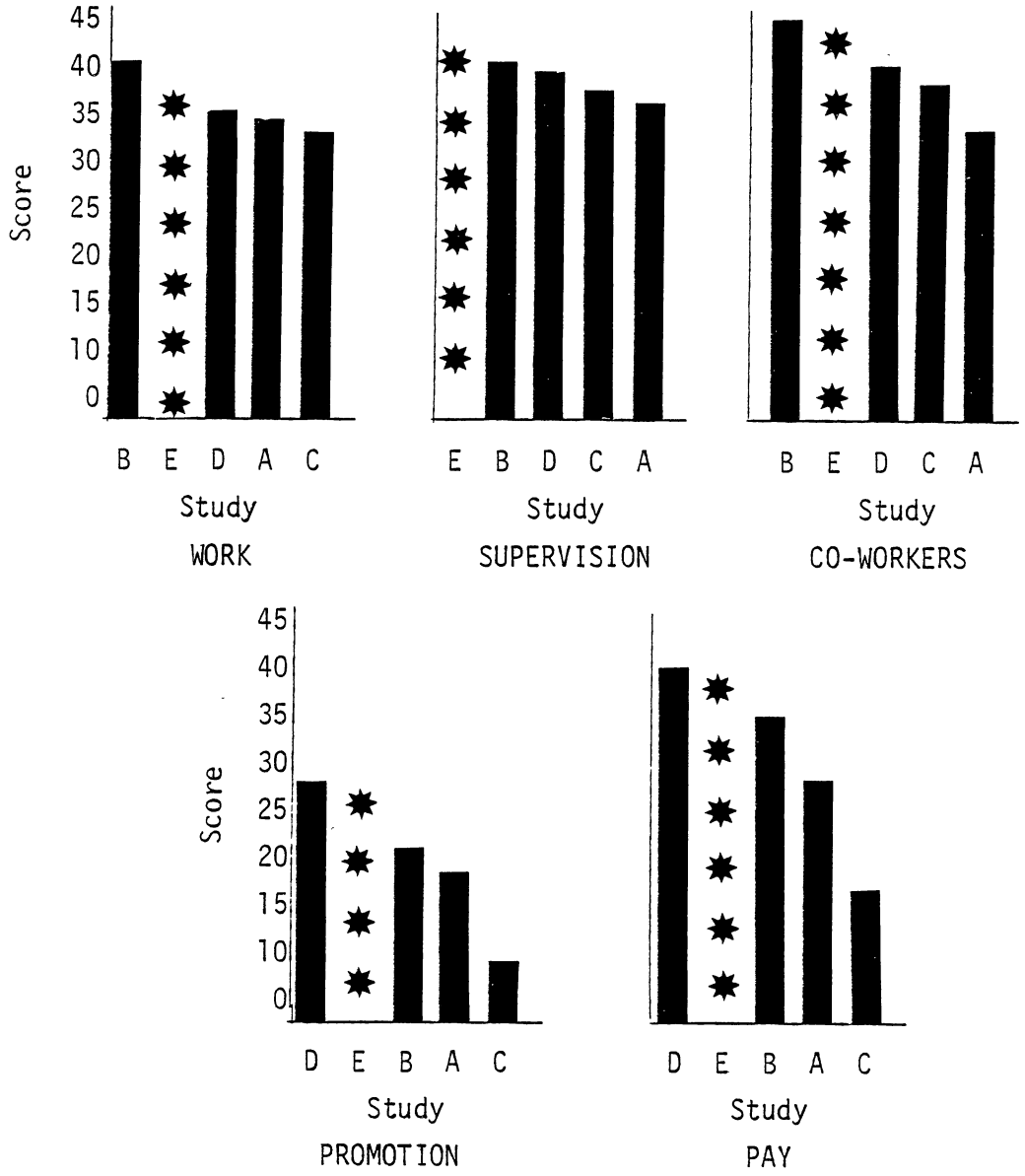
*Maximum score for each dimension was 54, or adjusted to 54.

[a]Broski and Cook (1978).

[b]Calbeck, Vaden, and Vaden (1979).

[c]Agriesti-Johnson and Broski (1982).

[d]Leche (1984).



Key:

A - Dietitians in the U.S. (Agriesti-Johnson and Broski, 1982)
B - Hospital Dietitians (Calbeck, Vaden, and Vaden, 1979)
C - Medical Dietitians (Broski and Cook, 1978)
D - Management Dietitians (Leche, 1984)
E - Dietitians in Business and Industry

Figure 5. Comparison With Similar Studies of Mean Subject Response to Five of the JDI/QWL Dimensions

TABLE XIII

ANALYSIS OF VARIANCE (ANOVA) RESULTS FOR PAY AND BENEFITS DIMENSION BY PERSONAL AND INSTITUTIONAL VARIABLES

Source	df	Mean Squares	F	P*
Age	3	377.63	2.58	0.0539
Error	175	146.13		
Total	178			
Salary	6	1342.43	12.35	0.0001
Error	173	108.68		
Total	179			
Position Title	9	444.43	3.31	0.0010
Error	171	134.17		
Total	180			
Type of Business/Industry	16	269.15	1.95	0.0193
Error	164	138.02		
Total	180			

*Only those significant at the .10 level are listed.

TABLE XIV

T-TEST PROCEDURE FOR PAY AND BENEFITS DIMENSION AND SEX

Sex	N	Mean	Standard Error	t	P*
Male	5	50.80	2.31	1.70	0.0917
Female	175	41.44	0.93		

*Significant (t-test) at the .10 level.

TABLE XV

DUNCAN MULTIPLE RANGE TEST FOR PAY AND BENEFITS SCORES AND PERSONAL AND INSTITUTIONAL VARIABLES[a]

Variables	N	Mean	Grouping[b]
Age			
51 and above	12	45.92	A
41-50	37	43.73	AB
31-40	73	42.60	AB
Less than 30	57	38.18	B
Position Title			
President or Vice-President	15	53.40	A
Director	20	45.45	AB
Manager or Assistant	20	44.40	BC
District/Territory Manager	12	44.00	BC
Marketing Related	14	42.57	BC
Food Service Director or Assist.	20	40.45	BC
Sales Representative	16	40.06	BC
"Other"	31	38.45	BC
Consultant	11	38.18	BC
Dietitian/Nutritionist	22	35.27	C
Type of Business or Industry			
Computer Services	1	57.00	A
Consumer Affairs	1	57.00	A
Weight Control Company	1	54.00	AB
Independent Food Service Operation	8	50.50	AB
Food Service Facility Design	2	48.50	AB
Own Business	11	47.91	AB
Pharmaceutical Company	18	46.33	ABC
Marketing, Advertising, or P. R.	9	44.00	ABC
Restaurant Management	5	43.80	ABC
Food Product Manufacturer	22	43.50	ABC
Food Service Management Co.	32	40.38	ABC
"Other"	40	39.23	ABC
Food Brokers and Distributors	17	38.29	ABC
Hospital Management Company	4	34.25	ABC
Equipment Design, Service/Sales	5	33.80	BC
Retail Food Chain	2	32.00	BC
Publishing Company	3	25.33	C

TABLE XV (Continued)

Variable	N	Mean	Grouping[b]
Salary			
$40,000 and above	42	50.31	A
$35,000 - 39,999	17	44.65	AB
$30,000 - 34,999	26	44.19	ABC
$25,000 - 29,999	44	40.59	BC
$20,000 - 24,999	31	36.87	CD
Below $14,999	7	30.57	DE
$15,000 - 19,999	13	26.54	E

[a]Data shown for significant ($p \leq .10$) findings only.

[b]Means with the same letter are not significantly different at the .05 level.

to determine differences between means yielded five separate groupings. Those earning $40,000 and above (N = 42), as expected, scored the highest ($\bar{X}$ = 50.31), and were significantly happier than those earning $25,000 - 29,999 (N = 44, $\bar{X}$ = 40.59), $20,000 - 24,999 (N = 31, $\bar{X}$ = 36.87), below $14,999 (N = 7, $\bar{X}$ = 30.57), and $15,000 - 19,999 (N = 13, $\bar{X}$ = 26.54). Yet no significant differences were noted between those earning $40,000 and above, $35,000 - 39,999 (N = 17, $\bar{X}$ = 44.65), and $30,000 - 34,999 (N = 26, $\bar{X}$ = 44.19). For other groupings, please refer to Table XV.

The presidents and vice-presidents (N = 15) were more satisfied with their pay ($\bar{X}$ = 53.40) than were managers or assistants (N = 20, $\bar{X}$ = 44.40), district/territory managers (N = 12, $\bar{X}$ = 44.00), marketing

related positions (N = 14, $\overline{X}$ = 42.57), food service directors or assistants (N = 20, $\overline{X}$ = 40.45), sales representatives (N = 16, $\overline{X}$ = 40.06), "others" (N = 31, $\overline{X}$ = 38.45), consultants (N = 11, $\overline{X}$ = 38.18), and dietitian/nutritionists (N = 22, $\overline{X}$ = 35.27). There were no differences noted between presidents and directors (N = 20, $\overline{X}$ = 45.45) concerning the effect of position title on satisfaction with pay. Both the presidents and directors were significantly more satisfied with their pay than those titled "dietitians." But there were no significant differences in the satisfaction of managers, district managers, marketing personnel, food service directors, sales representatives, "others," consultants, and "dietitians" with their pay and benefits as a result of position title.

The two respondents employed in computer services (N = 1, $\overline{X}$ = 57.00) and consumer affairs (N = 1, $\overline{X}$ = 57.00) scored significantly higher than those employed in equipment design, service, or sales (N = 5, $\overline{X}$ = 33.80), retail food chains (N = 2, $\overline{X}$ = 32.00), or publishing companies (N = 3, $\overline{X}$ = 25.33) on the pay and benefits dimension (Table XV). There were no differences between the means of 14 of the 27 types of business or industry. For means and groupings, please refer to Table XV.

Males (N = 5, $\overline{X}$ = 50.80) scored significantly higher than did females (N = 175, $\overline{X}$ = 41.44) on the pay and benefits dimension (Table XIV), with a significance level of .0917. Leche (1984) did not find a difference in the pay between males and females. Four other similar studies did not test for a difference. The Daily Oklahoman (1984) reported on newly released 1980 Census Bureau figures, and the average income for males with a college degree more than doubled the average income for women with degrees.

When DIBI members were compared to the norms (Smith, Kendall, and Hulin, 1969), their adjusted pay and benefits score ($\overline{X}$ = 37.56) fell at the fiftieth percentile when compared with males with 15 or more years of education, and at the sixty-fifth percentile when compared with females with nine or more years of education (Table XI). When making comparisons to other similar studies (Table XII and Figure 5), however, the DIBI respondents' adjusted mean score (37.56) was higher than the mean scores of hospital dietitians ($\overline{X}$ = 35.04) (Calbeck et al., 1979), dietitians in the United States ($\overline{X}$ = 28.14) (Agriesti-Johnson and Broski, 1982), and medical dietitians ($\overline{X}$ = 15.97) (Broski and Cook, 1978). Only the management dietitians ($\overline{X}$ = 38.37) (Leche, 1984) scored slightly higher on pay and benefits than did Dietitians in Business and Industry (Table XII and Figures 4 and 5).

QWL: Opportunities for Promotion (OFP)

The QWL dimension, opportunity for promotion, dealt with the opportunity for advancement and the fairness of the promotional system. The mean of the 171 respondents ($\overline{X}$ = 24.19) who answered items pertaining to promotion opportunities corresponded to a balanced attitude, a score of 24, regarding these opportunities (Table V).

The variables of age, sex, marital status, highest degree, R. D. status, time away from home, and number of people supervised did not significantly ($p > .10$) affect scores for the opportunities for promotion dimension. Variables that significantly affected opportunities for promotion scores were: salary ($p = .0525$), employment status ($p = .0863$), position title ($p = .0330$), and type of business or industry ($p = .0198$) (Table XVI).

The ANOVA determinations (Table XVI) showed that salary significantly ($p = .0525$) affected opportunity for promotion scores; however, the Duncan Multiple Range Test (Table XVII) did not show a significant difference between the means of any of the seven salary ranges because it was set up for p values $\leq .05$ only. The two highest means, however, belonged to those in the $35,000 - 39,999 range ($N = 16$, $\bar{X} = 27.31$) and the $40,000 and above category ($N = 39$, $\bar{X} = 27.08$). The two lowest mean scores were from those with an annual salary of below $14,999 ($N = 7$, $\bar{X} = 19.86$), and from $15,000 - 19,999 ($N = 12$, $\bar{X} = 18.67$). Since the score for a balanced attitude is 24, those making $20,000 - 24,999 ($N = 30$, $\bar{X} = 20.20$), below $14,999 and $15,000 - 19,999 fell below this halfway score.

Even though the ANOVA presented a significance level of $p = .0863$ (Table XVI), the Duncan Multiple Range Test (Table XVII) did not show a significant difference between the means of the three categories of employment status, since the program was set for $p \leq .05$ only. Those employed at least 35 hours per week ($N = 161$, $\bar{X} = 24.65$) did score higher on opportunities for promotion than did those employed 20-34 hours per week ($N = 5$, $\bar{X} = 16.20$) and those employed less than 20 hours per week ($N = 4$, $\bar{X} = 15.75$). Traditionally, those employed part-time may not have the same types of opportunities for promotion as those who were employed full-time.

Respondents who were presidents ($N = 13$, $\bar{X} = 32.00$) or district managers ($N = 12$, $\bar{X} = 30.33$) were significantly happier with their opportunities for promotion than were "dietitians" ($N = 32$, $\bar{X} = 20.46$), "others" ($N = 30$, $\bar{X} = 20.43$), and consultants ($N = 7$, $\bar{X} = 20.29$) (Table XVII). There were no significant differences between the means

of presidents, district managers, or sales representatives (N = 16, $\overline{X}$ = 27.25), food service directors (N = 19, $\overline{X}$ = 25.84), managers (N = 20, $\overline{X}$ = 24.30), directors (N = 18, $\overline{X}$ = 23.11), and those with marketing related positions (N = 13, $\overline{X}$ = 23.00).

TABLE XVI

ANALYSIS OF VARIANCE (ANOVA) RESULTS FOR OPPORTUNITIES FOR PROMOTION DIMENSION BY PERSONAL AND INSTITUTIONAL VARIABLES

Source	df	Mean Squares	F	P*
Salary	6	267.62	2.13	0.0525
Error	163	125.60		
Total	169			
Employment Status	2	319.26	2.49	0.0863
Error	167	128.38		
Total	169			
Position Title	9	258.24	2.09	0.0330
Error	160	123.47		
Total	169			
Type of Business/Industry	16	233.72	1.95	0.0198
Error	153	119.86		
Total	169			

*Only those significant at the .10 level are listed.

TABLE XVII

DUNCAN MULTIPLE RANGE TEST FOR OPPORTUNITIES FOR PROMOTION SCORES AND PERSONAL AND INSTITUTIONAL VARIABLES[a]

Variables	N	Mean	Grouping[b]
Employment Status			
Employed at least 35 hr/wk	161	24.65	A
Employed 20-34 hr/wk	5	16.20	A
Employed less than 20 hr/wk	4	15.75	A
Position Title			
President or Vice-President	13	32.00	A
District/Territory Manager	12	30.33	A
Sales Representative	16	27.25	AB
Food Service Director or Assist.	19	25.84	AB
Manager or Assistant	20	24.30	AB
Director	18	23.11	AB
Marketing Related	13	23.00	AB
Dietitian/Nutritionist	22	20.46	B
"Other"	30	20.43	B
Consultant	7	20.29	B
Type of Business or Industry			
Computer Services	1	45.00	A
Consumer Affairs	1	45.00	A
Own Business	8	35.00	AB
Pharmaceutical Company	18	29.50	AB
Independent Food Service Operation	5	28.83	AB
Marketing, Advertising, or P. R.	7	26.86	AB
Food Service Management Company	32	24.44	B
Restaurant Management	5	23.40	B
Food Product Manufacturer	21	22.91	B
Food Service Facility Design	2	22.50	B
"Other"	38	21.84	B
Food Brokers and Distributors	16	21.50	B
Retail Food Chain	2	19.50	B
Hospital Management Company	4	19.00	B
Publishing Company	3	16.33	B
Weight Control Company	1	15.00	B
Equipment Design, Service, or Sales	5	14.60	B

TABLE XVII (Continued)

Variables	N	Mean	Grouping[b]
Salary			
$35,000 - 39,999	16	27.31	A
$40,000 and above	39	27.08	A
$30,000 - 34,999	26	26.58	A
$25,000 - 29,999	40	24.00	A
$20,000 - 24,999	30	20.20	A
Below $14,999	7	19.86	A
$15,000 - 19,999	12	18.67	A

[a]Data shown for significant ($p \leq .10$) findings only.

[b]Means with the same letter are not significantly different at the .05 level.

There were also no significant differences between the means of sales representatives, food service directors, managers, directors, marketing related positions, "dietitians," "others," and consultants. Remembering that the balance attitude for opportunities for promotion was 24, directors, marketing personnel, "dietitians," "others," and consultants fell below that level.

The one respondent employed in computer services ($\overline{X}$ = 45.00) and the one employed in consumer affairs ($\overline{X}$ = 45.00) had the two highest promotion scores. There were no significant differences between the means of the other 15 types of business and industry (Table XVII). Of the 17 types of business and industry listed, 10 had scores below the balance attitude score of 24. (For means and groupings, please see

Table XVII.) The fact that respondents were not satisfied with opportunities for promotion was consistent with the literature concerning other allied health professionals (Joiner and Blayney, 1974; Perry, 1969).

When comparing adjusted promotion means with the male norms (Smith, Kendall, and Hulin, 1969), DIBI respondents ranked at the sixtieth percentile, and when compared to the female norms, they ranked at the seventy-fifth percentile (Table XI). DIBI ($\overline{X}$ = 27.21) scored similar to management dietitians ($\overline{X}$ = 27.24) (Leche, 1984) on the promotion dimension (Table XII and Figures 4 and 5), and scored higher than hospital dietitians ($\overline{X}$ = 20.50) (Calbeck, Vaden, and Vaden, 1979), dietitians in the United States ($\overline{X}$ = 17.72) (Agriesti-Johnson and Broski, 1982), and medical dietitians ($\overline{X}$ = 8.35) (Broski and Cook, 1978) (Table XII and Figure 5).

QWL: Supervision on Present Job (SOPJ)

The QWL dimension, supervision on present job, dealt with the characteristics of the person responsible for overseeing the respondent. DIBI seemed happy with the supervision they received (N = 166, $\overline{X}$ = 60.51). The balance attitude score for supervision was 39, the DIBI mean was 60.51, and the maximum score was 78 (Table V).

None of the 11 personal and institutional variables studied significantly ($\leq$ .10) affected respondents' satisfaction with the supervision on their present job.

When comparing DIBI's adjusted supervision mean (41.9) with Smith, Kendall, and Hulin's (1969) norms, DIBI ranked at the thirty-fifth and forty-fifth percentiles for male and female norms, respectively (Table

XI). DIBI scored higher on supervision than did dietitians in four other similar studies (Table XII and Figures 4 and 5). DIBI led with an adjusted mean score of 41.89, next were hospital dietitians ($\overline{X}$ = 40.59) (Calbeck, Vaden, and Vaden, 1979), management dietitians ($\overline{X}$ = 39.11) (Leche, 1984), medical dietitians ($\overline{X}$ = 36.90) (Broski and Cook, 1978), and dietitians in the United States ($\overline{X}$ = 35.91) (Agriesti-Johnson and Broski, 1982).

QWL: People on Your Present Job (POPJ)

The QWL dimension, people on your present job, dealt with the attributes of co-workers encountered on the job or the people met in connection with work (Smith, Kendall, and Hulin, 1969). Respondents answering items about co-workers (N = 178) appeared to be happy with the people they worked with. The mean "people on your present job" score was 63.80, with the balance attitude score being 39, and the maximum score being 78 (Table V).

The variables of age, sex, highest degree, R. D. status, time away from home, position title, type of business or industry, and number of people supervised did not significantly ($p > .10$) affect co-worker scores. Marital status ($p = .0201$), salary ($p = .0042$), and employment status ($p = .0081$) significantly affected the co-worker scores (Table XVIII).

Even though the ANOVA (Table XVIII) revealed that marital status significantly affected ($p = .0201$) people on your present job scores, the Duncan Multiple Range Test (Table XIX) did not show a significant difference between the means because of unequal N's. Yet, those married did score higher (N = 99, $\overline{X}$ = 66.53) than those divorced,

separated, or widowed (N = 24, $\overline{X}$ = 60.38) and those single (N = 54, $\overline{X}$ = 60.20).

TABLE XVIII

ANALYSIS OF VARIANCE (ANOVA) RESULTS FOR PEOPLE ON YOUR PRESENT JOB DIMENSION BY PERSONAL VARIABLES

Source	df	Mean Squares	F	P*
Marital Status	2	857.48	4.00	0.0201
Error	174	214.48		
Total	176			
Salary	6	679.72	3.31	0.0042
Error	170	205.62		
Total	176			
Employment Status	2	1050.65	4.95	0.0081
Error	174	212.26		
Total	176			

*Only those significant at the .10 level are listed.

As salary levels increased, respondents were happier with the people on their present job (Table XIX). Those making an annual salary of $40,000 and above (N = 42, $\overline{X}$ = 69.74), $35,000 -39,999 (N = 17, $\overline{X}$ = 68.29), and $30,000 - 34,999 (N = 25, $\overline{X}$ = 66.76) scored significantly higher than those making below $14,999 (N = 7, $\overline{X}$ = 54.14). Yet there were no significant differences between the means of

those earning $40,000 and above; $35,000 - 39,999; $30,000 - 34,999; $25,000 - 29,999 (N = 43, $\overline{X}$ = 60.61); $20,000 - 24,999 (N = 30, $\overline{X}$ = 59.13); and $15,000 - 19,999 (N = 13, $\overline{X}$ = 59.08). There was also no significant difference between the means of those earning from below $14,999 to $29,999.

TABLE XIX

DUNCAN MULTIPLE RANGE TEST FOR PEOPLE ON YOUR PRESENT JOB SCORES AND PERSONAL VARIABLES[a]

Variables	N	Mean	Grouping[b]
Marital Status			
Married	99	66.53	A
Divorced, Separated, or Widowed	24	60.38	A
Single	54	60.20	A
Salary			
$40,000 and above	42	69.74	A
$35,000 - 39,999	17	68.29	A
$30,000 - 34,999	25	66.76	A
$25,000 - 29,999	43	60.61	AB
$20,000 - 24,999	30	59.13	AB
$15,000 - 19,999	13	59.08	AB
Below $14,999	7	54.14	B
Employment Status			
Employed at least 35 hr/wk	167	64.59	A
Employed 20-34 hr/wk	5	52.50	AB
Employed less than 20 hr/wk	4	46.25	B

[a]Data shown for significant findings only ($p \leq .10$).

[b]Means with the same letter are not significantly different at the .05 level.

Respondents employed at least 35 hours per week (N = 167) were significantly happier ($\overline{X}$ = 64.59) with people on their present job than were those employed less than 20 hours per week (N = 4, $\overline{X}$ = 46.25). Means of respondents employed 20-34 hours per week (N = 5, $\overline{X}$ = 52.50) were not significantly different from either of the other two groups (Table XIX).

When comparing DIBI satisfaction with co-workers to male and female norms (Smith, Kendall, and Hulin, 1969), respectively, DIBI ranked at the thirty-third and forty-fifth percentiles (Table XI). When comparing the adjusted mean to other similar studies (Table XII and Figures 4 and 5), DIBI scored ($\overline{X}$ = 44.17) similar to hospital dietitians ($\overline{X}$ = 44.25) (Calbeck, Vaden, and Vaden, 1979) and had higher scores than management dietitians ($\overline{X}$ = 41.46) (Leche, 1984), medical dietitians ($\overline{X}$ = 37.21) (Broski and Cook, 1978), and dietitians in the United States ($\overline{X}$ = 33.12) (Agriesti-Johnson and Broski, 1982).

QWL: General Job Satisfaction (GJS)

The general job satisfaction dimension of QWL refers to the feelings a worker had about his job (Smith, Kendall, and Hulin, 1969). Respondents overall seemed to experience general job satisfaction, as the mean score was 26.80 (N = 177), compared to the balance attitude score of 17.5 (Table V).

The variables age, sex, marital status, highest degree, R. D. status, employment status, type of business or industry, or number of people supervised did not significantly affect the general job satisfaction scores. Salary (p = .0006), time away from home (p = .0945),

and position title ($p = .0150$) did, however, significantly ($p \leq .10$) affect GJS scores (Table XX).

TABLE XX

ANALYSIS OF VARIANCE (ANOVA) RESULTS FOR GENERAL JOB SATISFACTION DIMENSION BY PERSONAL VARIABLES

Source	df	Mean Squares	F	p*
Salary	6	138.17	4.16	0.0006
Error	169	33.24		
Total	175			
Time Away From Home	7	63.63	1.78	0.0945
Error	167	35.83		
Total	174			
Position Title	9	81.26	2.37	0.0150
Error	167	34.22		
Total	176			

*Only those significant at the .10 level are listed.

Respondents earning \$35,000 - 39,999 ($N = 16$, $\overline{X} = 29.50$), \$40,000 and above ($N = 44$, $\overline{X} = 29.02$), and \$30,000 - 34,999 ($N = 26$, $\overline{X} = 27.85$) scored significantly higher on general job satisfaction than those earning \$15,000 - 19,999 ($N = 13$, $\overline{X} = 23.62$) and \$20,000 - 24,999 ($N = 29$, $\overline{X} = 23.55$) (Table XXI). The mean scores of those whose annual salaries were \$25,000 - 29,999 ($N = 41$, $\overline{X} = 26.24$) and below \$14,999

TABLE XXI

DUNCAN MULTIPLE RANGE TEST FOR GENERAL JOB SATISFACTION SCORES AND PERSONAL VARIABLES[a]

Variables	N	Mean	Grouping[b]
Salary			
$35,000 - 39,999	16	29.50	A
$40,000 and above	44	29.02	A
$30,000 - 34,999	26	27.85	A
$25,000 - 29,999	41	26.24	AB
Below $14,999	7	25.29	AB
$15,000 - 19,999	13	23.62	B
$20,000 - 24,999	29	23.55	B
Time Away From Home			
Twice/week	27	29.19	A
Once/month	22	28.86	A
Once/week	14	27.79	A
Four times/week	8	27.00	A
Never	40	26.08	A
Twice/month	28	25.32	A
"Other"	34	25.21	A
Five times/week	2	24.00	A
Position Title			
Director	18	30.39	A
President or Vice-President	17	29.59	A
Consultant	10	28.70	AB
Marketing Related	14	27.57	ABC
Sales Representative	15	27.40	ABC
District/Territory Manager	12	26.42	ABC
"Other"	31	26.16	ABC
Food Service Director of Assist.	20	25.70	ABC
Manager or Assistant	19	24.47	BC
Dietitian/Nutritionist	21	23.91	C

[a]Data shown for significant findings only.

[b]Means with the same letter are not significantly different at the .05 level.

($N = 7$, $\bar{X} = 25.29$) were not significantly different from the mean scores of the other five salary ranges (Table XXI).

The time spent away from home variable significantly ($p = .0945$) (Table XX) affected general job satisfaction scores, but the Duncan Multiple Range Test (Table XXI) did not show a significant difference between the mean scores of the eight categories of time away from home, since the program was set for $p \leq .05$ only. The two highest scores, however, belonged to those who were away from home twice/week ($N = 27$, $\bar{X} = 29.19$) and once/month ($N = 22$, $\bar{X} = 28.86$). The lowest mean score came from respondents away from home five times per week ($N = 2$, $\bar{X} = 24.00$).

Respondents with the titles of director ($N = 18$, $\bar{X} = 30.39$) and president or vice-president ($N = 17$, $\bar{X} = 29.59$) had significantly higher general job satisfaction scores than managers or assistants ($N = 19$, $\bar{X} = 24.47$) and dietitians/nutritionists ($N = 21$, $\bar{X} = 23.91$). Yet, there were no significant differences between the mean GJS scores of directors, presidents, consultants ($N = 10$, $\bar{X} = 28.70$), marketing personnel ($N = 14$, $\bar{X} = 27.57$), sales representatives ($N = 15$, $\bar{X} = 27.40$), district managers ($N = 12$, $\bar{X} = 26.42$), "others" ($N = 31$, $\bar{X} = 26.16$), and food service directors ($N = 20$, $\bar{X} = 25.70$). For other groupings, please refer to Table XXI.

The general job satisfaction dimension was adopted from the Job Diagnostic Survey (Hackman and Oldham, 1980). Hackman and Oldham also provided normative data for this dimension. On a seven-point scale, the mean for professional or technical workers was 4.9. When the DIBI mean score of 26.80 was converted to the same scale, the adjusted score was 5.36, therefore being greater than the norm. When adjusted

to a 54 point scale, respondents scored ($\bar{X}$ = 41.35) slightly higher than management dietitians ($\bar{X}$ = 39.48) (Leche, 1984) on the GJS dimension (Figure 4).

QWL: Job in General (JIG)

The QWL dimension, job in general, dealt with the overall feelings about the work performed. The mean score of the respondents was 46.05 out of a possible 54, compared to a balance attitude score of 27 (Table V).

Variables that did not significantly affect ($p > .10$) JIG scores were: age, sex, highest degree, R. D. status, employment status, time away from home, type of business or industry, and number of people supervised. Marital status ($p = .0078$), salary ($p = .0017$), and position title ($p = .0115$) significantly affected JIG scores (Table XXII).

Married respondents (N = 101) were happier ($\bar{X}$ = 47.90) with their jobs in general than were single respondents (N = 54, $\bar{X}$ = 42.87) (Table XXIII). But there were no significant differences between the mean scores of those divorced, separated, or widowed and either married or single dietitians.

Respondents earning an annual salary of $40,000 and above (N = 44, $\bar{X}$ = 49.41) and $35,000 - 39,999 (N = 17, $\bar{X}$ = 49.24) scored significantly higher on the JIG dimension than those earning $20,000 - 24,999 (N = 31, $\bar{X}$ = 41.58) and $15,000 - 19,999 (N = 13, $\bar{X}$ = 40.23) (Table XXIII). There were no significant differences noted between the means of those earning $40,000 and above; $35,000 - 39,999; $30,000 - 34,999 (N = 26, $\bar{X}$ = 48.46); below $14,999 (N = 6, $\bar{X}$ =

46.33); and $25,000 - 29,999 (N = 43, $\overline{X}$ = 44.81). Also, no significant differences in the means were found between those earning below $14,999; $25,000 - 29,999; $20,000 - 24,999, and $15,000 - 19,999. For other groupings, please refer to Table XXIII.

TABLE XXII

ANALYSIS OF VARIANCE (ANOVA) RESULTS FOR JOB IN GENERAL DIMENSION BY PERSONAL VARIABLES

Source	df	Mean Squares	F	p*
Marital Status	2	453.11	5.00	0.0078
Error	178	90.71		
Total	180			
Salary	6	324.30	3.72	0.0017
Error	173	87.27		
Total	179			
Position Title	9	216.59	2.47	0.0115
Error	172	87.90		
Total	181			

*Only those significant at the .10 level are listed.

Presidents or vice-presidents (N = 17) were significantly happier ($\overline{X}$ = 52.35) with their job in general than were those with position titles of food service director (N = 20, $\overline{X}$ = 44.45), "other" (N = 32,

TABLE XXIII

DUNCAN MULTIPLE RANGE TEST FOR JOB IN GENERAL SCORES AND PERSONAL VARIABLES[a]

Variables	N	Mean	Grouping[b]
Marital Status			
Married	101	47.90	A
Divorced, Separated, or Widowed	26	45.31	AB
Single	54	42.87	B
Salary			
$40,000 and above	44	49.41	A
$35,000 - 39,999	17	49.24	A
$30,000 - 34,999	26	48.46	AB
Below $14,999	6	46.33	ABC
$25,000 - 29,999	43	44.81	ABC
$20,000 - 24,999	31	41.58	BC
$15,000 - 19,999	13	40.23	C
Position Title			
President or vice-president	17	52.35	A
Director	20	50.55	AB
Marketing Related	14	47.93	ABC
Consultant	10	47.60	ABC
Sales Representative	16	46.50	ABC
District/Territory Manager	12	46.33	ABC
Food Service Director or Assist.	20	44.45	BC
"Other"	32	43.97	BC
Manager or Assistant	20	43.45	BC
Dietition/Nutritionist	21	41.33	C

[a]Data shown for significant ($p \leq .10$) findings only.

[b]Means with the same letter are not significantly different at the .05 level.

$\overline{X}$ = 43.97), manager or assistant (N = 20, $\overline{X}$ = 43.45), or "dietitian" (N = 21, $\overline{X}$ = 41.33). Yet, there were no significant differences between the means of presidents, directors (N = 20, $\overline{X}$ = 50.55), marketing personnel (N = 14, $\overline{X}$ = 47.93), consultants (N = 10, $\overline{X}$ = 47.60), sales representatives (N = 16, $\overline{X}$ = 46.50), and district managers (N = 12, $\overline{X}$ = 46.33). For other significant differences between means, please refer to Table XXIII.

Leche (1984) measured management dietitians' satisfaction with their jobs in general also. Their mean score was 43.54, in comparison to the DIBI mean of 46.05 (Figure 4).

QWL: Performance Constraint Measure (PCM)

The QWL dimension, performance constraint measure, was a frustration index that measured situational resource variables relevant to performance (Peters and O'Connor, 1980). The higher the score, the less frustration was experienced on the job. The maximum score was 30, with a balance attitude score of 15 (Table V). The mean score of the DIBI respondents was 21.99, signifying that DIBI, overall, were not experiencing performance constraints.

The variables of age, sex, highest degree, R. D. status, time away from home, position title, type of business or industry, and number of people supervised did not significantly ($p > .10$) affect performance constraint measure scores. Marital status ($p = .0545$), salary ($p = .0018$), and employment status ($p = .0474$), however, did affect performance constraints (Table XXIV).

Even though the ANOVA (Table XXIV) suggested that marital status significantly affected ($p = .0545$) PCM scores, the Duncan Multiple

Range Test (Table XXV)) did not show a significant difference between the means of those married (N = 103, $\bar{X}$ = 22.29); divorced, separated, or widowed (N = 26, $\bar{X}$ = 21.46); and single (N = 54, $\bar{X}$ = 20.39), since the program is set up for $p \leq .05$ only.

TABLE XXIV

ANALYSIS OF VARIANCE (ANOVA) RESULTS FOR PERFORMANCE CONSTRAINT MEASURE DIMENSION BY PERSONAL VARIABLES

Source	df	Mean Squares	F	P*
Marital Status	2	116.61	2.96	0.0545
Error	180	39.44		
Total	182			
Salary	6	137.32	3.69	0.0018
Error	175	37.22		
Total	181			
Employment Status	2	122.30	3.10	0.0474
Error	180	39.43		
Total	182			

*Only those significant at the .10 level are listed.

Respondents earning annual salaries of $40,000 and above (N = 44, $\bar{X}$ = 24.50); $30,000 - 34,999 (N = 26, $\bar{X}$ = 23.50); $35,000 - 39,999 (N = 17, $\bar{X}$ = 22.71); and $25,000 - 29,999 (N = 44, $\bar{X}$ = 21.66) scored significantly higher on the PCM dimension than did those earning

$20,000 - 24,999 (N = 31, $\overline{X}$ = 19.36); below $14,999 (N = 7, $\overline{X}$ = 18.71); and $15,000 - 19,999 (N = 13, $\overline{X}$ = 18.23) (Table XXV). Yet, there were no significant differences between the mean scores of those earning $30,000 - 34,999; $35,000 - 39,999; $25,000 - 29,999; and $20,000 - 24,999. For additional mean separations, see Table XXV.

TABLE XXV

DUNCAN MULTIPLE RANGE TEST FOR PERFORMANCE CONSTRAINT MEASURE SCORES AND PERSONAL VARIABLES[a]

Variables	N	Mean	Grouping[b]
Marital Status			
Married	103	22.91	A
Divorced, Separated, or Widowed	26	21.46	A
Single	54	20.39	A
Salary			
$40,000 and above	44	24.50	A
$30,000 - 34,999	26	23.50	AB
$35,000 - 39,999	17	22.71	ABC
$25,000 - 29,999	44	21.66	ABC
$20,000 - 24,999	31	19.36	BC
Below $14,999	7	18.71	C
$15,000 - 19,999	13	18.23	C
Employment Status			
Employed at least 35 hr/week	173	22.19	A
Employed 20-34 hr/week	6	20.50	AB
Employed less than 20 hr/week	4	14.50	B

[a]Data shown for significant findings only ($p \leq .10$).

[b]Means with the same letter are not significantly different at the .05 level.

Those employed less than 20 hours per week (N = 4) experienced more performance constraints ($\overline{X}$ = 14.50) than those employed at least 35 hours per week (N = 173, $\overline{X}$= 22.19) (Table XXV). The mean of respondents employed 20-34 hours per week (N = 6, $\overline{X}$ = 20.50) was not significantly different from either of the other two means. The mean score of those employed less than 20 hours per week (14.50) was slightly below the balance attitude score of 15. Perhaps reasons why those employed part-time experienced more constraints include lack of resources, support, and assistance. There also may be a lack of time to do what is necessary. Part-timers were not as happy with the people they worked with as those employed full-time, and this could be a factor in experiencing performance constraints.

When comparing adjusted means, management dietitians ($\overline{X}$ = 37.40) (Leche, 1984) seemed to experience more performance constraints than did DIBI ($\overline{X}$ = 39.58) (Figure 4). Means adjusted to a 54 point scale were used, since the Leche instrument had nine items and the Taylor instrument had 10 items in the performance constraint measure.

Testing of the Hypotheses

H_1 - There will be no significant difference in the QWL: CO scores based on selected personal variables. Based on association results shown in Tables VI and VII, the research rejected H_1.

H_2 - There will be no significant difference in the QWL: CO scores based on selected institutional variables. Based on association results shown in Table VI, H_2 was rejected.

H_3 - There will be no significant difference in the QWL: AWPJ scores based on selected personal variables. Based on the results showing associations in Table IX, H_3 was rejected.

H_4 - There will be no significant difference in the QWL: AWPJ scores based on selected institutional variables. The institutional variables of type of business or industry and number of people supervised did not significantly affect QWL: AWPJ; therefore, the researcher failed to reject H_4.

H_5 - There will be no significant difference in the QWL: PB scores based on selected personal variables. Based on association results shown in Tables XIII and XIV, the researcher rejected H_5.

H_6 - There will be no significant difference in the QWL: PB scores based on selected institutional variables. Based on association results shown in Table XIII, H_6 was rejected.

H_7 - There will be no significant difference in the QWL: OFP scores based on selected personal variables. Based on the results showing associations in Table XVI, H_7 was rejected.

H_8 - There will be no significant difference in the QWL: OFP scores based on selected institutional variables. Based on the association results in Table XVI, H_8 was rejected.

H_9 - There will be no significant difference in the QWL: SOPJ scores based on selected personal variables. There were no personal variables that significantly affected supervision on present job; therefore, the researcher failed to reject H_9.

H_{10} - There will be no significant difference in the QWL: SOPJ scores based on selected institutional variables. The institutional variables of type of business or industry and number of people supervised did not significantly affect QWL: SOPJ; therefore, the researcher failed to reject H_{10}.

H_{11} - There will be no significant difference in the QWL: POPJ scores based on selected personal variables. Based on significant results shown in Table XVIII, the researcher rejected H_{11}.

H_{12} - There will be no significant difference in the QWL: POPJ scores based on selected institutional variables. There were no institutional variables that significantly affected the "people on your present job" dimension; therefore, the researcher failed to reject H_{12}.

H_{13} - There will be no significant difference in the QWL: GJS scores based on selected personal variables. Based on the results showing associations described in Table XX, the researcher rejected H_{13}.

H_{14} - There will be no significant difference in the QWL: GJS scores based on selected institutional variables. The institutional variables of type of business or industry and number of people supervised did not significantly affect general job satisfaction scores; therefore, the researcher failed to reject H_{14}.

H_{15} - There will be no significant difference in the QWL: JIG scores based on selected personal variables. Based on the association results shown in Table XXII, the researcher rejected H_{15}.

H_{16} - There will be no significant difference in the QWL: JIG scores based on selected institutional variables. There were no institutional variables that significantly affected QWL: JIG scores; therefore, the researcher failed to reject H_{16}.

H_{17} - There will be no significant difference in the QWL: PCM scores based on selected personal variables. Based on results showing associations described in Table XXIV, the researcher rejected H_{17}.

H_{18} - There will be no significant difference in the QWL: PCM scores based on selected institutional variables. The institutional variables of type of business or industry and number of people supervised did not significantly affect the performance constraint measure scores; therefore, the researcher failed to reject H_{18}.

Summary of Results

The results of this study were compared to four other similar studies (Table XII and Figure 5). Only the portions of the QWL instrument involving work, supervision, co-workers, promotion, and pay were compared. Normative comparisons of adjusted sample mean scores were made by comparing with men who had 15 or more years of education and women who had 9 or more years of education (Table XI). For comparison purposes, means had to be adjusted to a 54 point scale (Table V). Leche (1984) used a similar instrument and comparisons were made concerning all nine dimensions of QWL (Figure 4). The mean scores of the DIBI were all higher than the balance attitude score, which is the statistically expected score from a "balanced attitude" resulting in equal probabilities of endorsing favorable and unfavorable items (Smith, Kendall, and Hulin, 1969).

CHAPTER V

SUMMARY, RECOMMENDATIONS, AND IMPLICATIONS

The purpose in this study was to assess the quality of work life of Dietitians in Business and Industry, as this practice group has never before been studied in this context. Eighteen hypotheses were postulated to determine if selected personal and institutional variables affected the QWL of DIBI.

Definitions of QWL are plentiful in the literature. Sixteen definitions from 15 sources were reviewed and a consolidated list of 28 different QWL dimensions was presented. Only one QWL study of dietitians has been conducted (Leche, 1984), but there have been several studies analyzing job satisfaction of dietitians, public health nutritionists, and hospital food service directors. The samples, research instruments used, and discussion of findings of each of these studies were reviewed.

The sample used was randomly drawn from the ADA Practice Group of "Dietitians in Business and Industry." Data obtained from the 166-184 questionnaires usable for analysis were analyzed using frequencies, percentages, t-test, ANOVA, and Duncan Multiple Range Test.

Summary

Characteristics of Respondents

Forty-one percent of the respondents were 31 to 40 years of age,

while 31% were 30 or less, 20% were 41-50, and 7% were 51 and older. One hundred and seventy-eight of the respondents were female, and five were male. Fifty-five percent were married, 30% were single, and the remaining 15% were either divorced, separated, or widowed. Eighty-nine percent were registered dietitians.

The majority of the respondents (51%) had obtained an advanced degree, and the remainder had bachelor's degrees. The predominant major was dietetics or nutrition (61%), while 12% majored in food-service management, and 9% majored in management or business administration. The remainder majored in education (9%), nutrition communication (3%), or "other" (2%).

Twenty-seven percent of the DIBI members had been in the dietetic profession from less than one to five years, 25% from 6 to 10, 19% from 11 to 15, 16% for more than 20, and 14% for 16 to 20 years. Thirty-two percent had been in business and industry for three to five years, 24% for less than one to two years, 24% for more than 10 years, and 20% for 6 to 10 years. Forty-four percent had only been in their present jobs for less than one to two years, 36% for three to five years, 14% for 6 to 10 years, and 6% for greater than 10 years.

Ten different position titles were recognized; "other" was the most common title, with 32 responses. Position titles, frequencies, and percentages of occurrence were presented in Table II. There were 11 titles for supervisors, and vice-president (N = 35, 18%) was the most common. Other titles of supervisors and their frequencies are found in Table III.

Most of the respondents (93%) were employed at least 35 hours per week, while 3% each were employed 20 to 34 hours per week and less

than 20 hours per week. Twenty-four percent of the DIBI respondents earned $25,000 - 29,999 annually; 24% also earned $40,000 and above. Seventeen percent made $20,000 - 24,999; 14% from $30,000 - 34,999; 9% from $35,000 - 39,999; 7% from $15,000 - 19,999; and 4% below $14,999.

Twenty-three percent of the respondents never had to spend nights away from home due to their job, and 19% were in the "other" category. Seventeen percent were away from home twice per month. The remainder were away from home anywhere from once per month to five times per week.

Characteristics of the Institutions

There were 17 types of business or industry recognized as employing respondents. Due to the variety of responses received, 22% were placed in the "other" category. The second predominant type was foodservice management companies employing 17%. Food product manufacturers were third, with 12%; and pharmaceutical companies were fourth, with 10%. The remaining respondents were employed by food brokers and distributors, had their own business, marketing related, independent food service operations, equipment companies, restaurant management, hospital management, publishing companies, retail food chains, food service facility design, computer services, consumer affairs, and weight control companies.

No employees were supervised by 40% of the respondents, but 18% supervised 21 or more, 10% supervised 6 to 10, 9% each supervised 1 or 3 to 5, and 7% each supervised 2 or 11 to 20 employees. Thirty-nine percent answered "non-applicable" when asked what type of employees they supervised. Twenty-one percent supervised "others." Fifteen

percent supervised dietitians, 14% supervised food service workers, 7% supervised home economists, and 5% supervised clerical workers.

QWL of Dietitians in Business and Industry

The QWL expected scores under various assumptions such as indifference, balance attitude, and maximum scores for the nine QWL dimensions studied are illustrated in Table V. The means and adjusted means for the nine dimensions are also found in Table V.

DIBI members appeared to be satisfied with the companies (CO) they worked for. The variables of age, marital status, salary, employment status, position title, type of business or industry, and sex affected company scores significantly. Married respondents were happier with their companies than those who were single, but means of those divorced, separated, or widowed were not significantly different from either the single or married. Those less than 30 years old scored less than those above 30. Those earning $30,000 annually and above were more satisfied than those earning $15,000 - 24,999, but the means of those earning less than $14,999 and $25,000 -29,999 were not significantly different from any of the other categories. Respondents employed at least 35 hours per week and less than 20 hours per week were happier with their companies than those employed 20-34 hours per week. Presidents or vice-presidents were significantly happier with their companies than were managers, district managers, consultants, food service directors, "others," and "dietitians." Yet, there were no differences between the means of presidents, directors, sales representatives, and those with marketing related positions. Some significant differences between types of business or industry were

noted, but due to dangerously small cell sizes (one to three), generalizations cannot be made with certainty. For 13 out of 17 types of business or industry, no significant differences were noted.

The variables of age, salary, and position title significantly affected actual work on present job (AWPJ) scores. Respondents aged 41 and above were happier with their work than were those less than 30. Those earning annual salaries of less than $14,999 and above $30,000 were happier than those earning $15,000 - 24,999. The means of those earning $25,000 - 29,999 were not significantly different from the others. Presidents were significantly happier with the work on their present jobs than were "others," "dietitians," managers, and sales representatives. But there were no significant differences between the mean scores of presidents, marketing personnel, directors, district managers, consultants, and food service directors.

Overall, the DIBI respondents were satisfied with their pay and benefits. Sex, age, salary, position title, and type of business or industry affected PB scores. The males were significantly happier with their pay than were the females. Those ages 51 and older scored higher on the PB dimension than those less than 30. Means of respondents aged 31-50 were not significantly different from those older or younger. Presidents and directors were happier with their pay than "dietitians" were, but there were no significant differences between the mean scores of directors, managers, district managers, marketing personnel, food service directors, sales representatives, "others," and consultants. Differences were noted according to type of business or industry, but once again generalizations cannot be made because of

small sample size. Table XXV illustrated the significant differences between the 17 means.

The respondents were least satisfied with opportunities for promotion (OFP) of the nine QWL dimensions, yet they were still more satisfied than most dietitians in other studies. The variables of salary, employment status, position title, and type of business or industry significantly affected OFP scores. Even though salary significantly affected OFP scores, there were no differences between the means of the seven salary categories. Yet, those making $30,000 and above scored much higher than those making below $24,999. The same was true with employment status; no significant differences were found between means, but those employed at least 35 hours per week scored higher than those who worked part-time. Presidents and district managers scored significantly higher on OFP than did "dietitians," "others," and consultants. The only significant differences noted between mean scores of types of business or industry involved cell sizes of one. Table XVII presented the means, number in each type, and groupings.

DIBI seemed very happy with the supervision they received on their present jobs. None of the personal and institutional variables studied significantly affected SOPJ scores.

DIBI also appeared to be happy with the people on their present job. The variables of marital status, salary, and employment status affected POPJ scores. No significant differences were noted between the means, but married respondents scored higher than those single, divorced, separated, or widowed. Those earning $30,000 and above were happier with co-workers than those earning below $14,999. Yet, there

was no significant difference between the mean scores of those earning from $15,000 to above $40,000. Those employed at least 35 hours per week were happier with co-workers than those employed less than 20 hours per week.

Respondents overall seemed to experience general job satisfaction. Annual salaries, time away from home due to work, and position titles affected GJS scores. Respondents earning $30,000 and above were happier than those earning from $15,000 - 24,999. But means of those earning from $25,000 - 29,999 and below $14,999 were not significantly different from any of the others. Time away from home affected GJS scores, but no significant differences were noted between the means. Respondents away from home twice per week and once per month did score higher than those away five times per week. Directors and presidents were significantly more satisfied with their jobs than were managers and "dietitians." Yet, there were no significant differences between the means of directors, presidents, consultants, marketing personnel, sales representatives, district managers, "others," and food service directors.

Respondents were also happy with their jobs in general. The variables of marital status, salary, and position title significantly affected JIG scores. Married respondents had significantly higher JIG scores than did single respondents. Those earning $35,000 and above were happier with their jobs in general than were those earning from $15,000 -24,999. There were no significant differences in mean scores of those earning below $14,999 and $15,000 - 29,999. Presidents and directors had significantly higher JIG scores than did "dietitians." There were no significant differences between the mean scores of

directors, marketing personnel, consultants, sales representatives, district managers, food service directors, "others," and managers.

DIBI overall are not experiencing performance constraints in relationship to their jobs. Marital status, salary, and employment status affected performance constraint measure scores. No significant differences were noted between the means, but married respondents scored slightly higher (fewer constraints) than single respondents. Respondents earning $40,000 and above experienced fewer performance constraints than those earning below $14,999 - 24,999. No significant differences were noted between the means of those earning from $25,000 to above $40,000, or from below $14,999 to $39,999. DIBI employed at least 35 hours per week scored significantly higher than those employed less than 20 hours per week.

Testing the Hypotheses

A summary of associations between QWL dimension scores and personal and institutional variables is shown in Table XXVI. The designated significance level was 10%. Out of 18 hypotheses tested, the researcher rejected 11 and failed to reject 7.

Recommendations

Recommendations regarding the research instrument are concerned generally with the wording of some of the biographical questions. Highest level degree obtained and major were both asked for in question six. Some respondents did not answer the major portion of this question. Perhaps degree and major need to be asked separately. It is also suggested that, rather than having an open-ended question

TABLE XXVI

SUMMARY OF ASSOCIATIONS BETWEEN QWL DIMENSION SCORES AND PERSONAL/INSTITUTIONAL VARIABLES

Hypotheses	Association Between QWL Dimensions and Variables		P	Action Taken*
1	Company	Personal		
		Age	0.0190	R
		Sex	0.0048	
		Marital Status	0.0083	
		Salary	0.0001	
		Employment Status	0.0223	
		Position Title	0.0015	
2	Company	Institutional		
		Type of Business/Industry	0.0463	R
3	Actual Work on Present Job	Personal		
		Age	0.0200	R
		Salary	0.0009	
		Position Title	0.0113	
4	Actual Work on Present Job	Institutional		
		None		FTR
5	Pay and Benefits	Personal		
		Age	0.0539	R
		Sex	0.0917	
		Salary	0.0001	
		Position Title	0.0010	

TABLE XXVI (Continued)

Hypotheses	Association Between QWL Dimensions and Variables		P	Action Taken*
6	Pay and Benefits	Institutional		
		Type of Business/Industry	0.0193	R
7	Opportunities for Promotion	Personal		
		Salary	0.0525	R
		Employment Status	0.0863	
		Position Title	0.0330	
8	Opportunities for Promotion	Institutional		
		Type of Business/Industry	0.0198	R
9	Supervision on Present Job	Personal		
		None		FTR
10	Supervision on Present Job	Institutional		
		None		FTR
11	People on Present Job	Personal		
		Marital Status	0.0201	R
		Salary	0.0042	
		Employment Status	0.0081	
12	People on Present Job	Institutional		
		None		FTR

TABLE XXVI (Continued)

Hypotheses	Association Between QWL Dimensions and Variables		P	Action Taken*
13	General Job Satisfaction	Personal		
		Salary	0.0006	R
		Time Away From Home	0.0945	
		Position Title	0.0150	
14	General Job Satisfaction	Institutional		
		None		FTR
15	Job in General	Personal		
		Marital Status	0.0078	R
		Salary	0.0017	
		Position Title	0.0115	
16	Job in General	Institutional		
		None		FTR
17	Performance Constraint Measure	Personal		
		Marital Status	0.0545	R
		Salary	0.0018	
		Employment Status	0.0474	
18	Performance Constraint Measure	Institutional		
		None		FTR

*R = Reject; FTR = Failed to Reject.

regarding majors, a list of options such as: home economics, dietetics, food service administration, business or management, education, public health, and "other" could have been provided. Adding a higher salary category would give additional information concerning the annual salaries. In question 14, only one type of employee supervised could be coded, and many respondents supervised several types of employees. The question could be clarified by asking what type of employees are supervised the "majority" of the time. There were too many classifications under the type of business or industry, and due to small cell sizes, statistical analysis was limited. Yet, due to the nature of DIBI jobs, it would be hard to combine classifications. The researcher suggests using data for general information and not as variables. One option not listed that could have been included was "consultant." The question: "How often must you spend nights away from home?" needs to be rephrased for ease in analyzing data. There were eight answer choices and second only to "never," "other" was the predominant answer. Rephrasing the question to ask: "How many nights per month (year) must you spend away from home due to your job?" would allow for collapsing the categories later with the aid of the computer to yield more usable information.

Other questions that would provide useful data included:

"How did your undergraduate program prepare you for your current position?"

"How did your graduate program prepare you for your current position?"

"What skills do you need or use that you did not receive in your program?"

Renumbering the sections of the questionnaire would allow more ease in explaining results from sections in the instrument. Each section of the questionnaire originating from a different source should have a different number. The suggested renumbering would include: I. Biographical, II. JDI, III. Company, IV. General Job Satisfaction, and V. Performance Constraint Measure.

One problem arose in this study that has not been seen in other similar studies. Most respondents with the position title of president did not complete the supervision on present job dimension, due to nonapplicability. Leaving the section blank appeared to be the only solution to the problem.

A follow-up procedure is recommended, as other similar studies have had higher response rates. Either reminder postcards or letters with an additional questionnaire should be sent to the nonrespondents. Endorsement from the Practice Group Chairman, which was solicited but not obtained, and a reminder in the PG Newsletter would probably increase response rates also.

Implications

Dietitians in Business and Industry, overall, seemed to be very happy with their quality of work life, with the possible exception of opportunities for promotion, which seems to be an occupational hazard. Perhaps reasons why DIBI scored higher than dietitians in other studies should be investigated. An open-ended question asking the respondent: "What do you like most about your job?" could assist in discovering their reasons for high scores.

Opportunities for promotion for dietitians is perhaps another area to be investigated. We, as dietitians, need to consider if creating opportunities for promotions is an individual responsibility or an organizational responsibility. Perhaps if the organization does not provide us with such opportunities, it is up to us to create our own. Work as a balanced part of the total lifestyle is another QWL dimension (Walton, 1974; Heyel, 1982; Tuttle, 1982) that should perhaps be studied as part of the QWL assessment.

Since considerable data on professionals has been gathered using the JDI, Smith should provide up-to-date norms. Norms also need to be provided for the new, long version of the JDI.

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APPENDIXES

APPENDIX A

RESEARCH INSTRUMENT AND KEY

Oklahoma State University

Department of Food, Nutrition and Institution Administration

STILLWATER, OKLAHOMA 74074
(405) 624-5039

March 1, 1984

Dear DIBI Member:

We would like your assistance on a research project we are conducting in the Department of Food, Nutrition and Institution Administration at Oklahoma State University. The study is concerned with assessing the quality of work life of Dietitians in Business and Industry.

This survey includes questions on the following quality of work life issues: feelings and committment toward the organization, pay and benefits, job security, management, relations with your immediate supervisor, advancement issues, co-worker relations and the job itself. Information gained from this study can hopefully assist human resource managers, managers, and dietitians alike in improving the quality of work life for Dietitians in Business and Industry.

A summary of the findings will be shared with you in the DIBI Newsletter. The forms are coded for analysis only; results will not be identified with your company at any time. After completing the questionnaire, please fold, staple and return it to us. Please return on or before March 15, 1984. This questionnaire takes approximately 15 minutes to complete. If you have any questions, please call us at (405) 624-5039. Thank you for your assistance!

Sincerely,

Marcella Taylor

Marcella Taylor, R.D.
Graduate Teaching Assistant

Lea Ebro

Lea Ebro, Ph.D., R.D.
Associate Professor
(DIBI Member)

OKLAHOMA STATE UNIVERSITY
Department of Food, Nutrition and Institution Administration

QUALITY OF WORK LIFE ASSESSMENT

I. General Information

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

1. Are you currently employed in dietetic practice in business or industry?

_____(1) No _____(2) Yes

2. If no, please indicate why:

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

3. Sex:

_____(1) Male _____(2) Female

4. Marital Status:

_____(1) Single _____(3) Divorced _____(5) Widowed
_____(2) Married _____(4) Separated

5. Age:

_____(1) Under 25 _____(4) 36-40 _____(7) 51-55
_____(2) 25-30 _____(5) 41-45 _____(8) 56-60
_____(3) 31-35 _____(6) 46-50 _____(9) Over 60

6. Highest level degree obtained and major:

_____(1) BS_____
_____(2) MS_____
_____(3) Ph.D._____

7. _____(1) R.D. or _____(2) Non-R.D.

If not currently employed in dietetic practice in business or industry, you may conclude the questionnaire at this point and fold the questionnaire in thirds and staple it closed. The return address should be visible after stapling. Return postage is provided. Thank you very much.

Questions 8 - 10 refer to full-time employment. If employed part-time, please convert to full-time equivalents.

8. Number of years employed in the dietetic profession:_____

9. Number of years employed in Business and Industry:_____

10. Number of years in present job:_____

11. Position title:_____

12. Position title of your supervisor:_____

13. Number of employees you supervise:_____

14. Type of employees you supervise (ex. - food service workers, home economists, other dietitians, etc.):_____

15. Employment status:

_____(1) Employed at least 35 hr/wk
_____(2) Employed 20-34 hr/wk
_____(3) Employed less than 20 hr/wk

16. Annual Salary:

_____(1) Below $14,999
_____(2) 15,000-19,999
_____(3) 20,000-24,999
_____(4) 25,000-29,999
_____(5) 30,000-34,000
_____(6) 35,000-39,999
_____(7) 40,000 - above

17. Type of Business or Industry (Check the one that most closely describes the type business you work for):

_____(1) Retail food chain
_____(2) Food brokers and distributors
_____(3) Food product manufacturer
_____(4) Foodservice Management Company
_____(5) Hospital Management Company
_____(6) Restaurant Management
_____(7) Independent Food Service Operation
_____(8) Own business
_____(9) Food Service Facility Design
_____(10) Equipment design, service or sales
_____(11) Computer services
_____(12) Marketing, advertising or public relations
_____(13) Consumer affairs
_____(14) Publishing company
_____(15) Cooking school
_____(16) Pharmaceutical company
_____(17) Weight control company
_____(18) Fitness related company
_____(19) Pet food company
_____(20) Other:_____ (Please specify)

18. How often must you spend nights away from home due to your job? (This does not include professional meetings unless they are required as a term of your employment).

_____(1) Once/week
_____(2) twice/week
_____(3) four times/week
_____(4) five times/week
_____(5) once/month
_____(6) twice/month
_____(7) Never
_____(8) Other:_____ (Please specify)

II. Quality of Work Life Assessment

COMPANY

Think of the company you work for now. How well does each of the following phrases describe your present company? In the space provided beside each word or phrase, put:

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

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

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

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

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

Y Fascinating
N Routine
Y Satisfying
N Boring
Y Good
Y Creative
Y Respected
N Hot

Y Pleasant
Y Useful
N Tiresome
Y Healthful
Y Challenging
N On your feet
N Frustrating
N Simple

N Endless
Y Gives sense of accomplishment
N Repetitive
N Hectic
Y Well defined duties
N Too much to do
N Tiring
N Physically uncomfortable
N Pressured

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

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

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

Y Income adequate for normal expenses
Y Satisfactory profit sharing
N Barely live on income
N Bad
Y Income provides luxuries
N Insecure
N Less than I deserve
Y Highly paid
N Underpaid
Y Fair

Y Good benefits
N Too long between pay days
Y Steady work
Y Well paid
N Too little vacation
Y Clear pay policy
Y Above average for job
N Unfair
N Errors in payment
N Not enough increases

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

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

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

Y Good opportunities for promotion
N Opportunity somewhat limited
Y Promotion on ability
N Dead-end job
Y Good chance for promotion
N Unfair promotion policy
N Infrequent promotions
Y Regular promotions

Y Fairly good chance for promotion
Y Clear promotion policy
N Rather stay on present job
Y Consistent promotion policy
Y Could be worse
N Others have better opportunities
N Promotion depends on who you know
N Less than elsewhere

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

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

Y if it describes your supervisor
N if it does NOT describe him/her
? if you cannot decide

Y Asks my advice	Y Tactful
N Hard to please	Y Influential
N Impolite	Y Up-to-date
Y Praises good work	N Doesn't supervise enough
N Quick tempered	N Lazy
Y Tells me where I stand	N Has favorites
N Annoying	Y Good listener
N Stubborn	Y Tells me how I'm doing
Y Knows job well	N Interferes with my work
N Bad	N I'm unsure who supervises me
Y Intelligent	Y Keeps me informed
Y Leaves me on my own	N Poor planner
Y Around when needed	Y Gives clear directions

PEOPLE ON YOUR PRESENT JOB (Copyright, Bowling Green State University, 1975, 1983)

Think of the majority of the people that you work with now or the people you meet in connection with your work. How well does each of the following words or phrases describe these people? In the space provided beside each word or phrase below, put:

Y if it describes the people you work with
N if it does NOT describe them
? if you cannot decide

Y Stimulating	N No privacy
N Boring	Y Active
N Slow	N Narrow interest
Y Ambitious	Y Loyal
N Stupid	N Hard to meet
Y Responsible	Y Work well together
Y Fast	Y Do their share
Y Intelligent	N Prejudiced
N Easy to make enemies	Y Helpful
N Talk too much	Y Willing to listen
Y Smart	N Stubborn
N Lazy	N Interfere with my work
N Unpleasant	N Gossipy

GENERAL JOB SATISFACTION

Write a number in the blank for each statement, based on this scale:

How much do you agree with the statement?

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

7 1. Generally speaking, I am very satisfied with this job.
1 2. I frequently think of quitting this job.
7 3. I am generally satisfied with the kind of work I do in this job.
7 4. Most people in this job are very satisfied with the job.
1 5. People on this job often think of quitting.

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

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

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

Y Pleasant
N Bad
Y Ideal
N Waste of time
Y Good
N Undesirable
Y Worthwhile
N Worse than most
Y Acceptable

N Like to leave
Y Better than most
N Disagreeable
Y Makes me content
N Inadequate
Y Excellent
N Rotten
Y Enjoyable
N Poor

PERFORMANCE CONSTRAINT MEASURE

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

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

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

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

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

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

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

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

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

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

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

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

Please make sure you have completed the front and back portions of each page. Thank you for your participation. Please fold the questionnaire in thirds and staple it closed. The return address should be visible after stapling. Return postage is provided. Thank you very much.

APPENDIX B

CHARACTERISTICS OF DIBI MEMBERS NOT EMPLOYED IN BUSINESS AND INDUSTRY

Sixty of the 253 respondents (24%) were not currently employed in dietetic practice in business and industry. Personal data from these respondents was tallied, but not computer analyzed. Those DIBI members not employed in business and industry were female (97%), registered dietitians (88%), and married (43%) or single (43%). Most were from 25 to 30 years old (30%), or from 35 to 35 years old (22%). More than half (53%) had advanced degrees, while 47% had B.S. degrees.

Reasons why respondents were not currently employed in business and industry varied. Many (40%) listed "other" reasons such as: healthcare consultant, clinical dietitian, dietetic consultant, nursing home, own restaurant, unemployed, retired, or watching for job possibilities. Thirty-two percent were employed in a nondietetic position such as: advertising, sales, district manager, own business, research market planner, management consulting firm, promotion coordinator, QC Food Company, and health care market researcher. Many respondents with some of the same position titles did complete the questionnaire. Fifteen percent listed school, family, health, and not wanting to work for awhile as their reasons. No job was available for 13%.

APPENDIX C

CHARACTERISTICS OF "OTHERS"

The purpose of this appendix was to describe the characteristics of respondents that fell into an "other" category. Explanations follow for "other" majors, position titles, position titles of supervisors, time away from home, types of business and industry, and types of employees supervised.

Majors

Counseling
Food Technology
Journalism
Food Science
Home Economics Administration

Position Titles

Food Service Analyst
Health and Education Coordinator
Healthcare Communications Specialist
Product Communications Specialist
Project Leader
Healthcare Specialist
Food Coordinator
Scientist
Quality Control
Account Supervisor
Clinical Research Associate
Executive Recruiter
Research Coordinator
Associate Food Editor
Nutrition Editor
Production Supervisor
Account Executive

Position Titles of Supervisors

Executive Dietitians
Chief Dietitian
Engineer
Senior Scientists
Partner
Charge Person (Shift)
Owner

Position Titles of Supervisors (cont.)

Physician
Food Editor
Regional Food Coordinator
Supervisor of Commercial Marketing Program

Time Away From Home

One Week/Month
One Time/Quarter
Five - Ten Times/Year
Sporadic
Two - Five Times/Year
Four - Five Times/Month
Seldom
98 Days/Year
Two - Three Times/Year
30% of the Time
Three - Four Times/Year
Six Times/Year
Five Times/Year
Four Times/Quarter

Types of Business and Industry

Consulting
Independent Hospital Manager
Trade Association
Nursing Home Management
Utility
Home Health Care
Dairy Council
Air Force Food Service Headquarters
County Hospital
Nutrition Education
Agri-Marketing
Group Purchasing
Company Owned Cafeteria
Correctional
Public Health
Food Packaging

Types of Employees Supervised

Technician
Sales Representative

Types of Employees Supervised (cont.)

Food Service Manager
Consultant
Free Lance Food Consultant
Draftsmen
Systems Analyst
Nutrition Education Specialist
Telemarketer
Coordinator
Manager
Chef
Foodservice Supervisor
Quality Assurance Specialist
Industrial Specialist
Design and Layout Specialist
Food Chemist
Food Technologist
Vice-President
Public Relations Professional
Business Manager
Public Health Nutritionist

VITA 2

Marcella Taylor

Candidate for the Degree of

Master of Science

Thesis: A QUALITY OF WORK LIFE ASSESSMENT OF DIETITIANS IN BUSINESS AND INDUSTRY

Major Field: Food, Nutrition and Institution Administration

Biographical:

Personal Data: Born in Adel, Georgia, March 6, 1957, the daughter of Emmitt and Ozella Taylor.

Education: Attended the University of Georgia, received Bachelor of Science Degree in June, 1982; completed an Administrative Dietetic Internship at Oklahoma State University in May, 1983; Registered Dietitian status attained in October, 1983; completed requirements for the Master of Science degree at Oklahoma State University in December, 1984.

Professional Experience: Signal Intelligence Emitter Identifier/Locator, Army Security Agency, United States Army, Schleswig, West Germany, March, 1975-April, 1978; Crew Person and Swing Manager, McDonalds, Athens, Georgia, October, 1978-May, 1979; Dietary Clerk, Athens General Hospital, Athens, Georgia, October, 1979-March, 1980; Kitchen Manager/Cook, Presbyterian Student Center, Athens, Georgia, 1980-81; Dietetic Assistant, Veterans Administration Medical Center, Augusta, Georgia, July-August, 1981; Storeroom Manager, Food and Nutrition Department, University of Georgia, Athens, Georgia, 1981-82; Graduate Teaching Assistant, Department of Food, Nutrition and Institution Administration, Oklahoma State University, 1983-84; U.S. Army Reserve Dietitian, Second Lieutenant, 44th Evacuation Hospital, Oklahoma City, Oklahoma, May, 1984

Professional Organizations: American Dietietic Association, Oklahoma Dietetic Association, Phi Kappa Phi, Omicron Delta Kappa, Golden Key National Honor Society, Omicron Nu, Phi Upsilon Omicron, Who's Who Among Students in American Universities and Colleges.