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Women veterinarians: a study of job satisfaction and professional practice patterns

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WOMEN VETERINARIANS: A STUDY OF JOB SATISFACTION AND PROFESSIONAL PRACTICE PATTERNS

Iowa State University PH.D. 1980

Women veterinarians: A study of job satisfaction and professional practice patterns

by

Gerald Sherman Gurney

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DEDICATION

For My Mother

Molly Massien Gurney

(1917 - 1976)

CHAPTER I. INTRODUCTION

Young women have traditionally faced many obstacles in their efforts to prepare for and persist in male-dominated professions. Osipow (1973) suggests that discrimination women face in pay, promotions, and accessibility of positions as a function of their sex, can be expected to influence female career development in ways not experienced by males. He further found that the study of female career development had generally been ignored and that most theories have been formulated on the basis of men's careers and their problems. In a study of women in scientific professions, Roe (1966) concluded that women in all scientific fields receive little encouragement during their preparation, and face various degrees of discrimination. Zuckerman and Cole (1975) reported that unfounded stereotypes affect women's aspirations, access to higher education, and willingness to embark on demanding scientific and technical careers in undergraduate study. They also found that women who enter scientific fields are concentrated in nonsupervisory positions and often face discrimination in matters of rank.

Osipow (1973) has recognized a major problem in female developmental theory as being the small samples of women within certain professions. Scully (1979) reported an 80.9 percent rise in the number of doctoral degrees awarded to women since 1971. Of 8,313 degrees awarded in 1978, 26.9 percent were awarded to women. The 1975-76 United States Department of Health, Education, and Welfare report on degrees conferred by institutions of higher education indicate a rapidly rising trend toward the inclusion of women in the professions during the 1970's. It is this

rapid influx of women into formerly male-dominated professions that now enables researchers to obtain adequate samples for study of nontraditional women's career development.

The medical profession has historically fought the notion of female physicians. In an 1871 presidential address to the American Medical Association, Dr. Alfred Stille announced to the membership:

> 'On the whole, then, we believe that all experience teaches that woman is characterized by a combination of distinctive qualities of which the most striking are uncertainty of rational judgment, capriciousness of sentiment, fickleness of purpose, and indecision of action, which totally unfit her for professional pursuits' (Schneider, 1977).

Similarly, women veterinarians have historically been deterred in professional training by selective school admission policies and have been discouraged by male practitioners' preconceptions of their abilities ("Women Veterinarians", 1974). There were few women veterinarians during the first few decades of the century, with slow growth until 1969 ("Women Veterinarians," 1974). The 1975-76 academic year showed an increase of veterinary degrees conferred to women by 136 percent since 1971 (U.S. Department of H.E.W., 1977). While the recent growth in the admission of women to veterinary medicine indicates a change in veterinary admission policies, women who enter this nontraditional profession are reportedly discriminated against, discouraged, and generally affected by male practitioners' negative preconceptions. Some preconceptions are directed by secondary sex characteristics--the belief that women are often absent from the profession due to marriage, pregnancy, and childbearing; a belief that women do not work as many hours

as men; a belief that women are reluctant to accept responsibilities for large mortgages; and a belief that there is a tendency for women veterinarians to follow and not to assume positions of leadership ("Women Veterinarians", 1974). The same rationale has been used to justify discrimination against the female physician. Studies of the roles of female physicians have served to dispel these myths. Heins, Smock, and Martindale (1978) found that 84 percent of women physicians in their study were presently engaged in practice. They also found that only 7 percent of women physicians dropped out of practice for reasons related to the traditional female role. They further found that nearly all women physicians work very hard at the dual role of practicing medicine and running a home (child rearing and household management). Giuliani and Centra (1968) found that women veterinarians actively practiced 78 percent of the total years they might have practiced.

There is a discrepancy in salary between male and female veterinarians. A 1979 American Veterinary Medical Association study reported that male veterinarians averaged more than $12,000 in 1977 annual earnings above their female counterparts, attributing the inequality to fewer average female years in practice ("A.V.M.A. Report", 1979).

Giuliani and Centra (1968) reported that modern medical technological advancements such as animal restraints and tranquilizers have permitted women veterinarians to overcome many of the physical demands of veterinary medicine and have enabled them to broaden their participa-

tion in veterinary specialties. In spite of these improvements, women large-animal practitioners report discrimination from male clients who believe that women are incompetent to handle a horse or cow ("Woman Veterinarians", 1974).

Giuliani and Centra (1968) report a difficulty among women veterinarians in reconciling conflicts between professional and female roles. Studies by Heins, Smock, and Martindale (1978) and Cartwright (1978) both confirm a similar distressing role conflict among women physicians between their professional and sex roles.

Sex-role stereotyping has also filtered down to women's career choice in veterinary medicine. Female veterinary students reported more discouragement than male veterinary students from high school and college counselors and teachers (Andberg, Follett, and Handel, 1979).

Ginzberg, et al. (1951) theorized that one crystallizes and clarifies personal goals and values in order to form criteria for job satisfaction. These criteria are manifested as job factors. Job factors are objective elements within the job environment from which the worker finds the source for his/her satisfaction of dissatisfaction (Herzberg, et al., 1959). Job satisfaction has been defined as a blending of the individuals' needs (based upon their values) with the job environment (Loftquist and Dawis, 1975).

Statement of the Problem

The accumulated evidence of a discriminatory veterinary job environment for women suggests a potential for a widespread dissatisfaction. Osipow (1973) suggests that women's career development is influenced by

obstacles in pay, promotion, and accessibility of certain positions as a function of sex. It has seemed clear that limited opportunities for women veterinarians from male misconceptions and general discriminatory beliefs would have a deleterious effect on their career development and job satisfaction.

Objectives of the Study

The two primary purposes of this study are: (1) to describe the relationship between job satisfaction and the professional practice patterns of women veterinarians, and (2) to describe the relationship between job satisfaction and work factors among women veterinarians.

Secondary objectives in this study are: (1) to enhance the present knowledge about the job satisfaction and selected work factors of women engaged in nontraditional careers, (2) to enhance the present knowledge about job satisfaction and work factors of women scientists, and (3) to describe women's contribution to the types of practices within the veterinary profession.

Organization of the Study

Chapter I consists of the introduction, problem statement, the objectives of the study, definitions of the study, definitions of the terms, general hypotheses, and hypotheses tested.

Chapter II consists of a general review of the literature in areas of employment patterns, job satisfaction, and work values of women veterinarians and women in other nontraditional female occupations.

Chapter III reviews the methodology of the study, consisting of sampling procedures, sample description, data collection techniques, and

analysis of the hypotheses to be tested.

Chapter IV reports the findings and conclusions of the study.

Chapter V represents a discussion of the results of the study and recommendations for further research.

Limitations

This study of women veterinarians is group specific, and it is difficult to generalize its findings to other occupational groups. Although an effort was made to include male veterinarians in the sample, financial considerations restricted their inclusion. Only 420 (40%) of the subjects responded to this study. While other job satisfaction studies report similar low returns, the reader is cautioned as to inferences that can be drawn from this study.

Definition of Terms

Job Satisfaction: A blending of an individual's personal values, job environment, and other psychological and physiological circumstances that results in one's feeling of fulfillment with a particular occupation.

Job Dissatisfaction: A distinct and conscious discontent with a job as a whole that has been caused by a disparity between personal values, job environment, and other psychological and physiological circumstances related to the individual.

Job Factors: Objective elements within an occupation in which the individual identifies the source of good or bad feelings about his/her job. This term will be used interchangeably with work factors and job

aspects.

Work Values: Those qualities which people desire and seek in their job as means of self-actualization.

Professional Practice Patterns: This term relates to the types of practice engaged in by women veterinarians and other descriptive data such as age, years of post-high school formal education, and years in the occupation.

General Hypotheses

1. There will be a statistically significant difference in the level of job satisfaction when geographic location, age, type of practice, length of service, years of education, and job factors of women veterinarians are compared.

2. There will be a statistically significant difference in job factors when age, years in the profession, and type of practice of women veterinarians are compared.

3. There will be a statistically significant difference in the types of practice women veterinarians are engaged in when geographic location, age, years in the profession, and years of education are compared.

CHAPTER II. REVIEW OF THE LITERATURE

The women's movement and recent legislation have had a considerable impact on the role of women in the American labor force. The Civil Rights Act of 1964, the Equal Employment Act, the Women's Educational Equity Act of 1974, Affirmative Action, and the changing American economy have all served to open vistas in the educational and employment patterns of American women. A U.S. Department of Labor (1975) report concluded that women in the labor market rose from 31% in 1947 to 45% in 1975. Schneider (1977) suggests the key to women's economic equality is the degree to which they participate in the prestigious professions and management positions during the 1980's. Women have made notable advancements in their representation in professions. They were awarded 2,753 degrees and showed a 257.8% rise in the number of first professional degrees granted between 1971 and 1976 (U.S. Department of Labor, 1975).

There is an implication that recent inclusions of women into nontraditional professions and their educational institutions may have an effect upon the career development of women. Researchers have previously not chosen to study women's career development. Osipow (1973) found that the topic of women's career development had been virtually ignored; and previous theory has been based upon men's career development and their problems. Osipow (1973) further recognized a major problem in female development theory as being the small samples of women within certain professions.

Women in scientific professions have often been victims of discrimination. In a study of women in scientific professions, Roe

(1966) concluded that women in all scientific fields receive little encouragement during their preparation, and face various degrees of discrimination. Zuckerman and Cole's (1975) study reported that unfounded stereotypes of female scientists affect women's career aspirations, access to higher education, and willingness to embark on demanding scientific and technical careers. Harway and Astin (1977) concluded that the role of counselors can be critical in the career development of women, and they should be expected to understand the psychological and environmental factors which affect their participation in careers. Osipow (1973) suggests that discrimination women face in pay, promotions, and accessibility of positions as a function of their sex, can be expected to influence female career development in ways not experienced by males.

Veterinary medicine has been a typically male-dominated profession that has experienced this recent upsurge in female participation. Women veterinarians have historically been deterred in professional training by selective educational admission policies and have generally been discouraged by male practitioners' preconceptions of their abilities ("Women Veterinarians", 1974). The 1975-1976 academic year showed an annual increase of veterinary degrees conferred to women by 136% since 1971 (U.S. Department of HEW, 1977). One hundred seventeen veterinary degrees were awarded to women. The number of degrees rose to two hundred seventy-seven in 1976. Being a nontraditional scientific profession, women who enter this career are reportedly discriminated against, discouraged, and affected by male public and profes-

sional negative preconceptions of their abilities.

The discrimination against women practitioners has been centered around preconceptions of their secondary sex characteristics. Among those are: (a) the belief that women are often absent from the profession due to marriage, pregnancy, and child rearing; (b) the belief that women do not work as many hours as men because they prefer part-time work; (c) a belief that women are reluctant to accept responsibilities for large mortgages necessary for equipment and clinics; and (d) a belief in a tendency for women not to assume positions of leadership ("Women Veterinarians", 1974). Women veterinarians are also discriminated against economically. A 1979 American Veterinary Medical Association study reported that male veterinarians averaged more than $12,000 in 1977 annual earnings about their female counterparts, attributing the inequality to fewer average female years in practice ("A.V.M.A. Report", 1979). In spite of the major technological advancements which enable women to overcome the physical demands of large animal practice, male clients often believed women veterinarians incompetent to handle a horse or cow ("Women Veterinarians", 1974).

Research efforts to interpret the female veterinarian job environment, job satisfaction, practice patterns, and career development have been sparse. Andberg, Follett, and Handel (1979) found sex role stereotyping to filter down to women's career choice in veterinary medicine. Female veterinary students reported a greater degree of counselor and teacher discouragement than did male veterinary students. Giuliani and Centra (1968) studied the professional practice

patterns of Michigan State University D.V.M. graduates and factors that influenced their occupational choice and job satisfaction. A higher proportion of women than men practitioners responded that they would again choose to enter the veterinary profession. From these data, Giuliani and Centra concluded that female veterinarians were more satisfied than were male veterinarians. Seemingly contradictory, this study also reported that fewer women than men veterinarians were willing to recommend their profession to young persons of the same sex. They also found that women were attracted to small animal, research, and teaching practices, and away from practices of "a highly masculine nature". This phenomenon was explained as the result of feminine and professional role conflicts. Several studies of women physicians by Heins, Smock, and Martindale (1978) and Cartwright (1978) both confirm a distressing conflict between their professional and sex roles. Another study of women physicians by Zuckerman and Cole (1975) found that they are similarly concentrated in "nonmasculine" roles and non-supervisory positions.

The Giuliani and Centra (1968) study found women to be active participants in their profession, serving 78% of the total years they might have practiced. Heins, Smock, and Martingale (1978) found that 84% of women physicians were presently engaged in their professions.

Recent job satisfaction studies of women professionals seem to provide inconsistent results. Guiliani and Centra's conclusions about women's job satisfaction contradict some recent job satisfaction studies of professional women. Shapiro and Stern (1975) using the Job

Descriptive Index, found that professional women tended to express more dissatisfaction with their jobs than men professionals. They found professional women to be less satisfied than male professionals in the job factors (categories) of pay, work, supervision, promotion, and co-workers. A study by Weaver (1974) found similar job satisfaction patterns of professional women. A career satisfaction study of women physicians by Cartwright (1978), however, found an extremely high level (88%) of them to be extremely satisfied or satisfied. A study of work satisfaction and dissatisfaction of women leaders in higher education found them to be relatively satisfied (Haun, 1975).

Job Satisfaction

The topic of job satisfaction has been a popular subject for American vocational psychologists. Locke (1976) estimated that by 1972, 3,350 articles had been written about job satisfaction. Hoppock (1935) in a broad study of job satisfaction, identified the reason to study job satisfaction as being:

> A better understanding of the causes of job satisfaction is desirable, not because it will enable us to become completely satisfied, but because it may help to relieve that intense and painful dissatisfaction which injures both the individual and the society in which he lives (p. 52).

Hoppock (1935) defined job satisfaction as a combination of psychological, physiological, and environmental circumstances that create a genuine feeling of satisfaction. He further defined job dissatisfaction as a conscious expression of discontent with the occupation as a whole.

Studies of job satisfaction indicate that it is a multidimensional variable. Hoppock (1935) suggested that job satisfaction is dependent upon other satisfactions in one's life. Herzberg, Mausner, Peterson, and Capwell (1957) and Herzberg, Mausner, and Snyderman (1959) considered job satisfaction to be consisted of or affected by a number of factors or areas of job satisfaction. Researchers widely agree that job factors important to job satisfaction are strongly influenced by personal value structures. Ginzberg, et al. (1951) and Super (1970) emphasized the importance of the value structure in the development of job satisfactions and self-concept. Ginzberg, et al. (1951) theorized the value schemes of adolescents to be precursors of different satisfactions that individuals receive and derive from work. Katzell (1964) summarized research findings about the importance of values in the development of job satisfaction as follows:

(a) Job satisfaction is positively related to the degree of congruence between job conditions and personal values.

(b) The stronger the value the more intense the effect on job satisfaction.

(c) Job satisfaction varies with the values of the workers.

(d) People having similar values but different jobs may vary in their levels of job satisfaction.

(e) The presence of absence of certain job characteristics evoke varying degrees of satisfaction or dissatisfaction with people's occupations.

Ginzberg, et al. (1951) identified three significant types of satisfac-

tions derived from work. These are extrinsic satisfactions (pleasures derived from monetary rewards and prestige), intrinsic satisfactions (pleasures derived from the specific activity and accomplishments), and concomitant satisfactions (satisfactions derived from the physical environment). There has been a deluge of research to further delineate this broad classification of job satisfaction. Super (1970) developed the Work Values Inventory to further define and assess the goals which motivate people to work. Herzberg, Mausner, and Snyderman (1959) further specified fourteen factors or sources of job satisfaction or dissatisfaction. They identified those sources (first order factors) as recognition, achievement, possibility for growth, advancement, salary, interpersonal relations, supervision, responsibility, working conditions, the work itself, factors in one's personal life, status, and job security. Hulin and Smith (1978) categorized the most important of these factors influencing job satisfaction to be type of work, pay, promotional opportunities, supervision, and co-workers. Most recent studies (e.g., Super and Overstreet (1960), Hulin and Smith (1978), Keith and Glass (1977), and Sauser and York (1978)) measure job satisfaction by their relationship to job factors.

Job Satisfaction and Sex

Several studies have reviewed the relationship between job satisfaction and sex, and have found inconsistent results. Centers and Bugental (1966) found little difference between men and women in the degree to which they value intrinsic satisfactions. Women were found to value co-workers more than men. Herzberg, et al. (1957) found the

influence of sex in job satisfaction to not lead to any simple conclusions. Quinn, Starnes, and McCullough (1974) found inconsistencies in the issue of the influence of sex on job satisfaction. Hulin and Smith (1978), using the Job Descriptive Index, found women factory workers to be less satisfied with their overall job situation; specifically promotional opportunities, supervision, and co-workers. They explain this difference in job satisfaction to not necessarily be the function of sex, but a number of other variables which covary with sex, such as social norms, differences in pay, promotional opportunity, job levels, etc. A reexamination of this study by Sauser and York (1978) on state government employees reported similar conclusions.

Job Satisfaction and Age

Previous studies relating age to job satisfaction have also been inconsistent. Herzberg, et al. (1957), reviewing twenty-three studies, found a U-shaped relationship between age and job satisfaction. Job satisfaction was found to be high when workers began their jobs, dropping during the next few years, and reviving during the late twenties and steadily growing throughout the remainder of their careers. Hulin and Smith (1978) found no clear U-shaped relationship to exist. Glenn, Taylor, and Weaver (1977) found a direct positive relationship between age and job satisfaction.

Career Development of Pioneer Women

Psathas (1968) theorized that the career development of women is influenced by the relationships between sex roles and occupational roles. Factors which influence the relationship are values, marriage

plans, education, family income, and parental occupations. Rossi (1965) suggested that women career groups be categorized by pioneer (those women in male-dominated careers), and traditional (all other women engaged in career activities) classifications. Crawford (1978) found that pioneer women were influenced in their career development by sex role perception. Those women choosing to enter male-dominated professions were more liberal with regard to perceptions of their sex roles. A high educational level of the family and a working status of the mother was found to have a positive influence on the career choice of pioneer women. A close association between siblings of the opposite sex was also found to have influenced pioneer career choice. Psathas (1968) and Crawford (1978) agreed that the role of women in society is an important consideration in the career choice of women.

Summary

The literature has documented a substantial change in the participation and role of the American working woman. The women's movement has been a mechanism for the development of broader career aspirations of women and changing attitudes toward working women. Women are entering veterinary medicine and other nontraditional professions in record numbers as stereotypes are broken down.

Researchers vary in their views as to the specific factors associated with job satisfaction, but the literature has established that factors relating to job environment and personal values are of great importance. It seems evident that a discriminatory environment would affect the levels of job satisfaction and career development of women.

CHAPTER III. METHODOLOGY

This chapter is a description of the methods used in the study. It includes the sampling procedures, description of the sample, methods of data collection and data analyses, and hypotheses to be tested.

Description of the Sample and Sampling Procedures

The subjects in this study were women veterinarians in Canada and the United States whose names were listed in the 1978 American Veterinary Medical Association Directory.

A Kuder job satisfaction questionnaire known as the Personal Data Questionnaire (PDQ) was distributed to one thousand fifty women veterinarians.

The questionnaire distributed was accompanied with a Kuder Occupational Interest Survey (KOIS) and a cover letter composed by Donald Zytowski, Ed.D. The job satisfaction questionnaire (PDQ) and (KOIS) were part of a major project of Donald Zytowski, Ed.D. The cover letter was added to the study to explain the purpose of the Zytowski study and increase the response.

Only four hundred twenty women veterinarians (40% completion) returned the job satisfaction survey. The time consuming nature of the veterinary practice may have attributed to the low completion rate by the participants. Male veterinarians were not included in the study because of the expense of adding a national sample. Sections of the United States and Canada were divided into four regions and equal numbers of subjects were chosen from each region to ensure geographical

representation.

The Instrument

A Personal Data Questionnaire (PDQ) was developed so as to determine job satisfaction and as a screening instrument for the Kuder Occupational Interest Survey (KOIS) (Kuder, 1973). Data from these questionnaires were used to develop the thirty original KOIS core occupational groups and are being used to develop new scales for twenty-five nontraditional occupations during the next five years. After attempts to determine job satisfaction and job dissatisfaction from a series of five questions, Kuder (1977) quickly discovered that a single question produced almost exactly the same classification of subjects. The question is as follows:

> If you had your choice, which of the following would you choose, if each paid the same? (check one)
>
> _____ The job you have now.
>
> _____ The same kind of work but with some changes in the working conditions or people you work with.
>
> _____ A different kind of work entirely.

Subjects who chose either of the first two options were determined to be satisfied with their jobs, while the last option determined job dissatisfaction. The satisfaction questionnaire is part of the KOIS, whose predictive validity was investigated by Zytowski (1976) in the study. "Predictive Validity of the Kuder Occupational Interest Survey: A Twelve to Nineteen Year Follow-Up." Zytowski found that fifty-one

percent of his subjects were employed in the occupations that would have been suggested to them in the Kuder survey. This percentage compared favorably with the concurrent validity of other occupational interest inventories. Kuder (1966) and Zytowski (1976) both demonstrated satisfactory test-retest reliability of the KOIS. The PDQs are part of an overall project of Donald Zytowski, Ed.D. and Daniel C. Robinson, Ph.D. to norm the nontraditional occupation of the women veterinarian for the Kuder Interest Inventory. It was necessary that all questions on the front page of the questionnaire remain consistent with previous PDQs to protest the validity of the Zytowski study. This need for consistency did not allow for much flexibility in the questions asked; however, a question was added to include a job factor identification as an additional measure of satisfaction.

The Personal Data Questionnaire permits the investigator to identify:

a) the current occupation,

b) main duties engaged in,

c) number of years in occupation,

d) length of formal education,

e) race,

f) geographical location,

g) level of job satisfaction.

The instrument also asked the respondent to identify three job factors which their occupation most afforded her. This question was developed from work values identified in Super's Work Values Inventory (1970).

Job factors selected for the study are similar to Herzberg's first order factors, which parallel Super's work values (Herzberg, et al., 1959).

Statistical Procedures for Data Analysis

A dependent variable of job satisfaction was compared with geographic location, length of service, years of education, types of practice, age, and most afforded job factors were compared with age, years in the profession, types of practice. A third dependent variable of types of practice was compared with geographic location, age, years in practice, and years of education.

The variables in this study are all nominal and ordinal in nature. The Chi-square Test of Independence lends itself to these types of variables and will be used in the statistical analysis.

Hypotheses to be Tested

1. There will be a statistically significant difference in the level of job satisfaction when geographic location, age, types of practice, length of service, years of education, and preferred job factors of women veterinarians are compared.

2. There will be a statistically significant difference in the types of preferred job factors when age, years in the profession, and types of practice of women veterinarians are compared.

3. There will be a statistically significant difference in the types of practice women veterinarians are engaged in when geographic location, age, years in the profession, and years of education are compared.

Specific Hypotheses

Hypothesis 1:

H_o There is no significant difference in the level of job satisfaction of women veterinarians when length of service is compared.

H_a There is a significant difference in the level of job satisfaction of women veterinarians when length of service is compared.

Hypothesis 2:

H_o There is no significant difference in the level of job satisfaction of women veterinarians when geographic location is compared.

H_a There is a significant difference in the level of job satisfaction of women veterinarians when geographic location is compared.

Hypothesis 3:

H_o There is no significant difference in the level of job satisfaction of women veterinarians when job factors are compared.

H_a There is a significant difference in the level of job satisfaction of women veterinarians when job factors are compared.

Hypothesis 4:

H_o There is no significant difference in the level of job satisfaction of women veterinarians when types of practice are compared.

H_a There is a significant difference in the level of job satisfaction of women veterinarians when types of practice are compared.

Hypothesis 5:

H_o There is no significant difference in the level of job satisfaction of women veterinarians when age is compared.

H_a There is a significant difference in the level of job satisfaction of women veterinarians when age is compared.

Hypothesis 6:

H_o There is no significant difference in the level of job satisfaction of women veterinarians when years of education are compared.

H_a There is a significant difference in the level of job satisfaction of women veterinarians when years of education are compared.

Hypothesis 7:

H_o There is no significant difference in job factors of women veterinarians when age is compared.

H_a There is a significant difference in job factors of women veterinarians when age is compared.

Hypothesis 8:

H_o There is no significant difference in job facotrs of women veterinarians when years in the profession are compared.

H_a There is significant difference in job factors of women veterinarians when years in the profession are compared.

Hypothesis 9:

H_o There is no significant difference in job facotrs of women veterinarians when types of practice are compared.

H_a There is a significant difference in job factors of women veterinarians when types of practice are compared.

Hypothesis 10:

H_o There is no significant difference in the types of practice engaged

in by women veterinarians when geographic locations are compared.

H_a There is a significant difference in the types of practice engaged in by women veterinarians when geographic locations are compared.

Hypothesis 11:

H_o There is no significant difference in the types of practice engaged in by women veterinarians when age is compared.

H_a There is a significant difference in the types of practice engaged in by women veterinarians when age is compared.

Hypothesis 12:

H_o There is no significant difference in the types of practice engaged in by women veterinarians when years in the profession are compared.

H_a There is a significant difference in the types of practice engaged in by women veterinarians when years in the profession are compared.

Hypothesis 13:

H_o There is no significant difference in the types of practice engaged in by women veterinarians when years of education are compared.

H_a There is a significant difference in the types of practice engaged in by women veterinarians when years of education are compared.

The data in this study were analyzed by an IBM 360 computer using the Statistical Package for the Social Sciences (SPSS) (Nie, Hull, Jenkins, Steinbrenner and Brent, 1975).

The statistical significance of the Chi-squares were computed and the observed frequencies are presented in tables in the findings chapter. The level of significance selected was the .05 level. When the expected

numbers in some of the cells of a contingency table are very small, it is often suggested that neighboring classes be combined to meet the requirements of the Chi-square tests. Since in some of the tables, several cells had very low observed and expected frequencies this suggestion was followed. In this research the Chi-square tests with and without combination of neighboring classes will be reported.

CHAPTER IV. FINDINGS

Overview

The purposes of this study were (1) to describe the relationship between job satisfaction and the professional practice patterns of women veterinarians, and (2) to describe the relationship between job satisfaction and work factors among women veterinarians.

The following hypotheses were generated from an extensive review of vocational and job satisfaction theory:

A. There will be a statistically significant difference in the levels of job satisfaction when length of service, geographic location, age, types of practice, years of education and job factors of women veterinarians are compared.

B. There will be a statistically significant difference in the job factors when age, years in the profession, and types of practice of women veterinarians are compared.

C. There will be a statistically significant difference in the types of practice engaged in by women veterinarians when geographic location, age, years in the profession, and years of eduation are compared.

The research instrument chosen to investigate the hypotheses was a Kuder job satisfaction questionnaire (see the Appendix).

The subjects in this study were 420 women veterinarians obtained from a 1978 American Veterinary Medical Association Directory.

The Chi-square Test of Independence analysis was employed for all comparisons. A level of significance of .05 was selected to be statis-

tically significant.

Age

Table 1 represents the frequency distribution of ages for the women veterinarians in this study. A mean of 32.50 was found with a variance of 53.64.

Table 1. Frequency Distribution for Age of Women Veterinarians

Age	Absolute Frequency	Relative Frequency %
24	6	1.4
25	14	3.3
26	28	6.7
27	45	10.7
28	51	12.1
29	36	8.6
30	33	5.5
31	32	7.6
32	30	7.1
33	23	5.5
34	15	3.6
35	20	4.8
36	16	3.8
37	7	1.7
38	8	1.9
39	2	0.5
40	6	1.4
41	5	1.2
42	5	1.2
43	3	0.7
44	3	0.7

Table 1. Continued

Age	Absolute Frequency	Relative Frequency %
45	2	0.5
46	2	0.5
47	1	0.2
48	1	0.2
49	2	0.5
50	2	0.5
51	1	0.2
52	5	1.2
53	3	0.7
54	2	0.5
55	2	0.5
56	3	0.7
57	1	0.2
58	1	0.2
61	1	0.2
62	2	0.5
65	1	0.2
Total	420	100.0

Mean: 32.498 Median: 30.409

Variance: 53.635

Standard error: 0.357

Standard deviation: 7.324

Years in the Profession

Table 2 represents the frequency distribution of years in the profession for women veterinarians in this study. A mean of 7.20 was found with a variance of 39.96.

Table 2. Frequency Distribution for Years in Practice of Women Veterinarians

Years of Practice	Absolute Frequency	Adjusted Frequency %
1	4	1.0
2	59	14.2
3	81	19.5
4	42	10.1
5	41	9.9
6	22	5.3
7	20	4.8
8	26	6.3
9	22	5.3
10	19	4.6
11	9	2.2
12	16	3.8
13	10	2.4
14	4	1.0
15	6	1.4
16	4	1.0
17	4	1.0
18	3	0.7
19	3	0.7
20	4	1.0
21	2	0.5
22	1	0.2
23	1	0.2
25	3	0.7
30	4	1.0
33	1	0.2

Table 2. Continued

Years in Practice	Absolute Frequency	Adjusted Frequency %
35	2	0.5
37	1	0.2
38	1	0.2
40	1	0.2
Total	416	100.0

Four of the subjects in the study did not include their years of practice.

Mean: 7.202 Median: 5.037

Variance: 39.954

Standard error: 0.310

Standard deviation: 6.321

Types of Practice

Table 3 represents the frequency distribution of types of practice engaged in by women veterinarians. Type of practices was determined from (1) the question referring to the description of the occupation, and (2) the statement of main duties detailed in the Personal Data Questionnaire. From the responses to these questions, a determination was made as to the category of practice which best fit.

Table 3. Frequency Distribution for Types of Practice Engaged in by Women Veterinarians

Types of Practice	Absolute Frequency	Adjusted Frequency %
Mixed (50% large/small)	36	8.6
Mixed (mostly large)	2	0.5
Mixed (mostly small)	15	3.6
Small	244	58.2
Large	16	3.8
Equine	5	1.2
Pharmacology	1	0.2
Zoological/Exotic	3	0.7
Military	2	0.5
Teaching	38	9.1
Research	20	4.8
Laboratory Animal	9	2.1
Pathology	4	1.0
Meat Inspection	7	1.7
Public Health	4	1.0
Unemployed	1	0.2
Child Rearing	8	1.9
Retired	4	1.0
Total	419[a]	100.0

[a]One subject did not include her type of practice.

Job Factors

Table 4 represents a hierarchical distribution of job factors (or job aspects) which were most afforded to women veterinarians.

Table 4. Hierarchical Frequency Distribution of Job Factors Most Afforded to Women Veterinarians

Job Factor	Position	%
Variety	1	56.4
Independence	2	49.0
Achievement	3	43.8
Learning	4	37.9
Income	5	25.8
Security	6	21.9
Altruism	7	20.4
Way of Life	8	13.9
Creativity	9	11.1
Prestige	10	7.1
Surroundings	11	5.7
Authority	12	3.6
Associates	13	3.3
Supervision (of my work)	14	1.0

Job Satisfaction

Table 5 represents the frequency distribution of job satisfaction for women veterinarians in this study. The categories of satisfaction were determined from Kuder's job satisfaction question included in the Personal Data Questionnaire. For more detailed explanation, refer to the description of the instrument in Chapter III.

Table 5. Frequency Distribution of Job Satisfaction Among Women Veterinarians

Level of Job Satisfaction	n	Relative Frequency %
Satisfied	207	49.3
Satisfied, but with some changes in conditions, places, or people	191	45.5
Dissatisfied	18	4.3
Missing Subjects	4	1.0
TOTAL	420	100.0

Job Satisfaction and Length of Service

Table 6 represents a comparison between the levels of job satisfaction of women veterinarians when considering the independent variable, length of service. The following hypothesis was tested. Hypothesis 1: There is no signficant difference in the level of job satisfaction of women veterinarians when length of service is compared. A chi-square value of 86.8 was obtained with 58 degrees of freedom. Length of service was found to be statistically significant with a level of significance at .0085. For the chi-square test using the recoded length of service, the following categories were formed:

Category 1. 0 - 5 years in practice.

Category 2. 6 - 10 years in practice.

Category 3. 11 - 15 years in practice.

Category 4. 16 - 20 years in practice.

Category 5. 21 - 25 years in practice.

Category 6. 26 - 30 years in practice.

Category 7. 31 - 35 years in practice.

Using the recoded length of service, a chi-square value of 28.0 was obtained with 12 degrees of freedom with a level of significance at .0054. The null hypothesis was therefore rejected.

Table 6. Chi-Square for Comparisons between Levels of Job Satisfaction and Length of Service of Women Veterinarians

Satisfaction	Count / Row Pct / Col Pct / Tot Pct	Years in Profession 1	2	3	4	5	6	7	8	9	10
Satisfied		0	18	34	17	25	8	12	16	15	10
		0.0	8.7	16.5	8.3	12.1	3.9	5.8	7.8	7.3	4.9
		0.0	31.6	42.0	41.5	61.0	38.1	60.0	61.5	68.2	52.6
		0.0	4.4	8.3	4.1	6.1	1.9	2.9	3.9	3.6	2.4
Satisfied with qualifications		4	37	45	21	14	13	8	8	7	8
		2.1	19.7	23.9	11.2	7.4	6.9	4.3	4.3	3.7	4.3
		100.0	64.9	55.6	51.2	34.1	61.9	40.0	30.8	31.8	42.1
		1.0	9.0	10.9	5.1	3.4	3.2	1.9	1.9	1.7	1.9
Dissatisfied		0	2	2	3	2	0	0	2	0	1
		0.0	11.1	11.1	16.7	11.1	0.0	0.0	11.1	0.0	5.6
		0.0	3.5	2.5	7.3	4.9	0.0	0.0	7.7	0.0	5.3
		0.0	0.5	0.5	0.7	0.5	0.0	0.0	0.5	0.0	0.2
Column Total		4	57	81	41	41	21	20	26	22	19
		1.0	13.8	19.7	10.0	10.0	5.1	4.9	6.3	5.3	4.6

Table 6. (Continued)

Satisfaction	Count / Row Pct / Col Pct / Tot Pct	Years in Profession									
		11	12	13	14	15	16	17	18	19	20
Satisfied		5	12	7	2	4	2	2	3	1	2
		2.4	5.8	3.4	1.0	1.9	1.0	1.0	1.5	0.5	1.0
		55.6	75.0	70.0	50.0	66.7	50.0	50.0	100.0	33.3	50.0
		1.2	2.9	1.7	0.5	1.0	0.5	0.5	0.7	0.2	0.5
Satisfied with qualifications		3	2	3	2	2	0	2	0	1	2
		1.6	1.1	1.6	1.1	1.1	0.0	1.1	0.0	0.5	1.1
		33.3	12.5	30.0	50.0	33.3	0.0	50.0	0.0	33.3	50.0
		0.7	0.5	0.7	0.5	0.5	0.0	0.5	0.0	0.2	0.5
Dissatisfied		1	2	0	0	0	2	0	0	1	0
		5.6	11.1	0.0	0.0	0.0	11.1	0.0	0.0	5.6	0.0
		11.1	12.5	0.0	0.0	0.0	50.0	0.0	0.0	33.3	0.0
		0.2	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.2	0.0
Column Total		9	16	10	4	6	4	4	3	3	4
		2.2	3.9	2.4	1.0	1.5	1.0	1.0	0.7	0.7	1.0

Table 6. (Continued)

Satisfaction	Count / Row Pct / Col Pct / Tot Pct	Years in Profession 21	22	23	25	30	33	35	37	38	40	Row Total
Satisfied		1	0	1	1	4	1	2	0	1	0	206
		0.5	0.0	0.5	0.5	1.9	0.5	1.0	0.0	0.5	0.0	50.0
		50.0	0.0	100.0	33.3	100.0	100.0	100.0	0.0	100.0	0.0	
		0.2	0.0	0.2	0.2	1.0	0.2	0.5	0.0	0.2	0.0	
Satisfied with qualifications		1	1	0	2	0	0	0	1	0	1	188
		0.5	0.5	0.0	1.1	0.0	0.0	0.0	0.5	0.0	0.5	45.6
		50.0	100.0	0.0	66.7	0.0	0.0	0.0	100.0	0.0	100.0	
		0.2	0.2	0.0	0.5	0.0	0.0	0.0	0.2	0.0	0.2	
Dissatisfied		0	0	0	0	0	0	0	0	0	0	18
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Column Total		2	1	1	3	4	1	2	1	1	1	412
		0.5	0.2	0.2	0.7	1.0	0.2	0.5	0.2	0.2	0.2	100.0

Tabular Chi-Square = 86.80305 58 degrees of freedom

Significance = 0.0085*

Table 7 represents a comparison between levels of job satisfaction of women veterinarians when considering the independent variable, geographic location (by region). The following hypothesis was tested.

Hypothesis 2: There is no significant difference in the level of job satisfaction when geographic location is compared. A chi-square value of 5.74 was obtained with 6 degrees of freedom. Region was found to be statistically insignificant with a level of significance at .45. The null hypothesis therefore failed rejection.

Table 7. Chi-Square of Comparisons between Levels of Job Satisfaction and Length of Service of Women Veterinarians

Satisfaction	Count / Row Pct / Col Pct / Tot Pct	Regions: Northern Region	Eastern Region	Southern Region	Western Region	Row Total
	Satisfied	61	44	50	37	192
		31.8	22.9	26.0	19.3	
		48.8	48.9	45.0	54.4	48.7
		15.5	11.2	12.7	9.4	
	Satisfied with qualifactions	61	39	57	28	
		33.0	21.1	30.8	15.1	185
		48.8	43.3	51.4	41.2	47.0
		15.5	9.9	14.5	7.1	
	Dissatisfied	3	7	4	3	17
		7.6	41.2	23.5	17.6	4.3
		2.4	7.8	3.6	4.4	
		0.8	1.8	1.0	0.8	
	Column Total	125	90	111	68	394
		31.7	22.8	28.2	17.3	100.0

Tabular Chi-Square = 5.738 6 degrees of freedom

Significance = 0.45

Job Satisfaction and Job Factors

Table 8 represents a comparison between levels of job satisfaction of women veterinarians when considering the independent variables of job factors most afforded by their profession. The following hypothesis was tested. Hypothesis 3: There is no significant difference in the level of job satisfaction of women veterinarians when job factors most afforded by their profession are compared. Two of the fourteen factors, job security and good income, were found to be statistically significant when compared with levels of job satisfaction. The null hypothesis therefore failed rejection.

Table 8. Chi-Squares for Comparisons between Levels of Job Satisfaction of Women Veterinarians when Considering the Independent Variables of Fourteen Job Factors

Job Factors	Chi-Square Value	df	Significant Level
Security	6.620	2	0.036*
Prestige	1.186	2	0.552
Income	2.926	2	0.000*
Achievement	3.130	2	0.209
Surroundings	1.278	2	0.528
Associates	5.223	2	0.074
Authority	4.348	2	0.114
Supervision	0.190	2	0.910
Independence	0.726	2	0.696
Altruism	0.446	2	0.800
Creativity	5.160	2	0.076
Way of Life	3.916	2	0.142
Learning	1.388	2	0.500
Variety	1.812	2	0.404

Note: There are three possible answers for levels of job satisfaction which accounts for two degrees of freedom.

*Significant at .05

Job Satisfaction and Type of Veterinary Practice

Table 9 represents a comparison between levels of job satisfaction of women veterinarians when considering the independent variable, types of practice. Categories of veterinary practice were obtained from the 1978 American Veterinary Medical Association Directory code of practices. The following hypothesis was tested. Hypothesis 4: There is no significant difference in the level of job satisfaction of women veterinarians when types of practice are compared. A chi-square value of 34.16 was obtained with 32 degrees of freedom. Types of practice were found to be statistically insignificant with a level of significance at .36. For the chi-square test using the recoded types of practice, the following categories were formed:

Category 1. Mixed practice (50% large/50% small)

Category 2. Small animal and mixed but mostly small practice

Category 3. Large animal and mixed but mostly large practice

Category 4. Teaching practice

Category 5. Research practice

Category 6. Pharmacology, zoological/exotic, military, equine, laboratory animal, pathology, child reading, retired, meat inspection, and public health practices.

Using the recoded types of veterinary practice, a chi-square value of 4.84 was obtained with 10 degrees of freedom and a level of significance at 0.90. The null hypothesis therefore failed rejection.

Table 9. Chi-Square for Comparison between Levels of Job Satisfaction of Women Veterinarians when Considering the Independent Variable of Types of Practice

Satisfaction	Count / Row Pct / Col Pct / Tot Pct	Types of Practice									
		(50% Small/ Large) Mixed	Mixed Mostly Large	Mixed Mostly Small	Small	Large	Equine	Pharma-cology	Zool-ogy Exotic	Mili-tary	Teach-ing
Satisfied		16	0	8	115	8	2	1	0	0	23
		7.8	0.0	3.9	55.8	3.9	1.0	0.5	0.0	0.0	0.0
		45.7	0.0	57.1	47.1	50.0	40.0	100.0	0.0	0.0	60.5
		3.9	0.0	1.9	27.7	1.9	0.5	0.2	0.0	0.0	5.5
Satisfied with quali-fications		17	2	5	119	8	3	0	3	1	13
		8.9	1.0	2.6	62.3	4.2	1.6	0.0	1.6	0.5	6.8
		48.6	100.0	35.7	48.8	50.0	60.0	0.0	100.0	50.0	34.2
		4.1	0.5	1.2	28.7	1.9	0.7	0.0	0.7	0.2	3.1
Dissatisfied		2	0	1	10	0	0	0	0	1	2
		11.1	0.0	5.6	55.6	0.0	0.0	0.0	0.0	5.6	11.1
		5.7	0.0	7.1	4.1	0.0	0.0	0.0	0.0	50.0	5.3
		0.5	0.0	0.2	2.4	0.0	0.0	0.0	0.0	0.2	0.5
Column Total		35	2	14	244	16	5	1	3	2	38
		8.4	0.5	3.4	58.8	3.9	1.2	0.2	0.7	0.5	9.2

Table 9. (Continued)

Satisfaction	Count / Row Pct / Col Pct / Tot Pct	Types of Practice: Research	Laboratory Animals	Pathology	Child Reading	Retired	Meat Inspection	Public Health	Row Total
Satisfied		11	5	3	4	4	5	1	206
		5.3	2.4	1.5	1.9	1.9	2.4	0.5	49.6
		55.0	55.6	75.0	57.1	100.0	71.4	25.0	
		2.7	1.2	0.7	1.0	1.0	1.2	0.2	
Satisfied with qualifications		8	4	1	3	0	1	3	191
		4.2	2.1	0.5	1.6	0.0	0.5	1.6	46.0
		40.0	44.4	25.0	42.9	0.0	14.3	75.0	
		1.9	1.0	0.2	0.7	0.0	0.2	0.7	
Dissatisfied		1	0	0	0	0	1	0	18
		5.6	0.0	0.0	0.0	0.0	5.6	0.0	4.3
		5.0	0.0	0.0	0.0	0.0	14.3	0.0	
		0.2	0.0	0.0	0.0	0.0	0.2	0.0	
Column Total		20	9	4	7	4	7	4	415
		4.8	2.2	1.0	1.7	1.0	1.7	1.0	100.0

Tabular Chi-Square = 34.16377 with 32 degrees of freedom

Significance = 0.3641

Job Satisfaction and Age

Table 10 represents a comparison between the levels of job satisfaction of women veterinarians when considering the independent variable of age. The following hypothesis was tested. Hypothesis 5: There is no significant difference in the level of job satisfaction of women veterinarians when age is compared. A chi-square value of 92.28 was obtained with 32 degrees of freedom. While the level of significance approached statistical significance, age was found to be statistically insignificant with a level of significance at .08. For the chi-square test using the recoded ages, the following categories were formed:

Category 1. Ages 20-29.

Category 2. Ages 30-39.

Category 3. Ages 40-49.

Category 4. Ages 50-59.

Category 5. Ages 60 and above.

Using the recoded ages, a chi-square value of 24.8 was obtained with 8 degrees of freedom and a level of significance at 0.01. In this case categorization affected the significance. Because the recoded chi-square analysis is preferable, the null hypothesis was rejected.

Table 10. Chi-Square for Comparisons between Levels of Job Satisfaction of Women Veterinarians when Considering the Independent Variable of Age

Satisfaction	Count / Row Pct / Col Pct / Tot Pct	Age 24	25	26	27	28	29	30	31	32	33
Satisfied		1	6	10	16	20	16	14	19	19	10
		0.5	2.9	4.8	7.7	9.7	7.7	6.8	9.2	9.2	4.8
		16.7	42.9	35.7	35.6	41.7	44.4	42.4	61.3	63.3	43.5
		0.2	1.4	2.4	3.8	4.8	3.8	3.4	4.6	4.6	2.4
Satisfied with qualifications		5	8	18	28	26	19	18	11	9	12
		2.6	4.2	9.4	14.7	13.6	9.9	9.4	5.8	4.7	6.3
		83.3	57.1	64.3	62.2	54.2	52.8	54.5	35.5	30.0	52.2
		1.2	1.9	4.3	6.7	6.3	4.6	4.3	2.6	2.2	2.9
Dissatisfied		0	0	0	1	2	1	1	1	2	1
		0.0	0.0	0.0	5.6	11.1	5.6	5.6	5.6	11.1	5.6
		0.0	0.0	0.0	2.2	4.2	2.8	3.0	3.2	6.7	4.3
		0.0	0.0	0.0	0.2	0.5	0.2	0.2	0.2	0.5	0.2
Column Total		6	14	28	45	48	36	33	31	30	23
		1.4	3.4	6.7	10.8	11.5	8.7	7.9	7.5	7.2	4.4

Table 10. (Continued)

Satisfaction	Count / Row Pct / Col Pct / Tot Pct	Age 34	35	36	37	38	39	40	41	42	43
Satisfied		7	15	9	4	5	2	3	4	4	2
		3.4	7.2	4.3	1.9	2.4	1.0	1.4	1.9	1.9	1.0
		46.7	75.0	46.3	57.1	62.5	100.0	50.0	80.0	80.0	66.7
		1.7	3.6	2.2	1.0	1.2	0.5	0.7	1.0	1.0	0.5
Satisfied with qualifications		6	4	6	3	2	0	2	1	0	1
		3.1	2.1	3.1	1.6	1.0	0.0	1.0	0.5	0.0	0.5
		40.0	20.0	37.5	42.9	25.0	0.0	33.3	20.0	0.0	33.3
		1.4	1.0	1.4	0.7	0.5	0.0	0.5	0.2	0.0	0.2
Dissatisfied		2	1	1	0	1	0	1	0	1	0
		11.1	5.6	5.6	0.0	5.6	0.0	5.6	0.0	5.6	0.0
		13.3	5.0	6.3	0.0	12.5	0.0	16.7	0.0	20.0	0.0
		0.5	0.2	0.2	0.0	0.2	0.0	0.2	0.0	0.2	0.0
Column Total		15	20	16	7	8	2	6	5	5	3
		3.6	4.8	3.8	1.7	1.9	0.5	1.4	1.2	1.2	0.7

Table 10. (Continued)

Satisfaction	Count / Row Pct / Col Pct / Tot Pct	Age 44	45	46	47	48	49	50	51	52	53
Satisfied		1	1	1	0	0	2	1	1	2	3
		0.5	0.5	0.5	0.0	0.0	1.0	0.5	0.5	1.0	1.4
		33.3	50.0	50.0	0.0	0.0	100.0	50.0	100.0	40.0	100.0
		0.2	0.2	0.2	0.0	0.0	0.5	0.2	0.2	0.5	0.7
Satisfied with qualifications		1	1	1	1	1	0	1	0	3	0
		0.5	0.5	0.5	0.5	0.5	0.0	0.5	0.0	1.6	0.0
		33.3	50.0	50.0	100.0	100.0	0.0	50.0	0.0	60.0	0.0
		0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.0	0.7	0.0
Dissatisfied		1	0	0	0	0	0	0	0	0	0
		5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Column Total		3	2	2	1	1	2	2	1	5	3
		0.7	0.5	0.5	0.2	0.2	0.5	0.5	0.2	1.2	0.7

Table 10. (Continued)

Satisfaction	Count / Row Pct / Col Pct / Tot Pct	Age 54	55	56	57	58	61	62	65	Row Total
	Satisfied	1	2	3	1	0	1	1	0	207
		0.5	1.0	1.4	0.5	0.0	0.5	0.5	0.0	49.8
		50.0	100.0	100.0	100.0	0.0	100.0	50.0	0.0	
		0.2	0.5	0.7	0.2	0.0	0.2	0.2	0.0	
	Satisfied with qualifications	1	0	0	0	0	0	1	1	191
		0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.5	45.9
		50.0	0.0	0.0	0.0	0.0	0.0	50.0	100.0	
		0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.2	
	Dissatisfied	0	0	0	0	1	0	0	0	18
		0.0	0.0	0.0	0.0	5.6	0.0	0.0	0.0	4.3
		0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	
		0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	
	Column Total	2	2	3	1	1	1	2	1	416
		0.5	0.5	0.7	0.2	0.2	0.2	0.5	0.2	100.0

Tabular Chi-Square = 92.28302 with 74 degrees of freedom

Significance = 0.0738

Job Satisfaction and Years of Education

Table 11 represents a comparison between the levels of job satisfaction of women veterinarians when considering the independent variable of years of education. The following hypothesis was tested.

Hypothesis 6: There is no significant difference in the level of job satisfaction of women veterinarians when years of education is considered. A chi-square value of 23.52 was obtained with 22 degrees of freedom. Years of education was found to be statistically insignificant with level of significance at .38. For the chi-square test using the recoded years of education, the following categories were formed:

Category 1. 2-4 years.

Category 2. 5-7 years.

Category 3. 8-10 years.

Category 4. 11-13 years.

Using the recoded ages, a chi-square value of 5.78 was obtained with 6 degrees of freedom and a level of significance at 0.45. The null hypothesis therefore failed rejection.

Table 11. Chi-Square of Comparisons between Levels of Job Satisfaction of Women Veterinarians when Considering the Independent Variable of Years of Education

Satisfaction	Count / Row Pct / Col Pct / Tot Pct	Years of Formal Education Beyond High School					
		2	3	4	5	6	7
Satisfied		0	1	1	18	60	38
		0.0	0.5	0.5	8.7	29.0	18.4
		0.0	100.0	50.0	41.9	46.5	46.3
		0.0	0.2	0.2	4.3	14.4	9.1
Satisfied with qualifications		1	0	1	23	61	44
		0.5	0.0	0.5	12.0	31.9	23.0
		100.0	0.0	50.0	53.5	47.3	53.7
		0.2	0.0	0.2	5.5	14.7	10.6
Dissatisfied		0	0	0	2	8	0
		0.0	0.0	0.0	11.1	44.4	0.0
		0.0	0.0	0.0	4.7	6.2	0.0
		0.0	0.0	0.0	0.5	1.9	0.0
Column Total		1	1	2	43	129	82
		0.2	0.2	0.5	10.3	31.0	19.7

Table 11. (Continued)

Satisfaction	Count / Row Pct / Col Pct / Tot Pct	Years of Formal Education Beyond High School						Row Total
		8	9	10	11	12	13	
	Satisfied	42	20	15	10	2	0	207
		20.3	9.7	7.2	4.8	1.0	0.0	49.8
		51.2	60.6	65.2	76.9	33.3	0.0	
		10.1	4.8	3.6	2.4	0.5	0.0	
	Satisfied with qualifications	34	12	8	3	3	1	191
		17.8	6.3	4.2	1.6	1.6	0.5	45.9
		41.5	36.4	34.8	23.1	50.0	100.0	
		8.2	2.9	1.9	0.7	0.7	0.2	
	Dissatisfied	6	1	0	0	1	0	18
		33.3	5.6	0.0	0.0	5.6	0.0	4.3
		7.3	3.0	0.0	0.0	16.7	0.0	
		1.4	0.2	0.0	0.0	0.2	0.0	
	Column Total	82	33	23	13	6	1	416
		19.7	7.9	5.5	3.1	1.4	0.2	100.0

Tabular Chi-Square = 23.52547 with 22 degrees of freedom

Significance = 0.3726

Job Factors and Age

Table 12 represents a comparison between fourteen job factors of women veterinarians and the independent variable of age. The following hypothesis was tested. Hypothesis 7: There is no significant difference in job factors of women veterinarians with age is compared. Three of the fourteen job factors (achievement, independence, and altruism) approached statistical significance. The job factor of creativity was found to be statistically significant when compared with age. The null hypothesis therefore was rejected.

Table 12. Chi-Square Comparisons between Fourteen Job Factors of Women Veterinarians and Age

Job Factor	Chi-Square Value	df	Significance Level
Security	4.48	4	0.34
Prestige	1.22	4	0.88
Income	4.22	4	0.38
Achievement	9.04	4	0.06
Surroundings	2.52	4	0.64
Associates	0.98	4	0.92
Authority	1.66	4	0.80
Supervision	1.74	4	0.78
Independence	8.54	4	0.08
Altruism	8.02	4	0.10
Creativity	10.32	4	0.04*
Way of Life	4.60	4	0.33
Learning	2.40	4	0.66
Variety	7.34	4	0.12

Note: The variable age was coded into five categories which accounts for the four degrees of freedom. These chi-square comparisons were all made with the recoded age categories described earlier in this chapter.

*Significant at .05.

Job Factors and Years in Practice

Table 13 represents a comparison between fourteen job factors of women veterinarians and the independent variable of years in profession. The following hypothesis was tested. Hypothesis 8: There is no significant difference in job factors of women veterinarians when years in the profession are compared. None of the comparisons of years in the profession with the fourteen job factors reached a level of statistical significance. The null hypothesis therefore failed rejection.

Table 13. Chi-Square Comparisons between Fourteen Job Factors of Women Veterinarians and Years in the Profession

Job Factor	Chi-Square Value	df	Significance Level
Security	6.00	6	0.42
Prestige	2.22	6	0.90
Income	4.62	6	0.60
Achievement	6.62	6	0.36
Surroundings	3.66	6	0.72
Associates	1.40	6	0.96
Authority	1.08	6	0.98
Supervision	2.38	6	0.88
Independence	5.90	6	0.44
Altruism	7.42	6	0.28
Creativity	4.20	6	0.65
Way of Life	4.48	6	0.62
Learning	2.92	6	0.82
Variety	3.99	6	0.68

Note: Years in the profession were coded into seven categories which accounts for the 6 degrees of freedom. These chi-square comparisons were all made with the recoded years in practice categories described earlier in this chapter.

*Significant at .05.

Job Factors and Types of Practice

Table 14 represents a comparison between fourteen job factors of women veterinarians and the independent variable types of practice. The following hypothesis was tested. Hypothesis 9: There is no significant difference in job factors of women veterinarians when types of practice are compared. The factors of associates, authority, learning and variety were found to be statistically significant when compared to types of veterinary practice. Therefore the null hypothesis was rejected.

Table 14. Chi-Square Comparisons between Fourteen Job Factors of Women Veterinarians and Types of Practice

Job Factor	Chi-Square Value	df	Significance Level
Security	3.96	5	0.55
Prestige	5.20	5	0.39
Income	10.10	5	0.07
Achievement	3.65	5	0.60
Surroundings	2.98	5	0.70
Associates	16.54	5	0.01*
Authority	16.36	5	0.01*
Supervision	2.48	5	0.78
Independence	9.06	5	0.10
Altruism	0.56	5	0.98
Creativity	9.39	5	0.10
Way of Life	4.84	5	0.44*
Learning	11.50	5	0.04*
Variety	17.64	5	0.01*

Note: The variable types of practice was coded into six categories which account for the five degrees of freedom. These chi-square comparisons were all made with the recoded types of practice categories described earlier in this chpater.

*Significant at .05.

Types of Practice and Geographic Location

Table 15 represents a comparison between types of practice of women veterinarians and the independent variable geographic location. The following hypothesis was tested. Hypothesis 10: There is no significant difference in the types of practice engaged in by women veterinarians when geographic locations are compared. A chi-square value of 51.00 was obtained with 51 degrees of freedom. Geographic location was found to be statistically insignificant with a level of significance at .4738. Using the recoded types of practice categories referred to earlier in this chapter, a chi-square value of 19.16 was obtained with 15 degrees of freedom and a level of significance at 0.21. The null hypothesis therefore failed rejection.

Table 15. Chi-Square for Comparisons between Types of Practice and Geographic Location

Types of Practice	Count / Row Pct / Col Pct / Tot Pct	Regions: Northern	Eastern	Southern	Western	Row Total
	Mixed (50% small/large	12	6	7	8	33
		36.4	18.2	21.2	24.2	8.3
		9.5	6.6	6.3	11.8	
		3.0	1.5	1.8	2.0	
	Mixed mostly large	0	2	0	0	2
		0.0	100.0	0.0	0.0	5.0
		0.0	2.2	0.0	0.0	
		0.0	0.5	0.0	0.0	

Table 15. (Continued)

Types of Practice	Count / Row Pct / Col Pct / Tot Pct	Regions: Northern	Eastern	Southern	Western	Row Total
	Mixed mostly small	7 46.7 5.6 1.8	4 26.7 4.4 1.0	3 20.0 2.7 0.8	1 6.7 1.5 0.3	15 3.8
	Small	73 31.6 57.9 18.4	53 22.9 58.2 13.4	60 26.0 53.6 15.1	45 19.5 66.2 11.3	231 58.2
	Large	7 43.8 5.6 1.8	5 31.3 5.5 1.3	2 12.5 1.8 0.5	2 12.5 2.9 0.5	16 4.0
	Equine	1 20.0 0.8 0.3	2 40.0 2.2 0.5	2 40.0 1.8 0.5	0 0.0 0.0 0.0	5 1.3
	Pharmacology	0 0.0 0.0 0.0	1 100.0 1.1 0.3	0 0.0 0.0 0.0	0 0.0 0.0 0.0	5 1.3
	Zoology/ Exotic	1 33.3 0.8 0.3	1 33.3 1.1 0.3	1 33.3 0.9 0.3	0 0.0 0.0 0.0	3 0.8
	Military	0 0.0 0.0 0.0	1 50.0 1.1 0.3	1 50.0 0.9 0.3	0 0.0 0.0 0.0	2 0.5

Table 15. (Continued)

Types of Practice	Count / Row Pct / Col Pct / Tot Pct	Regions: Northern	Eastern	Southern	Western	Row Total
Teaching		7	8	17	6	38
		18.4	21.1	44.7	15.8	9.6
		5.6	8.8	15.2	8.8	
		1.8	2.0	4.3	1.5	
Research		8	3	6	1	18
		44.4	16.7	33.3	5.6	4.5
		6.3	3.3	5.4	1.5	
		2.0	0.8	1.5	0.3	
Laboratory Animal		3	1	0	3	7
		42.9	14.3	0.0	42.9	1.8
		2.4	1.1	0.0	4.4	
		0.8	0.3	0.0	0.8	
Pathology		1	1	0	3	4
		25.0	25.0	0.0	42.9	1.0
		0.8	1.1	0.0	4.4	
		0.3	0.3	0.0	0.8	
Unemployed		0	0	1	0	1
		0.0	0.0	100.0	0.0	0.3
		0.0	0.0	0.9	0.0	
		0.0	0.0	0.3	0.0	
Child Rearing		3	1	3	1	3
		37.5	12.5	37.5	12.5	0.8
		2.4	1.1	2.7	1.5	
		0.8	0.3	0.8	0.3	
Retired		1	1	1	0	3
		33.3	33.3	33.3	0.0	0.8
		0.8	1.1	0.9	0.0	
		0.3	0.3	0.3	0.0	

Table 15. (Continued)

Types of Practice	Count / Row Pct / Col Pct / Tot Pct	Regions: Northern	Eastern	Southern	Western	Row Total
	Meat Inspection	2 28.6 1.6 0.5	1 14.3 1.1 0.3	3 42.9 2.7 0.8	1 14.3 1.5 0.3	7 1.8
	Public Health	0 0.0 0.0 0.0	0 0.0 0.0 0.0	3 100.0 2.7 0.8	0 0.0 0.0 0.0	7 0.8
	Column Total	126 31.7	91 22.9	112 28.2	68 17.1	397 100.0

Tabular Chi-Square = 50.99620 51 degrees of freedom

Significance - 0.4738

Types of Practice and Age

Table 16 represents a comparison between types of practice of women veterinarians and the independent variable of age. The following hypothesis was tested. Hypothesis 11: There is no significant difference in the types of practice engaged in by women veterinarians when age is compared. A chi-square value of 165.40 was obtained with 68 degrees of freedom. Age was found to be statistically significant with a level of significance at .00. Using the recoded age categories referred to earlier in the chapter, a chi-square value of 42.40 was obtained with 20 degrees of freedom and a level of significance at 0.01. The null hypothesis therefore was rejected.

Table 16. Chi-Square for Comparisons between Types of Practice and Age

Types of Practice	Count / Row Pct / Col Pct / Tot Pct	Age 20-29	30-39	40-49	50-59	+60	Row Total
	Mixed (50% small/large)	17	15	2	2	0	36
		47.2	41.7	5.6	5.6	0.0	8.6
		9.4	8.1	6.7	10.5	0.0	
		4.1	3.6	0.5	0.5	0.0	
	Mixed mostly large	1	0	1	0	0	2
		50.0	0.0	50.0	0.0	0.0	0.5
		0.6	0.0	3.3	0.0	0.0	
		0.2	0.0	1.4	0.0	0.0	
	Small	103	113	20	5	3	244
		42.2	46.3	8.2	2.0	1.2	58.2
		57.2	60.8	66.7	26.3	75.0	
		24.6	27.0	4.8	1.2	0.7	
	Mixed mostly small	7	6	1	0	0	15
		46.7	40.0	6.7	0.0	0.0	3.6
		3.9	3.2	3.3	0.0	0.0	
		1.7	1.4	0.2	0.0	0.0	
	Large	13	2	0	1	0	16
		81.3	12.5	0.0	20.0	0.0	3.8
		7.2	1.1	0.0	5.3	0.0	
		3.1	0.5	0.0	0.2	0.0	
	Pharmacology	0	1	0	0	0	1
		0.0	100.0	0.0	0.0	0.0	0.2
		0.0	0.5	0.0	0.0	0.0	
		0.0	0.2	0.0	0.0	0.0	
	Equine	2	2	0	1	0	5
		40.0	40.0	0.0	20.0	0.0	1.2
		1.1	1.1	0.0	5.3	0.0	
		0.5	0.5	0.0	0.2	0.0	

Table 16. (Continued)

Types of Practice	Count / Row Pct / Col Pct / Tot Pct	Age 20-29	30-39	40-49	50-59	60+	Row Total
	Zoology/ Exotic	1 33.3 0.6 0.2	2 66.7 1.1 0.5	0 0.0 0.0 0.0	0 0.0 0.0 0.0	0 0.0 0.0 0.0	3 0.7
	Military	0 0.0 0.0 0.0	2 100.0 1.1 0.5	0 0.0 0.0 0.0	0 0.0 0.0 0.0	0 0.0 0.0 0.0	2 0.5
	Teaching	17 44.7 9.4 4.1	19 50.0 10.2 4.5	1 2.6 3.3 0.2	1 2.6 3.3 0.2	0 0.0 0.0 0.0	20 4.8
	Research	9 45.0 5.0 2.1	10 50.0 5.4 2.4	1 5.0 3.3 0.2	0 0.0 0.0 0.0	0 0.0 0.0 0.0	20 4.8
	Laboratory Animal	3 33.3 1.7 0.7	5 55.6 2.7 1.2	1 11.1 3.3 0.2	0 0.0 0.0 0.0	0 0.0 0.0 0.0	9 2.1
	Pathology	0 0.0 0.0 0.0	3 75.0 1.6 0.7	1 25.0 3.3 0.2	0 0.0 0.0 0.0	0 0.0 0.0 0.0	4 1.0
	Unemployed	1 100.0 0.6 0.2	0 0.0 0.0 0.0	0 0.0 0.0 0.0	0 0.0 0.0 0.0	0 0.0 0.0 0.0	1 0.2
	Child Rearing	3 37.5 1.7 0.7	3 37.5 1.6 0.7	2 25.0 6.7 0.5	0 0.0 0.0 0.0	0 0.0 0.0 0.0	8 1.9

Table 16. (Continued)

Types of Practice	Count / Row Pct / Col Pct / Tot Pct	Age 20-29	30-39	40-49	50-59	60+	Row Total
	Retired	0 0.0 0.0 0.0	0 0.0 0.0 0.0	0 0.0 0.0 0.0	3 75.0 15.8 0.7	1 25.0 25.0 0.2	4 1.0
	Meat Inspection	2 28.6 1.1 0.5	1 14.3 0.5 0.2	0 0.0 0.0 0.0	4 57.1 21.1 1.0	0 0.0 0.0 0.0	7 1.7
	Public Health	1 25.0 0.6 0.2	2 50.0 1.1 0.5	0 0.0 0.0 0.0	1 25.0 5.3 0.2	0 0.0 0.0 0.0	4 1.0
	Column Total	180 43.0	186 44.4	30 7.2	19 4.5	4 1.0	419 100.0

Tabular Chi-Square = 165.40 51 degrees of freedom

Significance = 0.0000*

Types of Practice and Years in Profession

Table 17 represents a comparison between types of practice of women veterinarians and the independent variable of years in profession. The following hypothesis was tested. Hypothesis 12: There is no significant difference in the types of practice engaged in by women veterinarians when years in progession is compared. Using the recoded types of practice categories referred to earlier in the chapter, a chi-square value of 29.78 was obtained with 30 degrees of freedom. Years in

profession was found to be statistically insignificant with a level of significance at .48. The null hypothesis therefore failed rejection.

Table 17. Chi-Square for Comparisons between Types of Practice and Years in Profession

Types of Practice	Count / Row Pct / Col Pct / Tot Pct	Years in Profession 0-5	6-10	11-15	16-20	21-25	26-30	31+	Row Total
	Mixed (50% Small/ Large	20	8	5	3	0	0	0	36
		55.6	22.2	13.9	8.3	0.0	0.0	0.0	8.7
		8.8	7.3	11.1	16.7	0.0	0.0	0.0	
		4.8	1.9	1.2	0.7	0.0	0.0	0.0	
	Small	133	80	25	10	4	2	4	258
		51.6	31.0	9.7	3.9	1.6	0.8	1.6	62.2
		58.6	73.4	55.6	55.6	57.1	66.7	66.7	
		32.0	19.3	6.0	2.4	1.0	0.5	1.0	
	Large	15	1	1	1	0	0	0	18
		83.3	5.6	5.6	5.6	0.0	0.0	0.0	4.3
		6.6	0.9	2.2	5.6	0.0	0.0	0.0	
		3.6	0.2	0.2	0.2	0.0	0.0	0.0	
	Teaching	23	9	5	0	1	0	0	38
		60.5	23.7	13.2	0.0	2.6	0.0	0.0	9.2
		10.1	8.3	11.1	0.0	14.3	0.0	0.0	
		5.5	2.2	1.2	0.0	0.2	0.0	0.0	
	Research	14	3	2	0	1	0	0	20
		70.0	15.0	10.0	0.0	5.0	0.0	0.0	4.8
		6.2	2.8	4.4	0.0	14.3	0.0	0.0	
		3.4	0.7	0.5	0.0	0.2	0.0	0.0	
	All others	22	8	7	4	1	1	2	45
		48.9	17.8	15.6	8.9	2.2	2.2	4.4	10.8
		9.7	7.3	15.6	22.2	14.3	33.3	33.3	
		5.3	1.9	1.7	1.0	0.2	0.2	0.5	
	Column Total	227	109	45	18	7	3	6	415
		54.7	26.3	10.8	4.3	1.7	0.7	1.4	100.0

Tabular Chi-Square = 29.77412 30 degrees of freedom
Significance = 0.4773

Types of Practice and Years of Education

Table 18 represents a comparison between types of practice of women veterinarians and the independent variable of years of education. The following hypothesis was tested. Hypothesis 13: There is no significant difference in the types of practice engaged in by women veterinarians when years of education is compared. A chi-square value of 168.70 was obtained with 51 degrees of freedom. Years of education was found to be statistically significant with a level of significance at .00. Using the recoded categories referred to earlier in this chapter, a chi-square value of 90.48 was obtained with 15 degrees of freedom and a level of significance at 0.00. The null hypothesis was therefore rejected.

Table 18. Chi-Square for Comparisons between Types of Practice and Years of Education

Types of Practice	Count / Row Pct / Col Pct / Tot Pct	Years of Formal Education Beyond High School 2-4	5-7	8-10	11-13	Row Total
	Mixed (50% Small/ Large	0 0.0 0.0 0.0	23 63.9 9.0 5.5	13 36.1 9.3 3.1	0 0.0 0.0 0.0	36 8.6
	Mixed mostly Large	0 0.0 0.0 0.0	2 100.0 0.8 0.5	0 0.0 0.0 0.0	0 0.0 0.0 0.0	2 0.5
	Mixed mostly Small	0 0.0 0.0 0.0	11 73.3 4.3 2.6	4 26.7 2.9 1.0	0 0.0 0.0 0.0	15 3.6

Table 18. (Continued)

Types of Practice	Count / Row Pct / Col Pct / Tot Pct	Years of Formal Education Beyond High School: 2-4	5-7	8-10	11-13	Row Total
Small		1	168	69	6	244
		0.4	68.9	28.3	2.5	58.2
		25.0	65.9	49.3	30.0	
		0.2	40.1	16.5	1.4	
Large		0	12	4	0	16
		0.0	75.0	25.0	0.0	3.8
		0.0	4.7	2.9	0.0	
		0.0	2.9	1.0	0.0	
Equine		0	4	1	0	5
		0.0	80.0	20.0	0.0	1.2
		0.0	1.6	0.7	0.0	
		0.0	1.0	0.2	0.0	
Pharmacology		0	0	1	0	1
		0.0	0.0	100.0	0.0	0.2
		0.0	0.0	0.7	0.0	
		0.0	0.0	0.2	0.0	
Zoology/ Exotic		1	0	2	0	3
		33.3	0.0	66.7	0.0	0.7
		25.0	0.0	1.4	0.0	
		0.2	0.0	0.5	0.0	
Military		0	1	1	0	2
		0.0	50.0	50.0	0.0	0.5
		0.0	0.4	0.7	0.0	
		0.0	0.2	0.2	0.0	
Teaching		0	8	20	10	38
		0.0	21.1	52.6	26.3	9.1
		0.0	3.1	14.3	50.0	
		0.0	1.0	4.8	2.4	

Table 18. (Continued)

Types of Practice	Count / Row Pct / Col Pct / Tot Pct	Years of Formal Education Beyond High School				
		2-4	5-7	8-10	11-13	Row Total
Research		0	7	10	3	20
		0.0	35.0	50.0	15.0	4.8
		0.0	2.7	7.1	15.0	
		0.0	1.7	2.4	0.7	
Laboratory Animal		2	5	2	0	9
		22.2	55.6	22.2	0.0	2.1
		50.0	2.0	1.2	0.0	
		0.5	1.2	0.5	0.0	
Pathology		0	2	1	1	4
		0.0	50.0	25.0	25.0	1.0
		0.0	0.8	0.7	5.0	
		0.0	0.5	0.2	0.2	
Pathology		0	0	1	0	1
		0.0	0.0	100.0	0.0	0.2
		0.0	0.0	0.7	0.0	
		0.0	0.0	0.2	0.0	
Child Rearing		0	5	3	0	8
		0.0	62.5	37.5	0.0	1.9
		0.0	2.0	2.1	0.0	
		0.0	1.2	0.7	0.0	
Retired		0	1	3	0	4
		0.0	25.0	75.0	0.0	1.0
		0.0	0.4	2.1	0.0	
		0.0	0.2	0.7	0.0	

Table 18. (Continued)

Types of Practice	Count / Row Pct / Col Pct / Tot Pct	Years of Formal Education Beyond High School 2-4	5-7	8-10	11-13	Row Total
	Meat Inspection	0 0.0 0.0 0.0	3 42.9 1.2 0.7	4 57.1 2.9 1.0	0 0.0 0.0 0.0	7 1.7
	Public Health	0 0.0 0.0 0.0	3 75.0 1.2 0.7	1 25.0 0.7 0.2	0 0.0 0.0 0.0	4 1.0
	Column Total	4 1.0	255 60.9	140 33.4	20 4.8	419 100.0

Tabular Chi-Square = 168.70 51 degrees of freedom

Significance = 0.0000*

The conclusions indicated by this study were as follows:

1. Several independent variables were compared with levels of job satisfaction of women veterinarian. Three of the independent variables tested, age, years in the profession, and job factors (security and good income) were found to be statistically significant when compared to job satisfaction. The null hypotheses in those comparisons were therefore rejected, indicating their dependence upon levels of job satisfaction. Years of education, types of practice engaged in by women veterinarians, and geographic location were found to be statistically insignificant when compared with levels of job satisfaction.

The null hypotheses in each of their cases failed rejection.

2. Several independent variables were compared with fourteen job factors of veterinary medicine. The independent variable of age was found to be statistically significant when compared to the job factor when compared to the job factor of creativity. The null hypothesis was therefore rejected. The independent variable, types of veterinary practice, was found to statistically significant when compared to the job factors of associates, authority, learning, and variety. The null hypothesis was therefore rejected. The independent variable, years in profession, was found to be statistically insignificant when compared to fourteen veterinary job factors.

3. Several independent variables were compared with types of practice engaged in by women veterinarians. The independent variables of age and years of education were found to be statistically significant when compared with types of veterinary practice. The null hypotheses in each of their cases were therefore rejected. The independent variables of geographic location and years in profession were found to be statistically insignificant when compared to types of practice. The null hypotheses therefore, failed rejection.

CHAPTER V. DISCUSSION AND RECOMMENDATIONS

The purposes of this study were (1) to describe the relationship between job satisfaction and the professional parctice patterns of women veterinarians, and (2) to describe the relationship between job satisfaction and work factors among women veterinarians. There has been evidence that women veterinarians have been working in a limited and discriminatory job environment. A concern that limited opportunities for nontraditional women professionals might have a deleterious effect on their career development and job satisfaction suggested a need for this study. A demographic discussion of the status of women veterinarians, a discussion of the findings, conclusions, recommendations for improving the research, and recommendations for future research are presented in this chapter.

Discussion

The women veterinarian subjects in this study tended to be rather recent participants in their profession. Table 1 illustrated the mean age of women veterinarians to be 32.5 years old. This reflected the recent admission trend of the 1970's reported by the Department of Health, Education, and Welfare (1977) to include women into the veterinary profession. The relative recency of large numbers of women veterinarians was further reflected in Table 2, where the mean years in the profession were only 7.2 years.

A Modern Veterinary Practice staff report suggested that women veterinarians were stifled by sex-role stereotypes and obliged to choose small animal and educational (research and teaching) practices

("Women Veterinarians", 1974). Table 3 summarized the frequency distribution of women practitioners' contribution to the various types of veterinary practices. This study found that although women were represented in fifteen of the nineteen types of practices, 76.7 percent of the subjects were engaged in small animal, mixed but mostly small animal practice, research, or teaching. It is unclear from the results of this study whether most women veterinarians voluntarily chose to enter those few types of practices or whether they were influenced to select them because of male preconceptions of their abilities.

Researchers such as Ginzberg, et al. (1951), Herzberg, et al. (1959), Super and Overstreet (1960), and Katzell (1964) all emphasized the importance of value structure in the development of job satisfaction or dissatisfaction. Super (1963) found that workers, particularly from higher level occupations, view work as a means of self-actualization or implementing one's self-concept. Semi-skilled, unskilled workers, and many women tended to view their occupation as a means to other ends. In the Work Values Inventory, Super (1970) interpreted many women to value altruism, good supervision of their work, and surroundings as being important in their jobs. He further interpreted certain work values as being typical of professional and scientific workers. The values of learning opportunities, achievement, independence, variety, and creativity were associated with professional or scientific male occupations. The fourteen job factors

illustrated in Table 4 closely parallel Super's work values. The female subjects studied clearly recognized veterinary medicine as an occupation affording them male scientific values and not typically female values. Further study is indicated to determine if female veterinarian work values parallel male veterinarian work values. The relatively high value of security (6) may indicate the current economic uncertainty of the job market.

Campbell and Klein (1975) reported the median range of satisfaction among workers in job satisfaction studies to be 75 to 80 percent. The high level of job satisfaction (94.8%) of women veterinarians summarized in Table 5 suggest a widespread satisfaction of women veterinarians with their work and confirm Giuliani and Centra's (1968) job satisfaction study of women veterinary medical graduates from Michigan State University. This finding further confirms the high levels of job satisfaction findings of Cartwright (1978) and Haun (1975) on professional women from other occupations. This finding contributes to the controversy over the job satisfaction of professional women.

Hypothesis 1, there is no significant difference in the level of job satisfaction of women veterinarians when years in profession is compared, was rejected due to differences realized from the chi-square test of independence at the .05 level of significance. An examination of the chi-square Table 6 indicated higher levels of dissatisfaction among women veterinarians during their first five years of practice, with a dramatic tapering in later years. It follows that women vet-

erinarians differ in levels of job satisfaction when length of service is compared.

A factor that may contribute to this outcome is age. Glenn, Taylor, and Weaver (1977) found a direct positive relationship between age and job satisfaction. A close examination of Table 6 reveals that dissatisfaction among women veterinarians occurred most frequently during the first decade of service, tapering off during the second decade, with no dissatisfaction found between twenty-one and forty years of service.

Hypothesis 2, there is no significant difference in the level of job satisfaction when geographic location is compared, failed rejection due to a lack of differences realized by the chi-square test of independence at the .05 level of significance. A factor that may be contributing to this result is type of practice, for some geographic regions of the country contain large numbers of rural or urban associated veterinary practices.

Hypothesis 3, there is no significance in the level of job satisfaction of women veterinarians when job factors most afforded by their profession are compared, was rejected due to differences realized by the chi-square test of independence at the .05 level of significance. Hypothesis 3 was rejected because two of the factors (security and income) were statistically significant, while factors of associates and creativity approached significance. A closer examination of the chi-square comparison of job satisfaction with the factors of income

and security revealed higher percentages of dissatisfied subjects choosing these factors most afforded to them by their profession. This finding indicated that dissatisfied women veterinarians tended to perceive their profession in a more materialistic sense. There is no clear rejection criteria that exists for job factors; however, because differences do exist the decision was made to reject the hypothesis. It is important to note that factors found to be either significant or approaching significance were not factors typically valued by professional or scientific males referred to earlier by Super (1970). This could account for a disproportionate number of dissatisfied veterinarians within significant categories.

Hypothesis 4, there is no significant difference in the level of job satisfaction of women veterinarians when considering the independent variable types of practice, failed rejection due to a lack of differences realized by the chi-square test of independence at the .05 level of significance. There appears to be no relationship between job satisfaction and types of practice for women veterinarians. This further implies that the veterinary profession offers a great variety of satisfying experiences for women.

Hypothesis 5, there is no significant difference in the level of job satisfaction when considering the independent variable of age, was rejected due to differences realized by the chi-square test of independence at the .05 level of significance. An examination of Table 10 revealed higher levels of dissatisfaction among women veterinarians

between the ages of 20 and 40 years, with dramatic tapering during later years. A factor which may have contributed to this outcome was length of veterinary service.

Hypothesis 6, there is no significant difference in the level of job satisfaction of women veterinarians when years of education is considered, failed rejection due to a lack of differences realized by the chi-square test of independence at the .05 level of significance. This finding indicated that job satisfaction is not related to years of education among women veterinarians.

Hypothesis 7, there is no significant difference in job factors of women veterinarians when age is compared, was rejected because the factor of creativity was found to be statistically significant at the .05 level. Women veterinarians under thirty years particularly tended to recognize this occupation as affording them creative opportunities. Further, the factors of achievement, independence, and altruism all approached statistical significance. The changing values among veterinary generations and recent changes in opportunities to participate in different veterinary practices may account for the differences in the choice of most afforded job factors.

Hypothesis 8, there is no significant difference in job factors of women veterinarians when years in the profession are compared, failed rejection because none of the fourteen job factors reached a

level of statistical significance. It appears that there is no significant relationship between job factors and years in veterinary practice for women.

Hypothesis 9, there is no significant difference in job factors of women veterinarians when types of practice are compared, was rejected because of the factors of associates, authority, learning, and variety were found to be statistically significant. Veterinary medical practice represents a great variety of activities that might grant particular job factors.

Hypothesis 10, there is no significant difference in the types of practice engaged in by women veterinarians when geographic locations are compared, failed rejection due to a lack of differences realized by the chi-square test of independence test. Although many geographic locations are characterized by urban and rural related veterinary practices, it failed to be reflected in the types of practices engaged in by the subjects in the study.

Hypothesis 11, there is no significant difference in the types of practice engaged in by women veterinarians when age is compared, was rejected due to differences realized by the chi-square test of independence at the .05 level of significance. A high concentration of women veterinarians (87.4%) engaged in atypical veterinary specialties were between the ages of 20 and 40. A factor contributing to this result may have been a change in male veterinarians' perceptions of their abilities and competencies. Another factor contributing may

have been an expanding occupational outlook for new veterinary specialties that attract young graduates. The physical demands or long hours spent working at some specialties could limit older veterinarians. The extent of discrimination regarding type of practice reported by previous literature may have been misleading or outdated.

Hypothesis 12, there is no significant difference in the types of practice engaged in by women veterinarians when years in profession is compared, failed rejection due to a lack of differences realized by the chi-square test of independence at the .05 level of significance. This finding closely paralleled the above comparison between types of practice and age. One might expect a stagnant and discriminatory profession to have specific roles for new and tenured practitioners. This finding indicated that women veterinarians are entering a variety of practices regardless of their veterinary tenure.

Hypothesis 13, there is no significant difference in the types of practices engaged in by women veterinarians when years of education is compared, was rejected due to differences realized by the chi-square test of independence at the .05 level of significance. Those subjects having five to ten years of formal education beyond high school were found to participate in the greatest variety of veterinary specialties, while those with more formal education were concentrated in teaching activities. Residencies and other educational programs for veterinarians afford women opportunities to enter a variety of veterinary specialties.

Conclusions

Conclusions indicated from this study include:

1. A generally high level of job satisfaction existed among women veterinarians.

2. Women veterinarian subjects recognized veterinary medicine as an occupation affording them male professional and scientific values and not typically female values.

3. Job satisfaction was found to be related to the length of service and age of women veterinarians.

4. Job satisfaction was found to be related to some work factors perceived to be most afforded by the veterinary profession to women subjects in this study.

5. Chosen job factors were found to be related to age and types of veterinary practice engaged in by women.

6. Types of practice engaged in by women veterinarians were found to be related to age. Younger women veterinarians were engaged in a greater variety of veterinary specialties, indicating a breakdown of historical male stereotypes and preconceptions and an increase in opportunities for women within the profession.

7. Types of practice engaged in by women veterinarians were found to be related to years of post-high school formal education, indicating an increase in opportunities for women within the veterinary profession through a variety of professional continuing education opportunities.

Recommendations

Recommendations suggested that would improve this research include:

1. Replicate this study using a nationally representative population of male veterinarians so that sex differences can be compared.

2. Test-retest reliability studies could be conducted to determine the reliability and validity of the Kuder Personal Data Questionnaire in measuring levels of job satisfaction.

3. Additional studies should be conducted to determine the effects of other variables such as income, race, work values, etc., upon the tested dependent variables.

4. Replicate this study using other job satisfaction instruments to measure levels of job satisfaction.

5. Replicate this study without having the instrument adjunct to another.

6. Replicate this study with a larger return from the sample.

Recommendations that might improve future research are:

1. The job satisfaction of other nontraditional occupations for women should be computed and compared. Guidance professionals should be aware of the current status of women entering nontraditional occupations. In addition, an accurate assessment of job satisfaction levels among actively employed nontraditional workers might aid counselors' recommendations to their clients.

2. Further job satisfaction studies should consider the variable

of race.

3. Research efforts should be intensified in the barriers of non-traditional careers and their effect on the general career development of women.

4. Counselor training institutions should make aware to their trainees current changes in opportunities available within nontraditional careers and professions that either limit or expand women and minority career choice.

REFERENCES

Andberg, W., Follett, C., & Handel, D. Career influences, educational experiences, and professional attitudes of women and men in veterinary medicine. Journal of College Student Personnel, 1979, 20 (2), 158-165.

Armistead, W. Changing face of veterinary medicine. Journal of American Veterinary Medical Association, 1966, 145, 1147-1151.

A.V.M.A. Report. Male practitioners earn more. D.V.M. Magazine, 1979, 10 (3), 1.

Campbell, D., & Klein, K. Job satisfaction and vocational interests. Vocational Guidance Quarterly, 1975, 24, 125-131.

Cartwright, L. Career satisfaction and role harmony in a sample of young women physicians. Journal of Vocational Behavior, 1978, 12, 184-196.

Centers, R., & Bugental, D. Instrinsic and extrinsic job motivation among different segments of the working population. Journal of Applied Psychology, 1966, 50, 193-197.

Crawford, J. Career development and career choice in pioneer and traditional women. Journal of Vocational Behavior, 1978, 12, 129-139.

Crites, J. O. Vocational Psychology: the Study of Vocational Behavior and Development. New York: McGraw Hill, 1969.

Daniels, M. Women veterinarians. Progressive Woman, 1972, ?, 6-7.

Farly, J. Women at work: name styles and job level. Journal of Employment Counseling, 1976, 13 (4), 174.

Ginzberg, E., Ginsburg, S., Axelrod, S., & Herma, J. Occupational Choice and Work. New York: Columbia University Press, 1951.

Giuliani, B., & Centra, J. The woman veterinarian. Personnel and Guidance Journal, 1968, 46 (10), 971-975.

Glenn, N., Taylor, P., & Weaver, C. Age and job satisfaction. Journal of Applied Psychology, 1977, 62 (2), 189-193.

Gordon, L., & Dube', W. Medical school enrollments, 1971-72 through 1975-76. Journal of Medical Education, 1976, 51, 144-146.

Harway, M., & Astin, H. Sex Discrimination in Career Counseling and Education. New York: Praeger, 1977.

Haun, H. A Study of Work Satisfaction and Dissatisfaction Among Selected Women Leaders in Higher Education. (Doctoral dissertation, The University of Tennessee, 1975). Dissertation Abstracts International, 1975, 36, 1330.

Heins, M., Smock, S., & Martindale, S. Current status of women physicians. International Journal of Women's Studies, 1978, 1, 294-305.

Herzberg, F. Work and the Nature of Man. Cleveland: The World Publishing Company, 1969.

Herzberg, F., Mausner, B., Peterson, R., & Capwell, D. Job Attitudes: Review of Research and Opinion. Pittsburgh: Psychological Service of Pittsburgh, 1957.

Herzberg, F., Mausner, B., & Snyderman, B. Motivation to Work. New York: John Wiley and Sons, 1959.

Hoppock, R. Job Satisfaction. New York: Harper and Brothers, 1935.

Hulin, C., & Smith, P. C. A linear model of job satisfaction: A reexamination. Personnel Psychology, 1978, 31, 537-548.

Katzell, R. Personal values, job satisfaction and job behavior. H. Boron (Ed.), Man in a World at Work. Boston: Houghton Mifflin, 1964.

Kavanagh, M., & Halpern, M. The impact of job level and sex differences on the relationship between life and job satisfaction. Academy of Management Journal, 1977, 20 (1), 66-73.

Keith, P., & Glass, L. Sex differences in the perception of job factors. College Student Journal, 1977, 11, 43.

Kosa, J., & Coker, R. The female physician in public health conflict and reconciliation of sex and professional roles. Sociology and Social Science Research, 1965, 49, 294-305.

Kuder, G. F. Kuder Occupational Interest Survey General Manual. Chicago: Scientific Research Associates, 1966.

Kuder, G. Kuder Occupational Interest Survey General Manual. Chicago: Scientific Research Associates, 1973.

Kuder, F. Activity Interests and Occupational Choice. Chicago: Science Research Associates, 1977, 144-146.

Locke, E. The nature and causes of job satisfaction. M. Dunnette (Ed.), Handbook of Industrial and Organizational Psychology. Chicago: Rand McNally, 1976.

Loftquist, L., & Dawis, R. Vocational needs, work reinforcers, and job satisfaction. The Vocational Guidance Quarterly, 1975, 24, 131-135.

Nie, N., Hull, C., Jenkins, J., Steinbrenner, K., & Brent, D. SPSS: Statistical Package for the Social Sciences (second edition). New York: McGraw-Hill, 1975.

Nord, W. Job satisfaction reconsidered. American Psychologist, 1977, 32, 1026-1035.

Osipow, S. Theories of Career Development. Englewood Cliffs, New Jersey: Prentice Hall, 1973.

O'Toole, J. Work, Learning, and the American Future. San Francisco: Jossey-Bass, 1977.

Powers, M., & Holmberg, J. Occupational status scores: changes introduced by the inclusion of women. Demography, 1978, 15 (22), 183-190.

Psathas, G. Toward a theory of occupational choice for women. Sociology and Social Research, 1968, 52, 253-268.

Quinn, R., Starnes, G., & McCullough, M. Job Satisfaction: Is There a Trend? Washington, D.C.: U.S. Department of Labor, U.S. Government Printing Office, 1974.

Roe, A. Women in science. Personnel and Guidance Journal, 1966, 44, 784-787.

Rossi, A. Barriers to the career choice of engineering, medicine, or science among American women. J.S. Matfield & C.G. VanAken (Eds.), Women and the Scientific Professions. Cambridge, Mass.: M.I.T. Press, 1965.

Roth, R., Hershenson, D., & Hilliard, T. The Psychology of Vocational Development: Readings in Theory and Research. Boston: Allyn and Bacon, 1970.

Sauser, W., & York, M. Sex differences in job satisfaction: A re-examination. Personnel Psychology, 1978, 31, 537-548.

Schneider, S. The Availability of Minorities and Women for Professional and Managerial Positions, 1970-1985. Philadelphia: University of Pennsylvania Press, 1977.

Scully, M. Women earn record number of doctoral degrees. Chronicle of Higher Education, Spet. 4, 1979, 16.

Shapiro, H., & Stern, L. Job Satisfaction: male and female, professional and nonprofessional workers. Personnel Journal, 1975, 54, 358-407.

Super, D. The structure of work values in relation to status, achievement, interests, and adjustments. Journal of Applied Psychology, 1962, 46 (4), 231-238.

Super, D. Self-concepts in vocational development. In D. E. Super, R. Stareshevsky, N. Matlin, and J. Jordaan. Career Development: Self-Concept Theory. New York: College Entrance Examination Board, 1963.

Super, D. Work Values Inventory Manual. Boston: Houghton Mifflin Company, 1970.

Super, D., & Overstreet, P. The Vocational Maturity of Ninth Grade Boys. New York: Bureau of Publications, Teachers College, Columbia University, 1960.

United States Department of Health, Education and Welfare--Office of Euducation Summary Report on Bachelors and Higher Degrees Conferred During the Year 1975-1976, Washington, D.C., U.S. Government Printing Office, 1977.

United States Department of Labor. Handbook of Labor Statistics: 1975. Washington, D.C.: U.S. Government Printing Office, 1975.

Vetter, B., Babco, E., McIntire, J. Professional Women and Minorities: A Manpower Data Resource Service (2nd Edition). Washington, D.C.: Scientific Manpower Commission, 1978.

Weaver, C. N. Negro-white differences in job satisfaction. Business Horizons, 1974, 17, 67-72.

Women Veterinarians. Modern Veterinary Practice, 1974, 55 (12), 933-940.

Wrenn, C. Human values and work in American life. In H. Borow (Ed.), Man in a World at Work. Boston: Houghton Mifflin, 1964.

Zuckerman, H., & Cole, J. Women in American Science. Minerva, 1975, 13, 82-102.

Zytowski, D. Predictive validity of the Kuder occupational interest Survey: a 12- to 19-year follow-up. Journal of Counseling Psychology, 1976, 23, 221-223.

APPENDIX: KUDER PERSONAL DATA QUESTIONNAIRE

PERSONAL DATA QUESTIONNAIRE # _____

The following questions are about your work and what you think of it. Your answers, in conjunction with your responses to the interest inventory, will supply the means to help people discover the occupations for which they are suited in the light of their preferences and abilities. Your answers will be kept strictly confidential.

Do you currently describe your occupation as a veterinarian?
___ Yes ___ No. If not, what is your occupation? _____

Please state briefly the main duties in your occupation:

_____

_____

_____

Which describes your practice best? ___ Large animal ___ Small animal
___ Mixed ___ Other (Describe): _____

How long have you been in this occupation? ___ years

How many years of formal education beyond high school have you had?
___ years

Other occupations you have practiced:

_____

Your Age: ____ (In order to assure that the scale is representative of all ages.)

Do you describe yourself as: (Check one in order to assume that the scale is representative of all groups.)

___ Caucasian
___ Oriental, Asian
___ Black, Afro-American
___ American Indian (Including Eskimo & Aleut)
___ Hispanic
___ Other

(continued)

PERSONAL DATA QUESTIONNAIRE (Continued)

If you have the choice, which of the following would you choose, if each paid the same? (Check one.)

___ The work you have now.

___ The same work, but with some changes in conditions, place or people you work with.

___ A different field of work entirely.

Where shall we mail your interest profile?

(This information is required only if you wish to receive a copy of your interest profile. If will not be revealed to anyone, nor used in any way, except to return your interest profile.)

_____
Name

_____
Street Address

_____
City State Zip Code

Thank you. Be sure to return this questionnaire with the green answer sheet.

(OVER PLEASE)

From the list of work factors which follows, check the three which your occupation of veterinary medicine most affords you:

_____ A secure future

_____ Prestige among other occupations

_____ A good income

_____ The opportunity to do something worthwhile

_____ A pleasant work environment

_____ Good co-workers

_____ A chance to assume authority over others

_____ Good supervision of my work

_____ The opportunity to be independent in my work

_____ Being able to help people

_____ Freedom to experiment with new ideas and ways

_____ That it makes a whole way of life for me

_____ The chance to continue learning if I want

_____ The variety; the lack of sameness in the work

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