

JOB SATISFACTION IN MEDICAL LABORATORIES, INC.

A THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF SCIENCE

IN THE GRADUATE SCHOOL OF THE

TEXAS WOMAN'S UNIVERSITY

INSTITUTE OF HEALTH SCIENCES

SCHOOL OF HEALTH CARE SERVICES

HEALTH SCIENCES INSTRUCTION PROGRAM

BY

BARBARA GAIL SMARTT, B.A., M.T. (ASCP)

DENTON, TEXAS

AUGUST 1985

The Graduate School
Texas Woman's University
Denton, Texas

May 1 19 85

We hereby recommend that the thesis prepared under
our supervision by Barbara Gail Smartt
entitled Job Satisfaction in Medical Laboratories, Inc.

be accepted as fulfilling this part of the requirements for the Degree of Master
of Science

Committee:

Eileen E. Morrison
Chairman

Barbara J. Thamel
Alon G. G. G. G.

Accepted:

Leslie M. Thompson
Provost of the Graduate School

DEDICATION

This thesis is dedicated to my mother for her
patience, support, and understanding.

ACKNOWLEDGMENTS

The researcher wishes to thank the committee who supervised this project. A special expression of appreciation goes to Dr. Eileen Morrison for her support and encouragement. A special thanks goes to Mr. Kiso Zamora for his help and encouragement.

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CHAPTER I

INTRODUCTION

In the laboratory as in any business, one of the key assets is personnel. However, personnel may not be viewed as an asset by the laboratory administration (Marty, 1977). The job places a person into an organizational network in which the efforts of others are joined for a common purpose (Gruneberg, 1979). In this setting, it is easy to lose the individual and look only at the business as a whole. Gruneberg stated that the two main reasons to look at job satisfaction were (a) from the individual's view--most people spend a large part of their lives at work, so understanding job satisfaction and the factors involved are relevant to improving the well-being of the individual in an important aspect of his life, and (b) from the corporate level--increasing job satisfaction will increase productivity and thus profits (1979).

According to Marty (1977), great care was taken in the laboratory to maintain an expensive piece of equipment, but many times the employee, although seldom breaking down completely, had periods of decreased productivity. Due to neglect, the employee might decide

to terminate and look for employment elsewhere. Hence, the person who is so vital to the laboratory's function should receive proper care and attention (Marty, 1977).

Job satisfaction and relevant factors within the job setting are important areas for study, because health care professionals, of which the laboratory personnel are a part, are directly or indirectly involved in patient care (Brown, 1982). The evidence suggests that factors that influence satisfaction of the different levels of employees may be quite varied (Palola, 1965). Job satisfaction has been shown to be a multifaceted subject (Broski & Cook, 1978) and cannot be covered in a single question, "Are you satisfied with your job?" (Broski & Cook, 1978, p. 282).

. Problem

This research delineated and compared the factors that affect job satisfaction levels for both professional and nonprofessional employees of the Medical Laboratories, Inc. of Denton, Texas. It reported job satisfaction on three levels--general, extrinsic, and intrinsic.

Statement of Purpose

The purpose of this study was to determine the overall satisfaction level and the selected factors that

affect job satisfaction for both professional and nonprofessional employees of Medical Laboratories, Inc. of Denton, Texas. With this information, the laboratory may offer strategies to maintain and increase employee satisfaction and thus increase employee cooperation, length of employment, and productivity.

Research Questions

For the purpose of this study, the following research questions were proposed.

1. What is the general job satisfaction level as measured by the Minnesota Satisfaction Questionnaire (short-form) for professional and nonprofessional employees of Medical Laboratories, Inc.?
2. What is the level of job satisfaction as measured by the extrinsic factors scale of the Minnesota Satisfaction Questionnaire (short-form) for professional and nonprofessional employees of Medical Laboratories, Inc.?
3. What is the level of job satisfaction as measured by the intrinsic factors scale of the Minnesota Satisfaction Questionnaire (short-form) for professional and nonprofessional employees of Medical Laboratories, Inc.?
4. Is there a difference in the level of general job satisfaction as measured by the Minnesota Satisfaction

Questionnaire (short-form) between professional and non-professional employees of Medical Laboratories, Inc.?

5. Is there a difference in the level of job satisfaction as measured by the extrinsic factors scale of the Minnesota Satisfaction Questionnaire (short-form) between professional and nonprofessional employees of Medical Laboratories, Inc.?

6. Is there a difference in the level of job satisfaction as measured by the intrinsic factors scale of the Minnesota Satisfaction Questionnaire (short-form) between professional and nonprofessional employees of Medical Laboratories, Inc.?

7. Is there a relationship between job satisfaction as measured by the Minnesota Satisfaction Questionnaire (short-form) and age, employment status, gender, salary range, length of time employed, job position, and enrollment in education programs for professional employees of Medical Laboratories, Inc.?

8. Is there a relationship between job satisfaction as measured by the Minnesota Satisfaction Questionnaire (short-form) and age, employment status, gender, salary range, length of time employed, job position, educational background, and enrollment in educational programs for nonprofessional employees of Medical Laboratories, Inc.?

9. Is there a difference in job satisfaction as measured by the Minnesota Satisfaction Questionnaire (short-form) with respect to age, employment status, gender, salary range, length of time employed, job position, educational background, and enrollment in educational programs between professional and nonprofessional employees of Medical Laboratories, Inc.?

Definition of Terms

For the purpose of this study, the following definitions were used.

1. Job satisfaction. The individual's emotional reaction to a particular job--the total body of feelings that an individual has about his job.

2. Professional. Group including both registered technologists and nonregistered technicians--people who do the actual clinical testing of human body samples in the laboratory.

3. Registered technologist. Any person who is registered by the American Society of Clinical Pathology or the Department of Health and Human Services.

4. Nonprofessional. A person who does no actual testing of body samples--to include clerical staff, phelobotomists, and computer personnel.

5. Intrinsic factor scale. This scale consists of 12 items that deal with the job--achievement, activity, working conditions, creativity, and compensations.

6. Extrinsic factors scale. This scale consists of six items that deal with the company--job security, employee recognition, supervision, company policies and practices, and compensation.

7. Demographic factors. Demographic factors are those which include age, gender, annual salary range, employee title or position held, educational background, and length of time on the job.

8. Age. One's chronological age at the time of the survey.

9. Annual salary. The annual income for the past year.

10. Employee title or position held. Any supervisory position held.

11. Educational background. Last degree attained or enrollment in any educational programs for credit.

12. Minnesota Satisfaction Questionnaire (short-form). MSQ (short-form).

Assumptions

There were two assumptions made for this study. The first was that the participants in the study answered

with truthful responses. The second was that the information supplied on the demographic form on each participant was correct.

Limitations

The only limitation made for this study was that it does not apply to any field or work setting other than Medical Laboratories, Inc. This study cannot be generalized to any other laboratory work setting. Although the Minnesota Satisfaction Questionnaire (short-form) had reliability established for several populations, reliability was not known for laboratory personnel.

Significance of the Study

Although a great deal has been published in the area of general job satisfaction, little research has been published in the area of laboratory personnel job satisfaction. This study could help Medical Laboratories, Inc. identify the general level of job satisfaction of its employees and the factors that contribute to their job satisfaction from the professional as well as nonprofessional standpoint. By identifying the extrinsic and intrinsic factors that are important in job satisfaction, the study may assist the administration of Medical Laboratories, Inc. to review current personnel policies

and to formulate new plans to keep a good work environment and satisfied staff in the face of forced cutbacks due to current governmental regulations.

Summary

This chapter included a statement of purpose and the significance of this study, expressing the importance of job satisfaction and the need to study the factors included to improve employee working job satisfaction. It defined the terms used in the study and included a statement of the problem of the study which was to determine the general level of job satisfaction for both professional and nonprofessional employees of Medical Laboratories, Inc. of Denton, Texas. The study also proposed to delineate factors important in job satisfaction for the professional and nonprofessional employees of Medical Laboratories, Inc. of Denton, Texas.

CHAPTER II

LITERATURE REVIEW

General job satisfaction is one of the most researched topics in psychology. During the course of research for the book, Job Satisfaction and Productivity, there were recorded 2,000 reference sources published between Spring, 1959 and Spring, 1974 (Srivastus, Salipante, Cummings, Notz, Biglow, & Waters, 1977). So much literature is in the field that only the most pertinent to the medical laboratory was used. Gruneberg (1979) stated several reasons for the interest in this area. One was that most individuals spent a large part of the working hours at work; thus the factors involved in job satisfaction were relevant to the well-being of a large number of individuals in an important aspect of life. Another reason for interest in job satisfaction was that it was believed that increasing job satisfaction would increase productivity and thus profits (Gruneberg, 1979).

Definitions of Job Satisfaction

There appeared to be no agreed upon definition of job satisfaction. Herzberg, Mausner, Peterson, and

Capwell (1957) stated that job satisfaction was not a unidimensional attitude. They broke satisfaction down into specific activities of the job such as the place, working conditions under which the job was performed and specific factors of the job, e.g. social prestige and security. LaFollette (1973) stated that job satisfaction may be viewed as a multidimensional phenomenon, because several different job-related components could be seen which included satisfaction with (a) co-workers, (b) pay, (c) supervision, and (d) company policy. Likewise, Hulin and Smith (1965) looked at job satisfaction in the light of five similar areas: satisfaction with work, pay, promotional opportunity, co-workers, and supervision. Gruneberg offered another definition of job satisfaction. He stated that it "consists of the total body of feelings that an individual has about his job" (Gruneberg, 1976, p. x). This involved the nature or the job itself, pay, promotional prospects, and the nature of supervision--the sum total of influences of the job (Gruneberg, 1976). Vroom (1962) stated that job satisfaction was the extent to which "the work role lowers or increases the worker's self-evaluation" (p. 2) and that job satisfaction and satisfaction with self were related.

Theories of Job Satisfaction

Gruneberg (1979) in his review of the history of job satisfaction stated that Marx was among the first to see that the fragmented nature of work could result in lack of fulfillment and bring dissatisfaction. Another fore-runner in the field of job satisfaction was Taylor (1911) who worked with Bethlehem steelworkers to try to increase productivity by selecting the right man for the right job. Hoppock (1935) published the first attempt to use survey methods and attitude scales to examine job satisfaction. Hoppock's discussion of the nature of job satisfaction has relevance today. Hoppock identified six major components of job satisfaction:

the way the individual reacts to unpleasant situations; the facility with which he adjusts himself to other persons; his relative status in the social and economic group with which he identifies himself; the nature of the work in relation to the abilities, interest, and preparation of the worker; security; and loyalty. (Hoppock, 1935, p. 275)

His findings stated that the majority of small town workers reported job satisfaction. He surveyed workers in New Hope, Pennsylvania (population 1113), in 1933.

According to Hoppock (1935), some people who stayed with a job adapted to it and became too easily satisfied.

Today's theorists, according to Gruneberg (1979), were of two main camps, namely, content theorists and process theorists. For the content theorist, factors influence job satisfaction. Examples of these theorists were Maslow (Need Hierarchy) and Herzberg (Two Factor Theory). Maslow (1943) ranked factors that contribute to job satisfaction in the order in which they were attained. An individual must satisfy certain basic needs (food, water, and shelter) before he or she could turn his or her attention to higher needs. A person's highest order of need was self-actualization or realizing his or her potential (Maslow, 1943). Under this theory of job satisfaction, the employee would try to seek higher level needs, for usually society will satisfy the lower needs. Few employees reach self-actualization (Brown, 1982).

In 1959, Herzberg, a content theorist, attacked the current theories of job satisfaction as a continuum, and introduced his Two Factor Theory of job satisfaction. He claimed the causes of satisfaction and dissatisfaction were separate and distinct. His theory originated with a study using accountants and engineers in the Pittsburgh area (1959). The study subjects described incidences of

feeling good and feeling bad about their jobs. From this data, two factors emerged--good critical incidences and bad critical incidences (Herzberg, 1959). Thus, King (1976) interpreted The Herzberg's Two Factor Theory to mean:

the primary determinants of job satisfaction are intrinsic aspects called motivators (eg. achievement, recognizing the work itself, responsibility, and advancement) and primary determinants of job dissatisfaction are extrinsic factors called hygiene (eg. company policy, administration, supervision, salary, interpersonal relations with co-workers, and working conditions).
(p. 33)

In other words, "satisfaction is a function of the content of work and dissatisfaction a function of the environment" (Brown, 1982, p. 10).

The process theorist attempted to describe the interaction between variables and their relationship to job satisfaction. To the process theorist "job satisfaction is determined by the extent of the discrepancy between what the job offers and what the individual expects, what the individual needs, and what the individual values" (Gruneberg, 1979, p. 19). All process theorists agreed that simply increasing the availability

of a variable to the employee, e.g. money, will not create job satisfaction (Gruneberg, 1979). This fact was explored by Lawler and O'Gara (1966), in a study of graduate students hired at different pay scales to do a job of interviewing. They determined the underpaid person produced more interviews at a lower quality than the equitably rate person. The equity theory of pay (Adams, 1963), another process theory, stated that the employee perceives what he or she gets from a job situation in relation to what he or she puts into it and compares it with other employees' situations. If the perceptions are equal a state of equity exists. Lawler and O'Gara (1966) further stated the underpaid person saw the job as less important, but more interesting than the equitably rated person. The equity theory of pay was confirmed by Pritchard, Dunnette, and Jorgenson (1972) with male college students. The researchers used the Minnesota Satisfaction Questionnaire and the Job Descriptive Index as the instruments to measure the satisfaction factors. They found in cases where employees were overrewarded or underrewarded that there was less satisfaction than where employees were made to feel equitably paid. They also found job satisfaction was higher on jobs with high incentive conditions (piece-rate pay) and low in cases of

low incentive conditions (hourly flat pay) (Pritchard, Dunnette, & Jorgenson, 1972).

The studies of process theorists, Hulin and Blood (1968), found that job size and job level were positively related to job satisfaction. Since the employee compared job input and output with other employees, understanding the reference group and work setting were also critical to understanding job satisfaction (Hulin & Blood, 1968). Klein and Maher (1966) also stated the importance of a reference group. An individual compares himself or herself to his or her peer reference group when determining salary satisfaction. Pervin (1968) agreed with Klein and Maher (1966) and stated that performance and satisfaction were functions of an individual's environmental fit.

Looking at sex and occupational differences in the value of specific job factors, Centers and Bugental (1966) in a study of a cross section of an urban community, showed that the higher occupational levels (white-collar workers) valued intrinsic job factors (self-expression, interest-value of work, and feelings of satisfaction derived from the work), while the lower occupational levels (blue-collar workers) valued extrinsic job factors (pay, security, satisfying co-workers). They found no differences between the sexes in the value placed on the

factors in general. Women did have a higher value placed on "good co-workers" and men placed a higher value on an opportunity to use their skills (1966).

Using a combination of both the process and content theories, the Work Adjustment Projects which are a part of the Minnesota Studies of Vocational Rehabilitation were a series of research studies started in 1957 and conducted on the general problems of adjustment to work. These studies have two objectives, "the development of diagnostic tools for assessing the work adjustment 'potential' of applicants for vocational rehabilitation, and the evaluation of work adjustment outcomes" (Weiss, Dawis, England, & Lofquist, 1967, p. v). The Theory of Work Adjustment "states that job satisfaction is a function of the correspondence between an individual's need and the reinforcers present on the job" (Weiss et al., 1964, p. 4) or how an individual's work personality and the work environment coincide (Weiss et al., 1967). Work adjustment is inferred from two indicators, satisfaction of the worker and satisfactoriness of the worker in terms of productivity and efficiency. The research resulted in the development of several questionnaires, one of which was the Minnesota Satisfaction Questionnaire that measures satisfaction by looking at several aspects of the work and work environment and the worker's satisfaction with them (1967).

Job Satisfaction Factors

Gruneberg (1979) stated that there were many factors involved in job satisfaction. The job itself has such variables as recognition, specialization, job variety, job autonomy, task identity, and job involvement. Context factors were also important, including:

1. Pay
2. Security in the job--fear of unemployment
3. Work-groups--special relations at work
4. Supervision--leadership style
5. Participation in job decisions
6. Role conflict and ambiguity--usually with the supervisor
7. Organizational structure and climate--type of supervision (Gruneberg, 1979).

Gruneberg further stated that differences in people also played a role in job satisfaction. Some factors to be considered were age, gender, tenure on the job, educational level, cultural differences, personality differences, and individual differences to include health and life goals, and satisfaction (1975). Hulin and Smith (1964) likewise studied the variables of age, tenure of the job, tenure with the company, job level salary, and salary desired minus salary received. They found the only variables which predicted job satisfaction were work and pay.

One of the variables to be considered under individual differences was age. Herzberg et al. (1957) visualized a U shaped curve demonstrating the relationship of age

versus satisfaction and motivation. They stated that satisfaction started high with the young on their first job, declined with age, and at middle age started to increase. This point was supported by Glen, Taylor, and Weaver (1977). In their study, an increased satisfaction at middle age was found in both males and females. The researchers thought that it was explained in part by the increasing extrinsic job rewards (income, accepted prestige, authority, and autonomy on the job) which occurred with age (1977). Arvey and Dewhirst (1979) also demonstrated a significant relationship between age and extrinsic satisfaction (benefit packages and insurance programs).

Saleh and Otis (1964) on the other hand found a steady decline in the level of job satisfaction with age after an overall peak period which was reached in the middle age range (up to 60 years). They attributed this decline to a blockage of channels of self-actualization and psychological growth as well as a decline in physical health. However, in a study of 1,500 workers by the Survey Research Center at the University of Michigan (1972), age was a factor in 3 of 6 of the more satisfied groups. These three age groups were workers age 55 and older, workers 45 and older averaging more than 4,999, and

blacks more than 44 years of age (Herrick, 1972). Arvey and Dewhirst, in a study of 291 scientists using the Minnesota Satisfaction Questionnaire, showed that age demonstrated a positive relationship to extrinsic satisfaction (1979). This statement was further backed by Saleh and Otis (1964) who said that older employees looked to extrinsic factors for satisfaction. Extrinsic factors in this case were labeled benefit packages and insurance programs for coming retirements. Hunt and Saul (1975) in a study of 5,800 white collar workers in a large Australian governmental organization found, contrary to Herzberg's U shaped relationship of age and satisfaction, a positive linear relationship between overall job satisfaction when both age and company tenure existed. Overall job satisfaction was reported to be more associated with age than with tenure with respect to males, but the opposite was true for females. Wild and Dawson in a study of female manual workers in an electronics plant in the United Kingdom, also found that job satisfaction increased with tenure (1972).

Another variable in job satisfaction is gender. Gruneberg (1979) stated that there were inconsistencies in findings concerning the relationship between sex and job satisfaction due to a variety of factors. These

factors included different levels of jobs satisfying individual needs and different groups having different work attitudes and expectations. Herrick's report (1972) of his worker survey stated that women age 29 and under were third in rank among the most dissatisfied groups. He stated women expressed more negative attitudes toward work and toward life than men. The greatest area of dissatisfaction for women seemed to be in comparable jobs and equal pay with men, i.e., equal employment opportunity (Herrick, 1972). Hulin and Smith (1964) in their study also found female workers less satisfied. They did not mention that sex per se was a crucial factor leading to high or low satisfaction. They did find women in lesser states of lower paying jobs and felt that if all job variables were equal, no differences in job satisfaction would have been seen.

When considering the variable of education, Vollmer and Kinney (1955), using employees of the Ordnance Corps of the United States, showed that less highly educated people were more satisfied and concluded that the greater the educational investment, the lesser the job satisfaction (1955). This point was supported by the work of Klein and Maher (1966) who found in a study of first level managers in an electronics manufacturing population, that a higher

education was associated with dissatisfaction with pay. They stated "the major predictor of satisfaction with pay appears to be the expectation of what salary an individual feels he will get . . ." and ". . . the conceptualization of the expectation being a function of perceived self-worth, is based partly upon education attainment" (p. 206). Herrick (1972) reported the University of Michigan study commissioned by the U.S. Department of Labor's Employment Standard Administration of which he was a deputy administrator. He stated that the percentage of dissatisfaction was equal for workers with an elementary to high school education, but increased with college experience.

In 1975 and 1976 there was an interest in goals and goal setting and their effect on job satisfaction. Arvey, Boling, and Dewhirst (1975) investigated the impact of goal specificity and participation in goal setting on the job satisfaction of 271 scientists and engineers. Their study showed a positive link with job satisfaction and goal setting. Arvey, Dewhirst, and Brown (1978) studied the effect on satisfaction attributed to a Management by Objectives Program with scientists and engineers. The Minnesota Satisfaction Questionnaire (short-form) was used as the instrument, and a major finding of their study was a positive relationship between supervisory goal setting

functions and employee job satisfaction. Umstot, Bell, and Mitchell (1976) went a step further by looking at the effect of job enrichment and task goals on satisfaction. They found that job enrichment had a major impact on satisfaction, but little impact on performance. Further, goal setting had a major impact on performance, but little on satisfaction.

Lawler and Hall (1970) polled scientists on job attitudes, job factors, and job behavior as related to job involvement, satisfaction, and intrinsic motivation. They found that satisfaction was related to job characteristics such as the amount of control the job allowed the holder and the degree to which it was relevant to the holder's valued abilities.

Arvey and Dewhirst (1979) looked at diversity of interest in relation to job performance and satisfaction. They stated, ". . . data suggests that individuals with high general interest diversity tend to perform better as measured by salary and to display more satisfaction with the intrinsic aspects of their job" (p. 22).

Vroom (1962) related performance and satisfaction with the point to which a person is ego-involved in his job. Vroom's study was on data from supervisory and non-supervisory employees of an electronics firm and hourly

blue collar workers in an oil refinery. He stated "persons who are ego-involved in their jobs are rated higher in job performance . . ." and ". . . job satisfaction and satisfaction of self of the persons who are ego-involved in their jobs are significantly higher" (p. 176).

Kahn (1969) stated that productivity and satisfaction did not go together. He cited work surveys of the Survey Research Center with an insurance company, repeated on railroad workers, and again on employees of a tractor company. He found no systematic relationship between productivity and intrinsic job satisfaction, financial and job status satisfaction, or satisfaction with the company (1969).

Thus, generally, job satisfaction was not composed of one item. The survey of workers by the University of Michigan (Herrick, 1972) showed the five work features rated most important were:

1. Interesting work
2. Enough help and equipment to get the job done
3. Enough information to get the job done
4. Enough authority to do the job
5. Good pay. (p. 5)

Job Satisfaction Among Allied Health Professionals

Palola and Larson (1965) looked at dimensions of job satisfaction among hospital personnel and, under the fulfillment theory, looked at fulfillment of work values and

job satisfaction. They also concluded job satisfaction was not a unitary concept and that each occupational group studied within the hospital had different work values and fulfillment needs.

Broski and Cook (1978), in a study of job satisfaction of allied health professionals, looked at four medical groups: medical dietitians, physical therapists, occupational therapists, and medical technologists using the Job Descriptive Index as their instrument. The professional groups had a low overall level of satisfaction. Differences between the professions were found with physical therapists and occupational therapists with higher degrees of satisfaction than medical technologists and medical dietitians. Low scoring areas found for all professions surveyed were in the area of work, promotion, and pay. One explanation offered by the researchers was that a lack of upward mobility in all the allied health professions existed (Broski & Cook, 1978). Broski, Manuselis, and Noga (1982) continued the study of job satisfaction of the four allied health groups: medical dietitians, medical technologists, occupational therapists, and physical therapists. Their study showed that medical technologists were very low in comparison to the other professions. In an anecdotal comment section within the

survey instrument used, the six most commonly entered comments for dissatisfaction were:

1. Limited upward mobility
2. Low pay
3. Over prepared/under utilized
4. Limited authority
5. Lack of respect/recognition
6. High stress (Broski, Manuselis, & Noga, 1982).

Job Satisfaction Among Laboratory Personnel

Jeswald (1971) studied laboratory employees in Indiana and Illinois to get attitudes and satisfaction levels for use in future recruitment and planning. His survey showed laboratory personnel to be more committed to career and non-monetary rewards. Barros (1981), using Herzberg's Job Enrichment program, listed five satisfiers and five dissatisfiers that had the greatest impact on satisfaction among laboratory employees. The five satisfiers were listed as achievement, recognition, work itself, responsibility, and growth and advancement. The five dissatisfiers were listed as salary, company policy, supervision, interpersonal relations, and working conditions (Barros, 1981). She stated that cost effectiveness had a direct relationship to the level of job satisfaction of laboratory personnel, thus motivation and satisfaction should be areas of interest to all laboratory supervisors (Barros, 1981).

McMahon, Ivancevich, and Matteson, in a study of variables associated with job satisfaction of medical technologists, showed that organizational climate (managerial behavior, sharing new ideas, involving others in decisions, and recognition) had a significant link with the needs satisfaction of medical technologists. However, organizational climate was not as important for the needs satisfaction of administrators as it was for non-administrators (1977).

French and Rezler (1976) studied the personality characteristics and job satisfaction patterns of a volunteer group of medical technologists from three areas of the laboratory, administration, education, and clinical positions. They found little impact of personality on job satisfaction, although patterns of personality could be identified for each group. For all three groups the study showed the least satisfaction with promotion and pay, and the most satisfaction with co-workers and nature of the work. Satisfaction stemmed from being a part of the health team, challenge of new procedures, and working with health professionals. Dissatisfaction for all three groups came from poor communication and a lack of perceived esteem (French & Rezler, 1976). Marty (1977) in a study of Utah laboratory workers

found very much the same thing. The workers in his study indicated enjoyment from the challenge of work and contribution to patient care, while negative attitudes were expressed in the area of advancement and participation in decision making.

Love (1977) looked at job satisfaction, adaptiveness and stratification within a group of medical technologists in a hospital setting. From his findings, "it was concluded that Medical Technologists prefer a supportive, well structured environment that provides opportunity for them through participation to maintain a degree of control over their work setting" (p. 1142). Matteson and Ivanovich (1982) reported that

The laboratory is an exacting work environment. It demands extremely high levels of accuracy in performance, frequently under severe time pressures and with the consequences of an error almost always being serious and sometimes even fatal. (p. 168)

Rogers stated that yearly termination figures for laboratory staff were up to almost one-fifth of the total number employed (1983). Thus, she concluded, "job satisfaction is the single best overall predictor of longevity. Job satisfaction has been related to low turnover, less absenteeism, and low grievance rates" (Rogers, 1983, p. 183).

Summary

In this chapter a variety of job satisfaction definitions were explored. A brief listing of job satisfaction studies were outlined, and the job satisfaction theorists were divided into content and process. Factors involved in job satisfaction were discussed, and studies on job satisfaction among allied health professionals as well as medical technologists were discussed.

CHAPTER III

METHODOLOGY

This study used the descriptive survey method of research. This method was employed to process the data that came to the researcher through observation (Leedy, 1980). In this study, the data were generated through the benefit of the questionnaire technique.

Setting

Medical Laboratories, Inc. is a privately owned clinical laboratory servicing Texas, Oklahoma, Louisiana, New Mexico, and old Mexico. Its headquarters are in Denton, Texas. The laboratory has seven pathologists affiliated with it and a staff of 180 employees.

Population and Sample

The population included all 180 employees of Medical Laboratories, Inc. The sample was the voluntary respondents to the survey. The sample was differentiated into professional and nonprofessional categories by information filled out on the demographic sheet attached to the survey.

Protection of Human Subjects

Protection of human subjects was assured through the use of survey methodology data. The return of the survey constituted consent to use the information. The survey data were, furthermore, only reported by group statistics. To aid anonymity to the survey, preaddressed envelopes accompanied the survey instrument. No names were requested, and the survey coding was for follow-up purposes only.

Instrument

The instrument used consisted of two parts: Part I was the researcher constructed demographic form (see Appendix A). Part II was the Minnesota Satisfaction Questionnaire (short-form) which had 20 statements measuring factors involved in a person's job satisfaction (see Appendix B). "The MSQ surveys major parameters of satisfaction in important different aspects of the work environment. Administration time is reasonable. The items are easy to read (fifth grade reading level)" (Buros, 1972, p. 1065). The short form is composed of the items which were most highly correlated with the 20 scales making up the longer form. Only about five minutes should be needed for taking the short-form (Buros, 1972).

The short-form yields intrinsic, extrinsic, and general satisfaction scores. "The questionnaire consists of statements about various aspects of a person's job which he is asked to rate on a five-point scale from 'not satisfied' to 'extremely satisfied'" (Sweetland & Keyser, 1983, p. 782). The MSQ item responses are weighted from 5 to 1: very satisfied (5), satisfied (4), neither (3), dissatisfied (2), and very dissatisfied (1). On the short form MSQ intrinsic factor variables were measured by items 1, 2, 3, 4, 7, 8, 9, 10, 11, 15, 16, and 20; the extrinsic factor variables were measured by items 5, 6, 12, 13, 14, and 19; and the general satisfaction items were measured by items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, and 20.

For the intrinsic category, there was a maximum score of 60 for very satisfied (5×12), 48 for satisfied (4×12), 36 for neither (3×12), 24 for dissatisfied (2×12), and 12 for very dissatisfied (1×12). For the extrinsic category, there was a maximum possible score of 30 for very satisfied (5×6), 24 for satisfied (4×6), 18 for neither (3×6), 12 for dissatisfied (2×6), and 6 for very dissatisfied (1×6). For general satisfaction there was a maximum score of 100 (5×20) for very satisfied, 80 for satisfied (4×20), 60 for neither

(3 X 20), 40 for dissatisfied (2 X 20), and 20 for very dissatisfied (1 X 20).

The reliability coefficients on data from six different populations using the MSQ ranged for the intrinsic scale from .84 to .91, the extrinsic scale from .87 to .92 (Brown, 1982).

Since the short-form MSQ is based on a subset of the long-form items validity for the short-form may in part be inferred from validity for the long-form. Other evidence for the validity of the short-form MSQ is available from two sources: (1) studies of occupational group differences and (2) studies of the relationship between satisfaction and satisfactoriness, as specified by the "Theory of Work Adjustment." (Weiss, Dawis, England, & Lofquist, 1967, p. 24)

Data Collection

Permission to use the employees of Medical Laboratories, Inc. was obtained from the Technical Director (see Appendix C). He also gave permission to use the paycheck envelopes as a means of distribution. A pre-survey introductory letter (see Appendix D) was mailed to all the supervisors of the individual laboratories of the Medical Laboratories, Inc. to acquaint them with the forthcoming study. The questionnaires were prepared by adding the researcher constructed demographic sheet to the MSQ, including a cover instruction letter, and a stamped pre-addressed envelope. A master list of the

different laboratories and their supervisors was obtained from the personnel supervisor. A number was assigned to each laboratory, and the questionnaires were coded by that number. The number was placed on the upper right-hand corner of the questionnaire. The only reason for coding was to help calculate percent returns and aid in follow-up mailouts if necessary. In order to facilitate stuffing the paycheck envelope, information was obtained from the personnel supervisor to allow the surveys to be arranged in the same order as the paychecks.

Since the survey data were to be mailed to the researcher a 2-week period was allowed for the packet return. A return rate of 60% was determined as adequate. The surveys were coded by department and at the end of the 2-week period, adequate returns had not been received. Supervisors of the large sections which had had poor returns were contacted and survey packets were reissued. There seemed to be a problem with the coding on the first issue of the survey. Many participants appeared to feel that the coding would pinpoint them even though all precautions had been taken to try to protect anonymity. Many surveys returned had the code either scratched out or torn off. Thus, the reissued surveys had no coding. Another 2-week period was allowed for the return of the survey packets.

Treatment of Data

Statistical analysis of data was performed on the computer at the Texas Woman's University using the Statistical Package for the Social Science (SPSS). The significance level was set at 0.05.

For the first three research questions, mean scores, standard deviations, and ranges as well as frequency of response were calculated. Norms were established for each group.

For research questions four to six, the t -test was used to determine statistically significant differences between professional and nonprofessional employees of Medical Laboratories, Inc. For research questions 7, 8, and 9, the Analysis of Variance was used to determine whether differences among the variables were significant.

CHAPTER IV

FINDINGS

Introduction

This chapter presents the data received on the surveys of the employees of Medical Laboratories, Inc. It delineates the demographic data and answers the research questions individually. It also gives the data in normative form.

Response Data

At the time the survey preliminaries were in progress, the director of Medical Laboratories, Inc. said there were 180 employees. Introductory letters were sent to 15 laboratory and section supervisors. One hundred sixty-one surveys were put in paycheck envelopes and after a 2-week period 90 surveys had been received which was short of the proposed 60% by seven surveys. Finally, 2 weeks after reissue 106 of the survey which were sent out had been received for a return rate of 66%.

Demographic Variables

Variables considered in the survey were age, gender, employment status (full-time/part-time), length of

employment, and income. Professional vs nonprofessional status, educational background, and current educational status were also considered.

Age

The age of the respondents varied from 18 to over 46. Most of the respondents of the survey were between the ages of 21 and 34 (34%). Only 6 (5.7%) were listed as over 46, and 13 (12.3%) were in the 18 to 20 age group.

Gender

The employees of Medical Laboratories, Inc. who responded to the survey were primarily female (88 or 83%). Only 16 (15%) males responded.

Employment Status

Most employees responding to the survey were employed on a full-time basis (73 or 68.9%). The length of employment varied from 0 to 42 months with 24 (22.6%) listing employment over 42 months. Twenty-five respondents (23.6%) were still in the probationary period of 0-6 months. At least 50% of the respondents have been working for Medical Laboratories, Inc. for less than 3 months with only 27.6% having worked over 42 months.

Income

This variable showed the largest percentage of respondents (35.8%) to be making over \$12,000.00 per year. Nineteen made less than \$5,000.00, and 82 (77.3%) made less than \$12,000.00. There were nine respondents that left this item unanswered.

Position

Of the two position categories at Medical Laboratories, Inc. (professional and nonprofessional), 47 (44%) respondents were classified as professional and 59 (56%) were classified as nonprofessional. There appeared to be some confusion with this item as several marked spaces in both categories. In these cases, for the most part, it appeared to be general nonprofessionals with duties that were listed under the professional category.

Education

Of the 106 respondents, 57 (53.8%) stated that they were high school graduates, 16 (15.1%) stated that they had associated degrees, 30 (28.3%) stated that they held bachelor's degrees, and 3 (2.8%) stated that they held a master's or higher degree. Also, 66 (62.3%) stated they were not enrolled in an educational program, but 39 (36.8%) stated they were enrolled in an educational

program. Of those enrolled in an educational program, 2 (5.1%) were still working on a high school diploma, 27 (25.5%) were working on their bachelor's degree, and 7 (6.6%) were working on a higher degree. Only one was working on his or her doctoral degree.

Research Questions

General Job Satisfaction

Research Question 1 asked, "What is the general job satisfaction level as measured by the Minnesota Satisfaction Questionnaire (short-form) for professional and nonprofessional employees of Medical Laboratories, Inc.?" The mean score for general job satisfaction on the MSQ (short-form) was 70.84 with a standard deviation of 14.04. Scores ranged from 21 to 99 for general satisfaction. Eighty-seven people (82%) indicated they were satisfied with their jobs. Of this number 23 (22%) were highly satisfied; 64 (60%) were in the general satisfaction category; 16 (15%) indicated they were neither satisfied nor dissatisfied and 3 (3%) indicated they were dissatisfied. No one indicated they were very dissatisfied. See Table 1.

Table 1

Frequencies and Percentages of Respondents' General
Satisfaction Levels

General Satisfaction Levels	Range of Category Scores	f	%
Very Satisfied	80-100	23	22.6
Satisfied	60- 79	64	60.3
Neither	40- 59	16	15.1
Dissatisfied	20- 39	3	2.7
Very dissatisfied	0- 19	0	--

Note. Total n = 106.

Extrinsic Job Satisfaction

Research Question 2 asked, "What is the level of job satisfaction as measured by the extrinsic factors scale of the Minnesota Satisfaction Questionnaire (short-form) for professional and nonprofessional employees of Medical Laboratories, Inc.?" The respondents in this section of the survey had a mean score of 18.43 with a standard deviation of 5.56 for extrinsic job satisfaction. Scores ranged from 6 to 30. Fifty-seven people (54%) indicated they were satisfied with the company and its policies. Of these 17 (16%) were highly satisfied; 40 (38%) were

in the satisfied category. Thirty-four (32%) expressed neither satisfaction nor dissatisfaction; and 15 (14%) expressed dissatisfaction of which 3 (3%) expressed they were very dissatisfied (see Table 2)

Table 2

Frequencies and Percentages of Respondents' Extrinsic Job Satisfaction Levels

Satisfaction Level	Range of Category Scores	f	%
Very Satisfied	24-30	17	16.0
Satisfied	19-23	40	37.7
Neither	13-18	34	32.1
Dissatisfied	7-12	12	11.3
Very dissatisfied	0- 6	3	2.8

Note: Total n = 106.

Intrinsic Job Satisfaction

Research Question 3 asked, "What is the level of job satisfaction as measured by the intrinsic factors scale of the Minnesota Satisfaction Questionnaire (short-form)

for professional and nonprofessional employees of Medical Laboratories, Inc.?" The respondents on this section of the survey had a mean score of 45.38 with a standard deviation of 7.68 and scores ranging from 13 to 60. Ninety-four respondents showed satisfaction with the job itself. Of these, 36 (34%) were very satisfied, and 58 (55%) were in the general satisfaction category. Ten (9%) were neither satisfied nor dissatisfied, and two (2%) expressed dissatisfaction with the job intrinsic factors (see Table 3).

Table 3

Frequencies and Percentages of Respondents' Intrinsic Job Satisfaction Levels

Satisfaction Level	Range of Category Scores	f	%
Very satisfied	49-60	36	34.0
Satisfied	37-48	58	54.7
Neither	25-36	10	9.4
Dissatisfied	13-24	2	1.9
Very dissatisfied	0-12	0	--

Note: Total n = 106.

Differences in Levels of General Job Satisfaction

Research Question 4 asked, "Is there a difference in the level of general job satisfaction as measured by the Minnesota Satisfaction Questionnaire (short-form) between professional and nonprofessional employees of Medical Laboratories, Inc.?" An independent t test was performed between professional ($\bar{M} = 45.36$) and nonprofessional ($\bar{M} = 45.39$) employees on the general job satisfaction statistics. No significant t test statistics resulted $t(104) = -.1.12, p < .05$ (see Table 4).

Differences in Level of Extrinsic Factors

Research Question 5 asked, "Is there a difference in the level of job satisfaction as measured by the extrinsic factor scale of the Minnesota Satisfaction Questionnaire (short-form) between professional and nonprofessional employees of Medical Laboratories, Inc.?" An independent t test was performed between professional ($\bar{M} = 17.57$) and nonprofessional ($\bar{M} = 19.12$) employee scores on the extrinsic factor items. No significant t test statistics resulted $t(102) = -1.49, p < .05$ (see Table 4).

Table 4

Satisfaction Differences: Professional vs Nonprofessional

Group	<u>n</u>	<u>M</u>	<u>SD</u>	<u>c</u>	<u>df</u>	<u>F</u>
Intrinsic						
Professional	47	45.36	5.750	-0.02	100	0.984
Nonprofessional	59	45.39	8.977			
Extrinsic						
Professional	47	17.58	4.348	-1.49	102	0.140
Nonprofessional	59	19.12	6.317			
General						
Professional	47	68.77	12.148	-1.12	104	0.264
Nonprofessional	59	71.85	15.347			

Differences in Level of
Intrinsic Factors

Research Question 6 asked, "Is there a difference in the level of job satisfaction as measured by the intrinsic factor scale of the Minnesota Satisfaction Questionnaire (short-form) between professional and nonprofessional employees of Medical Laboratories, Inc.?" An

independent t test was performed between professional ($M = 68.77$) and nonprofessional ($M = 71.85$) employee scores on the intrinsic factor item statistics. No significant t test statistics resulted $t(100) = -.02$, $p < .05$ (see Table 4).

Relationships Among Variables of Professionals

Research Question 7 asked, "Is there a relationship between job satisfaction as measured by the Minnesota Satisfaction Questionnaire (short-form) and age, employment status, gender, salary range, length of time employed, job position, educational background, and enrollment in educational programs for professional employees of Medical Laboratories, Inc.?" Professional scores were isolated from nonprofessional scores and an Analysis of Variance was performed within the group on the three job satisfaction variables in search of differences due to age, employment status, gender, salary range, length of employment, job position, educational background, and enrollment in educational programs. All Analysis of Variance tests were non-significant except for the analyses of intrinsic factors by length of employment and job description. Results of the analysis of variance of the length of employment vs intrinsic factors revealed that those who had been

employed for 7-12 months had an average intrinsic score which was significantly lower ($\bar{M} = 37.60$) than all other employment categories (see Table 5). Results for job description revealed that bench technologists ($\bar{M} = 43.48$) had an average intrinsic score lower than supervisors ($\bar{M} = 48.07$) and administrators ($\bar{M} = 47.50$) (see Table 6).

Table 5

Analysis of Variance: Length of Employment vs Intrinsic Factors

Source	Sum of Squares	df	Mean Squares	F Ratio	p
Between Groups	350.1729	5	70.0346	2.453	0.0493*
Within Groups	1170.6782	41	28.5531		
Total	1520.8511	46			

*p = < .05.

Table 6

Analysis of Variance: Job Position vs Intrinsic Factors

Source	Sum of Squares	df	Mean Squares	F Ratio	p
Between Groups	225.6818	2	112.8409	3.833	0.0292*
Within Groups	1295.1693	44	29.4357		
Total	1520.8511	46			

*p = < .05.

Relationships Among Variables of
Nonprofessionals

Research Question 8 asked, "Is there a relationship between job satisfaction as measured by the Minnesota Satisfaction Questionnaire (short-form) and age, employment status, gender, salary range, length of time employed, job position, educational background, and enrollment in educational programs for nonprofessional employees of Medical Laboratories, Inc.?" Nonprofessional scores were isolated from professional and an Analysis of Variance was performed within the group on the job satisfaction variables in search of differences due to age, employment status, gender, salary range, length of

employment, job position, educational background, and enrollment in educational programs. All Analysis of Variance tests were non-significant except for the analysis of gender differences which revealed that females ($\bar{M} = 73.40$) had a significantly higher general score average than did males ($\bar{M} = 63.36$) (see Table 7).

Table 7

Analysis of Variance: Gender Vs General Satisfaction

Source	Sum of Squares	df	Mean Squares	F Ratio	p
Between groups	898.6354	1	898.6354	4.075	0.0483*
Within Groups	12349.8646	56	220.533		
Total	13248.5000	57			

* $p = < .05$.

Results for analysis of intrinsic factors by current educational enrollment showed non-enrollees ($\bar{M} = 47.77$) to have a significantly higher intrinsic score than those enrolled in educational programs ($\bar{M} = 42.78$) (see Table 8).

Table 8

Analysis of Variance: Intrinsic Factors Vs Educational Enrollment

Source	Sum of Squares	df	Mean Squares	F Ratio	p
Between Groups	360.2588	1	360.2588	4.689	0.0346*
Within Groups	4302.0860	56	76.8230		
Total	4662.3448	57			

*p = < .05.

Differences of Variables Between Professionals and Nonprofessionals

Research Question 9 asked, "Is there a difference in job satisfaction as measured by the Minnesota Satisfaction Questionnaire (short-form) with respect to age, employment status, gender, salary range, length of time employed, job position, educational background, and enrollment in educational programs between professional and nonprofessional employees of Medical Laboratories, Inc.?" An Analysis of Variance was performed on each of the three satisfaction variables for effects due to professional vs nonprofessional and due to each of the demographic variables; age,

employment status, gender, salary range, length of time employed, job position, educational background, and enrollment in an educational program. No significant differences resulted due to professionalism or to the interaction of professionalism with any demographic variables.

Normative Data

Using the computer printout, an ogive curve (Hopkins & Glass, 1978) was constructed and from it the following Table 9 of Normative Data. The table shows the Mean and Median value to be very close on all parameters of satisfaction thus showing symmetrical distribution. The standard deviation of the general satisfaction does appear to be a bit large when compared to the extrinsic and intrinsic deviations.

Summary

A good response to the surveys sent out was received. Results showed the employees of Medical Laboratories, Inc. to be young, primarily female, full-time employees with employment at Medical Laboratories, Inc. for less than three years, and making over \$12,000.00. A large percentage of respondents were classified as non-professional with at least a high school degree. The

Table 9

Normative Data

Data Categories	Scale		
	Intrinsic	Extrinsic	General
Mean	45.38	18.43	70.48
Standard Deviation	7.68	5.56	14.04
Percentiles			
1	13	5	21
5	32	8	44
10	35	10	53
15	38	13	58
20	40	14	62
25	42	-	63
30	43	15	65
35	44	16	66
40	-	17	68
45	45	18	69
50	-	18	71
55	46	19	73
60	47	-	74
65	48	20	75
70	-	21	76
75	49	22	77
80	51	22	80
85	53	23	85
90	54	24	86
95	55	27	90
99	58	29	96

survey showed most were not enrolled in any educational program. Most employees were shown to be in the satisfied to very satisfied level of general as well as intrinsic and extrinsic job satisfaction. The statistically significant findings of the survey showed that on the professional level those employees in the 7-12 month length of employment category as well as bench technologists were less satisfied with intrinsic factors of the job (job achievement, activity, working conditions, creativity, and compensations). On the nonprofessional level the survey showed that male employees and those enrolled in educational programs were more dissatisfied with the intrinsic factors than others.

CHAPTER V

SUMMARY, CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

Summary

The problem considered by this study was the satisfaction level of Medical Laboratories, Inc. The purpose was to determine and compare the level of the selected factors that affect job satisfaction of both professional and nonprofessional employees of the Medical Laboratories, Inc.

To accomplish the purpose, nine research questions were tested:

1. What is the general job satisfaction level as measured by the Minnesota Satisfaction Questionnaire (short-form) for professional and nonprofessional employees of Medical Laboratories, Inc.?
2. What is the level of job satisfaction as measured by the extrinsic factors scale of the Minnesota Satisfaction Questionnaire (short-form) for professional and nonprofessional employees of Medical Laboratories, Inc.?
3. What is the level of job satisfaction as measured by the intrinsic factors scale of the Minnesota

Satisfaction Questionnaire (short-form) for professional and nonprofessional employees of Medical Laboratories, Inc.?

4. Is there a difference in the level of general job satisfaction as measured by the Minnesota Satisfaction Questionnaire (short-form) between professional and nonprofessional employees of Medical Laboratories, Inc.?

5. Is there a difference in the level of job satisfaction as measured by the extrinsic factors scale of the Minnesota Satisfaction Questionnaire (short-form) between professional and nonprofessional employees of Medical Laboratories, Inc.?

6. Is there a difference in the level of job satisfaction as measured by the intrinsic factors scale of the Minnesota Satisfaction Questionnaire (short-form) between professional and nonprofessional employees of Medical Laboratories, Inc.?

7. Is there a relationship between job satisfaction as measured by the Minnesota Satisfaction Questionnaire (short-form) and age, employment status, gender, salary range, length of time employed, job position, educational background, and enrollment in educational programs for professional employees of Medical Laboratories, Inc.?

8. Is there a relationship between job satisfaction as measured by the Minnesota Satisfaction Questionnaire

(short-form) and age, employment status, gender, salary range, length of time employed, job position, educational background, and enrollment in educational programs for nonprofessional employees of Medical Laboratories, Inc.?

9. Is there a difference in job satisfaction as measured by the Minnesota Satisfaction Questionnaire (short-form) with respect to age, employment status, gender, salary range, length of time employed, job position, educational background, and enrollment in educational programs between professional and nonprofessional employees of Medical Laboratories, Inc.?

The study used the descriptive survey method of research. The population included all employees of Medical Laboratories, Inc. The sample consisted of the voluntary respondents to the survey. The instrument used to gather the data consisted of two parts. Part I was a demographic information form and Part II was the short-form Minnesota Satisfaction Questionnaire (MSQ) which had 20 statements on different aspects of one's job for the individual to evaluate his or her levels of satisfaction.

The demographic forms and questionnaire were coded with a letter of the alphabet according to the section of

the laboratory in which the person worked. The only reason for coding was to assess returns and help with the follow-up in case the proposed 60% return was not accomplished in the two weeks allotted. The demographic forms, questionnaire, and a cover letter were put in the company paycheck envelopes the week of August 8, 1984. After the allotted two weeks period, the 60% return had not been accomplished, so follow-up phone calls to the section supervisors and reissue of surveys was sent. After another two weeks interval, a 66% return had been accomplished.

The first three research questions were investigated using mean scores, standard deviations, and ranges. Research Questions 4 to 6 used the t test to determine statistically significant differences between professional and nonprofessional employees. Research Questions 7 to 9 used the Analysis of Variance to determine whether differences among the variables were significant. The statistical significance level was set at .05.

Conclusions

The conclusions of this study were as follows:

1. The level of general job satisfaction for all employees both professional and nonprofessional of

Medical Laboratories, Inc. indicated that the majority of employees were satisfied with their jobs.

2. The level of extrinsic job satisfaction indicated that the majority of employees both professional and nonprofessional of Medical Laboratories, Inc. were satisfied with the extrinsic factors (job security, employee recognition, supervision, company policies and practices, and compensations).

3. The level of intrinsic job satisfaction indicated that the majority of employees both professional and nonprofessional of Medical Laboratories, Inc. were satisfied with achievement, activity, working conditions, creativity, and compensations on the job.

4. There was no significant difference in general job satisfaction between professional and nonprofessional employees of Medical Laboratories, Inc.

5. There was no significant difference in extrinsic factor item scores between professional and nonprofessional employees of Medical Laboratories, Inc.

6. There was no significant difference in intrinsic factor item scores between professional and nonprofessional employees of Medical Laboratories, Inc.

7. Of the professional employees of Medical Laboratories, Inc. only two significant relationships among the demographic variables and satisfaction levels were found.

Those employed 7-12 months had a lower intrinsic scale value than all others. Likewise, bench technologists had a lower intrinsic score than either supervisors or administrators.

8. Of the nonprofessional employees of Medical Laboratories, Inc. only two significant relationships were found among the demographic variables and satisfaction levels. Females had a higher general satisfaction score than males, and those currently enrolled in education programs had a lower intrinsic score.

Discussion

Unlike most reported studies (Borski et al., 1978, 1982) of laboratory personnel, the employees of Medical Laboratories, Inc. indicated they were generally satisfied not only with the intrinsic factors of the job, but with the extrinsic factors of the company. This was surprising in the light of cut-backs, decreased work load, and general job re-hire freezing due to Diagnosis Related Groups (DRGs) that are affecting the whole medical field. Although it is a very good place to work, several possible explanations for false reports of satisfaction could have come from the survey. The fact that coding of the surveys caused many employees concern. Several questions were received about why it was used and, as mentioned before,

several surveys were returned with the coding section either inked out or removed. There seemed to be concern that the employees or their section could be pinpointed by the survey. With the survey reissue, it is possible an employee could have turned in two surveys, but it is not likely. Also the fact that the surveys went out in the paycheck envelopes could have contributed to employee unrest, giving the employees the false opinion that they must answer to make the management look good.

One of the deviations from satisfaction on the professional side came from employees in the 7-12 month category. These people showed a lower satisfaction level with intrinsic factors (achievement, activity, working conditions, creativity, and compensation). This is the period just after the probationary 6 months and before the first evaluation and potential for a salary increase. Studies (Gruneberg, 1979; Borski et al., 1978) show money can be a major cause of satisfaction, thus this period of uncertainty about a money increase could be an unsettling period for the employee. Considering the intrinsic factors, there is no other factor which could be isolated to employees during just this 7-12 month period.

Also on the professional side, a statistically significant difference in satisfaction was demonstrated with

the bench technologist. This difference was not found in the scores of the supervisors or administrators in the area of intrinsic factors (achievement, activity, working conditions, creativity, and compensations). Because of the organizational structure of Medical Laboratories, Inc., the supervisor functions as a bench technologist most of the time. Thus it is hard for two people, one a bench technologist and one a supervisor to work side by side doing the same work, yet one functions also in laboratory decision making and is privy to supervisory recognition and supervisory information. Advancement is a very slow process and most supervisors have many years of employment.

On the nonprofessional side, the survey showed females to have a higher general satisfaction level than males. This fact was in direct contradiction to the studies of Hulin and Smith (1964) which showed females less satisfied with their job than males. Their subjects were, however, industrial workers. In the laboratory traditionally there are more females than males, and this was demonstrated by the survey returns. Eighty-three percent of the survey respondents were females and 15% males. Historically, this has been a field females could enter, leave to have a family, and reenter.

The educational background of the survey respondents was varied, eg., completion of high school to doctoral degrees. The surveys showed no significant differences in the satisfaction levels with respect to educational background. This is in direct contrast to the work of Vollmer and Kinney (1955) and Klein and Maher (1966) which stated the higher the education level the less the job satisfaction.

One notable point was that lower intrinsic satisfaction levels occurred only on the nonprofessional level in the category of employees currently enrolled in educational programs. On the surface one logical explanation of this could come from the fact that a majority of individuals in this category could still be working toward high school or baccalaureate degrees and may just use the job to help them exist. However, the data showed 30 of the 59 nonprofessional employees were not currently enrolled in any educational program, so this point disputes Vollmer and Kinney's (1955) work that stated the higher the education the less satisfied. Furthermore, looking at the nonprofessional category 12 (20.2%) were in the 18-20 year old group, 27 (45.7%) were 21-25, and 20 (32.2%) were over 25. This is an older group of people so one should look again into the intrinsic

factors (achievement, activity, working conditions, creativity, and compensations for an explanation).

According to the manual of the Minnesota Satisfaction Questionnaire:

The most meaningful scores to use in interpreting the MSQ are the percentile scores for each scale obtained from the most appropriate norm group for the individual. Ordinarily, a percentile score of 75 or higher would be taken to represent a high degree of satisfaction; a percentile score of 25 or lower would indicate a low level of satisfaction; and scores, in the middle range of percentiles indicate average satisfaction. (Weiss et al., 1967, p. vii)

There has been little normative data established for populations using the Minnesota Satisfaction Questionnaire (short-form). The manual lists only six groups: assemblers, clerks, engineers, janitors and maintenance-men, machinists, and salesmen (Weiss et al., 1967). None of these groups would fit the work laboratory personnel do. It was of interest, however, the percentile scores 25, 50, and 75 on all levels general, extrinsic, and intrinsic were very close to the percentile scores listed for assemblers. The percentile score for the laboratory personnel at Medical Laboratories, Inc. showed most of the personnel to have average satisfaction.

Recommendations

Since there is a limited amount of research in the area of job satisfaction in the clinical laboratory and the requirements are changing in the medical fields due to new governmental regulations, the following recommendations are made:

1. A reissue of the survey in one year to determine the effect of the government's DRG program on the laboratory policies and personnel satisfaction. A change in distribution method and coding may make a more reliable study.

2. A comparison study of private laboratories and hospital based laboratories would be helpful to assess the effects of different philosophies of patient care and job setting on job satisfaction.

3. A study of job satisfaction in the clinical laboratory using the Minnesota Satisfaction Questionnaire long-form to get a better picture of the multiple factors involved in job satisfaction.

4. The reliability of the Minnesota Satisfaction Questionnaire (short-form) needs to be established for laboratory personnel.

APPENDIXES

APPENDIX A

DEMOGRAPHIC FORM

1026 Alice Street
Denton, Texas
August 8, 1984

Dear Medical Laboratories, Inc. Employee,

Medical Laboratories, Inc. has graciously allowed me to survey its employees for the purpose of establishing a job satisfaction level. This survey will be part of the requirements for completion of my master's degree in Health Sciences Instruction at the Texas Woman's University.

I am asking your assistance. Will you please complete the attached questionnaire? It should take only five minutes of your time.

You are in no way obligated to participate in the study, but the information that you provide is very valuable to establish a job satisfaction level for Medical Laboratories, Inc. All information is confidential, and reports will show group data only. Access to your answers will be available only to the researcher.

I appreciate your time in filling out the survey. All instructions are included, and the survey should be mailed back to me within five days in the envelop provided.

Thank you for your assistance. If you have any questions, I can be reached at 817-382-2733.

Yours truly,

Barbara G. Smartt

Barbara G. Smartt
MT (ASCP)

DEMOGRAPHIC INFORMATION

66

Instructions: On the line provided place a check (✓)
besides your answer.

1. Age: ☐ 18-20
 ☐ 21-25
 ☐ 26-30
 ☐ 31-35
 ☐ 36-40
 ☐ 41-45
 ☐ over 46

2. Sex: ☐ Female
 ☐ Male

3. Employment: ☐ Part time
 ☐ Full time

4. Length of employment:
 ☐ 0-6 months
 ☐ 7-12 months
 ☐ 13-24 months
 ☐ 25-36 months
 ☐ 37-42 months
 ☐ over 42 months

5. Annual salary:
 ☐ less \$5,000
 ☐ \$5,000-7,000
 ☐ \$7,000-9,000
 ☐ \$9,000-12,000
 ☐ over \$12,000

6. Position held:

a. Professional
 ☐ Bench technician
 ☐ Supervisor
 ☐ Administration

b. Nonprofessional
 ☐ Computer personnel
 ☐ Clerical personnel
 ☐ Phlebotomist
 ☐ Supervisory
 ☐ Personnel
 ☐ Other--please
 specify:

7. Educational background:
 ☐ High School Graduate
 ☐ Associate degree
 ☐ Baccalaureate
 ☐ Master's degree
 ☐ Doctoral degree

8. Are you currently enrolled in an educational program?
 ☐ Yes
 ☐ No

If so, at which level:

☐ High School
☐ Bachelor's Program
☐ Master's Program
☐ Doctoral Program

Access to this information is only available to the researcher.
Thank you for your participation.

APPENDIX B

MINNESOTA SATISFACTION QUESTIONNAIRE

(short-form)

minnesota satisfaction questionnaire

(short-form)



Vocational Psychology Research
UNIVERSITY OF MINNESOTA

minnesota satisfaction questionnaire

The purpose of this questionnaire is to give you a chance to tell **how you feel about your present job**, what things you are **satisfied** with and what things you are **not satisfied** with.

On the basis of your answers and those of people like you, we hope to get a better understanding of the things people **like and dislike about their jobs**.

On the next page you will find statements about your **present job**.

- Read each statement carefully.
- Decide **how satisfied you feel about the aspect of your job** described by the statement.

Keeping the statement in mind:

—if you feel that your job gives you **more than you expected**, check the box under **"Very Sat."** (Very Satisfied);

—if you feel that your job gives you **what you expected**, check the box under **"Sat."** (Satisfied);

—if you **cannot make up your mind** whether or not the job gives you what you expected, check the box under **"N"** (Neither Satisfied nor Dissatisfied);

—if you feel that your job gives you **less than you expected**, check the box under **"Dissat."** (Dissatisfied);

—if you feel that your job gives you **much less than you expected**, check the box under **"Very Dissat."** (Very Dissatisfied).

- Remember: Keep the statement in mind when deciding **how satisfied you feel about that aspect of your job**.
- Do this for **all** statements. Please answer **every** item.

Be frank and honest. Give a true picture of your feelings about your **present job**.

Ask yourself: How **satisfied** am I with this aspect of my job?

Very Sat. means I am very satisfied with this aspect of my job.

Sat. means I am satisfied with this aspect of my job.

N means I can't decide whether I am satisfied or not with this aspect of my job.

Dissat. means I am dissatisfied with this aspect of my job.

Very Dissat. means I am very dissatisfied with this aspect of my job.

On my present job, this is how I feel about . . .

	Very Dissat.	Dissat.	N	Sat.	Very Sat.
1. Being able to keep busy all the time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The chance to work alone on the job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The chance to do different things from time to time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The chance to be "somebody" in the community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The way my boss handles his/her workers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The competence of my supervisor in making decisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Being able to do things that don't go against my conscience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. The way my job provides for steady employment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. The chance to do things for other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. The chance to tell people what to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. The chance to do something that makes use of my abilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. The way company policies are put into practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. My pay and the amount of work I do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. The chances for advancement on this job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. The freedom to use my own judgment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. The chance to try my own methods of doing the job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. The working conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. The way my co-workers get along with each other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. The praise I get for doing a good job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. The feeling of accomplishment I get from the job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Very Dissat.	Dissat.	N	Sat.	Very Sat.

APPENDIX C

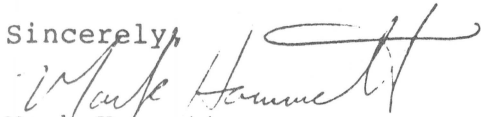
ADMINISTRATION APPROVAL FOR SURVEY

Medical Laboratories, Inc.
Anatomic, Clinical & Forensic Pathology
P.O. BOX 1867 • 1401 SCRIPTURE STREET
DENTON, TEXAS 76201
(817) 383-2383 • METRO 434-1541

TO WHOM IT MAY CONCERN:

Mrs. Smartt has our permission to distribute the Minnesota Job Satisfaction Questionnaire to Medical Laboratories, Inc. employees. The results of the questionnaire should be made available to us at the end of the study, and they may be used as data for her Masters thesis at T.W.U.

Sincerely,



Mark Hammett
Technical Director
Medical Laboratories, Inc.

MH:lr

Medical Laboratories, Inc.
Anatomic, Clinical & Forensic Pathology
P.O. BOX 1867 • 1401 SCRIPTURE STREET
DENTON, TEXAS 76201
(817) 383-2383 • METRO 434-1541

March 21, 1985

Dear Ms. Smartt:

You have my permission to use the employees of Medical Laboratories, Inc., in research for Texas Woman's University. I understand that the subject of the research is job satisfaction. I look forward to seeing the results of this study.

Sincerely,



K. L. FORD, JR., M.D.

KLF:ddd

APPENDIX D

PRE-SURVEY INTRODUCTORY LETTER

1026 Alice Street
Denton, Texas
July 15, 1984

Dear Med. Lab. Supervisor:

Medical Laboratories, Inc. has graciously allowed me to use its employees in a job satisfaction survey which is part of a research project for the completion of my master's degree in Health Sciences Instruction at Texas Woman's University. I feel in these uncertain times of governmental regulations and cutbacks, it is important to know the strengths and weaknesses of a laboratory. I would appreciate your help and encouragement of your employees to participate in the survey. The survey questionnaire will be distributed with the checks for the next pay period. All instructions will come with the survey.

Thank you for your help.

Yours truly,

Barbara G. Smartt

Barbara G. Smartt
MT (ASCP)

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