DOCUMENT RESUME

ED 096 449 CE 002 057

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TITLE Perceptions of Female Vocational Faculty Members as Seen by Themselves and College Administrators.
INSTITUTION Pennsylvania State Univ., University Park. Dept. of Vocational Education.
SPONS AGENCY Pennsylvania State Dept. of Education, Harrisburg. Bureau of Vocational, Technical, and Continuing Education.
PUB DATE Aug 74
NOTE 150p.

EDRS PRICE MF-$0.75 HC-$6.60 PLUS POSTAGE
DESCRIPTORS Administrator Attitudes; College Faculty; *Community Colleges; Educational Research; Educational Sociology; Equal Opportunities (Jobs); Family Influence; Goal Orientation; Professional Recognition; *Role Perception; Statistical Studies; Tables (Data); Teacher Attitudes; Vocational Development; Vocational Education; *Vocational Education Teachers; *Women Teachers

ABSTRACT

The study consists of four main parts and was designed to: (1) ascertain the perceptions of public community college presidents regarding professional women vocational faculty; (2) ascertain the perceptions of female vocational education faculty members at suc. colleges; (3) compare those perceptions; and (4) determine the demographic characteristics of professional women in vocational education at the public community colleges. The perceptions sought were of: dual-role conflict, advancement possibilities, and career aspirations. An equalitarian perception scale and a female demographic data questionnaire were sent to randomly selected college presidents and female faculty. The findings are presented in both graphic and tabular form, with textual explication and discussion. It was found that both the college presidents and the women faculty members perceive some degree of role conflict in the women; administrators and women faculty agreed that women were not as likely to achieve positions of leadership as men, although the administrators perceived more opportunity for the women than the women themselves did. Administrators perceived in women faculty only moderate career aspiration; the findings from the women's sample upheld that perception. (AJ)

THE PENNSYLVANIA STATE UNIVERSITY
DEPARTMENT OF VOCATIONAL EDUCATION

PERCEPTIONS OF FEMALE VOCATIONAL FACULTY MEMBERS AS SEEN BY THEMSELVES AND COLLEGE ADMINISTRATORS

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Pennsylvania Department of Education
Bureau of Vocational Education
(Project No. 14-3064)

VOCATIONAL — TECHNICAL EDUCATION **Research Report**

Perceptions of Female Vocational Faculty Members as Seen by Themselves and College Administrators

by

Elizabeth Camp King

The Pennsylvania State University

University Park, Pennsylvania

August, 1974

Pennsylvania Department of Education
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Preface

The findings reported herein are a part of a larger study concerning female vocational faculty members and several types of educational institutions. Included in the overall effort are randomly selected public community-junior colleges, area vocational schools, comprehensive secondary schools, and post-secondary proprietary schools. Each of these became the focal point for separate sub-studies, one of which has its findings reported here.

The series of four sub-studies originated in response to a national concern for the status and roles of professional women in vocational education. A manifestation of this concern was expressed in a resolution proposed by the house of delegates of the American Vocational Association at its Chicago Convention of December, 1972. This resolution read as follows:

> RESOLVED, that the American Vocational Association Board of Directors authorize a study of professional employment in Vocational Education with regard to the number of males and females at every level of the profession, the salaries paid to each category of employee, and identify any restrictions in promotional opportunities because of sex.

This is the first of the four sub-studies to be completed and it deals with female vocational faculty members in public community-junior colleges. An important aspect of this inquiry is the identification of the perceptions of these female faculty members in the three broad areas of dual-role conflict, career aspirations, and career expectations. Their self perceptions with regard to selected questions in these three broad areas were compared with those of community college presidents in order to identify differences and similarities. Several important discrepancies were found and carefully documented herein. Also included in

this effort is the identification of several important status components of female vocational faculty members, which are of particular value for comparative purposes. The final effort will be made when all sub-studies are completed, and the result will be a synthesized report of the four inquiries.

The findings reported herein are of great importance in the continuing efforts in identifying components in vocational education in which female faculty are in greatest need of assistance relative to matters of status, career aspirations, dual-role conflicts, and career expectations.

The sample was carefully selected in a random manner, and it is assumed the findings are not untypical of public community-junior college women faculty and presidents. Therefore, the findings, conclusions, and recommendations reported herein by Elizabeth Camp King would be of considerable value for others interested in vocational female faculty in particular and public community-junior colleges in general.

The study was supported by federal-state funds allocated by the Bureau of Vocational Education of The Pennsylvania Department of Education of The Pennsylvania State University. Special thanks is offered to Elizabeth Camp King for her long term efforts in this research.

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ACKNOWLEDGMENTS

The author is particularly grateful to her thesis advisor, Dr. Angelo C. Gillie, Sr., for his support and advice throughout the study. Gratitude is also expressed to Dr. Seymour T. Brantner for his thorough critique of the final draft of the manuscript. Dr. Thomas E. Long and Dr. George R. Hudson are also acknowledged for their encouragement and constructive comments.

A special acknowledgment is given to Kathy Spicer for her assistance in the typing and preparation of the final manuscript.

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BACKGROUND AND STATEMENT OF THE PROBLEM

Introduction

Women have become one of the foremost problems in the United States. Almost overnight they have achieved a status previously reserved for such downtrodden minorities as Blacks and retarded children. The literature, both popular and professional, is replete with articles delineating the problems of women and suggesting ways to meet them (Lewis, 1965).

The current uproar concerning the status of women in our society and their agitation for political, civil and social equality is not new. As early as 1850 in the State of Ohio a convention concerning women's rights was held. The following is a brief summary of the principal demands.

1. Education in primary and secondary schools, universities, medical, legal and theological institutions.
2. Partnerships in industry.
3. An equal share in the formation of laws, through legislative assembilies, courts, and executive offices, (Women's Rights Convention, Spring, 1850).

Only a decade later (1860) John Stuart Mill wrote in "The Subjection of Women":

> The second benefit to be expected from giving to women the full use of their facilities, by leaving them the free choice of their employments and opening to them the same field of occupation and the same prizes and encouragements as to other human beings, would be that of doubling the mass of mental faculties available for the higher service of humanity (Mill, 1860, p. 123).

It has been over a century since Mill wrote "The Subjection of Women" and the convention for women was held in Ohio. However, one would find it difficult to argue that changes in women's education and occupational opportunities have doubled the intellectual output of higher education or that they have become co-equals in government and industry.

In spite of the fact that women comprise four-fifths of the elementary and almost one-half of the secondary teaching staff, recent figures reveal that women total less than one-fourth of the faculty in higher education (Maul, 1969). This situation seems to indicate that the female population still represents a pool of underdeveloped talent.

The study is intended to delineate both the situation of women faculty at public community colleges and to contribute to increased understanding between college administrators and vocational female faculty.

Need for the Study

With the increased concern for equal employment opportunities for women, it is indeed timely that we concern ourselves with the present status of women in the professional ranks of vocational education. Nationally, the need for this assessment is indicated by a recent finding. The Women's Bureau of the U.S. Department of Labor has published statistics that show that fully employed women of either white or minority races continue to earn less than their male counterparts. While this fact is known to be the case in the overall labor force, it is important to determine if this is also true in vocational education.

Expressing a deep concern over this, the American Vocational Association passed a Resolution at its recent Chicago convention which reads as follows:

> RESOLVED, that the American Vocational Association Board of Directors authorize a study of professional employment in Vocational Education with regard to the number of males and females at every level of the profession, the salaries paid to each category of employee, and identify any restrictions in promotional opportunities because of sex.

If the data indicated in the AVA Resolution are obtained and properly analyzed, relationships between them and sex can be identified with a high degree of accuracy. The findings could lead to suggestions which would assist in the identification of professional employment opportunities for women in vocational education (Gillie, 1973).

Definition of Terms

1. Dual-role conflict:

   Role conflict occurs when a person occupies two or more positions simultaneously and when the role expectations of one are seemingly incompatible with the role expectations of the other (Sabin, 1964).

2. Administrators:

   For the purposes of this study, this term refers to public community presidents.

Statement of the Problem

This study consisted of four main parts and was designed to:

1. Ascertain the perceptions of public community college presidents regarding professional women vocational faculty in terms of: dual-role conflict, advancement possibilities, and career aspirations.
2. Ascertain the perceptions of female vocational education faculty members at public community colleges with regard to: dual-role conflict, advancement possibilities, and career aspirations.
3. Compare the perceptions of female vocational faculty members as seen by themselves and college administrators.
4. Determine the demographic characteristics of professional women in vocational education at public community colleges.

To complete Part 1 of the study the following questions were investigated:

Question 1. How do public community college presidents perceive professional women vocational faculty in terms of:

a. dual-role conflict?

b. advancement possibilities?

c. career aspirations?

Question 2. What are the relationships between administrators' total number of years teaching and their perceptions of the female faculty members:

a. dual-role conflict?

b. advancement possibilities?

c. career aspirations?

Question 3. What are the relationships between the administrators' total number of years in administration and their perceptions of the female faculty members:

a. dual-role conflict?

b. advancement possibilities?

c. career aspirations?

Question 4. What are the relationships between school size and the administrators' perception of the female faculty members:

a. dual-role conflict?

b. advancement possibilities?

c. career aspirations?

Table 1.1 illustrates the following dependent and independent variables examined in questions 2, 3, and 4.

Question 5. What are the employment characteristics of public community college presidents in terms of:

a. teaching experience?

b. administration experience?

To complete Part 2 of the study, the following questions were investigated:

TABLE 1.1

Dependent and Independent Administrator's Demographic and Career Perception Variables

Dependent Variables	Independent Variables[1] A	B	C
1. What is the relationship between the administrator's total number of years teaching and how he perceives the female faculty members:	X	X	X
2. What is the relationship between the administrator's total number of years in administration and how he perceives the female faculty members:	X	X	X
3. What is the relationship between school size and the administrator's perception of female faculty members:	X	X	X

[1] A Dual-role conflict
B Advancement possibilities
C Career aspirations

Question 6. How do female vocational education faculty members at public community colleges perceive their:

a. dual-role conflict?

b. advancement possibilities?

c. career aspirations?

To complete Part 3 of the study, the following questions were investigated:

Question 7. What are the statistically significant differences between how female faculty perceive their dual-role and how their dual-role is perceived by administrators?

Question 8. What are the statistically significant differences between how female faculty perceive their advancement possibilities and how their advancement possibilities are perceived by administrators?

Question 9. What are the statistically significant differences between the perceived aspirations of professional women and the aspiration levels of these women as perceived by administrators?

Question 10. Is there a significant difference between the total Equalitarian Perception Scale of professional women and that of administrators?

To complete Part 4 of the study the following questions were investigated:

Question 11. What are the demographic characteristics of public community college vocational female faculty in terms of:

a. vocational area?

b. highest degree attained?

c. academic rank?

d. marital status?

e. number of children?

f. distribution of children by age group?

g. age?

h. salary?

i. work experience outside education?

j. teaching experience at present community college?

k. teaching experience by level (i.e., elementary, secondary, two-year post-secondary, four-year college)?

l. promotions received at present institution?

m. laboratory and lecture hours at present institution?

Question 12. What are the relationships between the salary of female vocational faculty members and their:

a. age?

b. number of years employed outside education?

c. number of years employed at present institution?

d. highest degree attained?

e. marital status?

Table 1.2 illustrates the following dependent and independent variables examined in question 12.

TABLE 1.2

Dependent and Independent Professional Women's Demographic Variables

Dependent Variables	Independent Variables[1] A	B	C	D	E
1. What is the relationship between salary and:	X	X	X	X	X

[1] A Age
B Number of years employed outside education
C Number of years employed at present institution
D Highest degree attained
E Marital status

Questions 13 through 19

13. What is the relationship between highest degree held and:

14. What is the relationship between marital status and:

15. What is the relationship between number of children and:

16. What is the relationship between number of years employed outside education and:

17. What is the relationship between number of years at present institution and:

18. What is the relationship between age and:

19. What is the relationship between salary and:

    a. dual-role conflict?

    b. advancement possibilities?

    c. career aspirations?

Table 1.3 illustrates the following dependent and independent variables examined in Questions 13 through 19.

TABLE 1.3

Dependent and Independent Professional Women's Demographic and Perception Variables

Dependent Variables	Independent Variables[1] A	B	C
1. Highest degree held	X	X	X
2. Marital status	X	X	X
3. Number of children	X	X	X
4. Years employed outside education	X	X	X
5. Years employed at present institution	X	X	X
6. Age	X	X	X
7. Salary	X	X	X

[1] A Dual-role conflict
B Advancement possibilities
C Career aspirations

II

LITERATURE REVIEW

Status

The position of women in colleges and universities in the United States has long been a focus of more rhetoric than research (Husbands, 1972). Burstyn and Dolan express contrasting views concerning the gains made by women in higher education in the past century. Dolan (1972) is optimistic about the future gains to be made; however, in sharp contrast Burstyn (1973) is more analytical showing that while the number of women obtaining degrees at all levels has increased during this century, the percentage of degrees awarded to women dropped after World War II and is only currently returning to the pre-war level.

Although the number of women graduating from high school exceeds that of males, women receive only 40 percent of the bachelor's degrees, 34 percent of the master's degrees and 12 percent of the doctorates awarded in 1969 (Harris, 1970). Despite the fact that teaching has been traditionally viewed as an appropriate profession for women, they constitute only nine percent of college and university faculties and receive salaries $1000 to $1500 lower than those paid to their male colleagues (Green, 1970).

When researching the status of women in higher education we find one universal rule: the higher, the fewer. Only one percent of presidents of colleges and universities are lay* women and their proportions

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*The term is used to describe members of a religious sect.

are declining (Harris, 1970). There are 2847 colleges and universities in the United States and 98 have women presidents but only 23 are lay women (Harris, 1970).

In seeking employment as faculty, women are discriminated against by all kinds of institutions in higher education (Simpson, 1968). Simpson's research concerning employing agents' attitudes toward academic women in higher education led to four major conclusions:

1. When all variables were equal except sex, the male candidate was typically chosen for employment. This finding was consistent with the opinions of Caplow and McGee (1959), Leonard (1963), and Anastasi (1967).
2. Women were hired if they were superior to and not equal to the qualified males.
3. There was significantly less discriminatory employment attitudes towards academic women representing fields that have typically employed women.
4. Subjects who rejected female candidates for higher education also exhibited negative attitudes toward women in general.

These findings are supported by Harris (1970), Parrish (1962), and Epstein (1970).

A study (Parrish, 1962) on the distribution of women faculty at ten high-endowment (Chicago, Columbia, Cornell, Harvard, Johns Hopkins, M.I.T., Northwestern, Princeton, Stanford, and Yale) and ten high enrollment (Berkeley, C. C. N. Y., Indiana, Illinois, Michigan, Michigan State, Minnesota, N.Y.U., Ohio and Pennsylania State) institutions of higher education in 1960 resulted in the following statistics:

At the high endowment institutions:

1. 2.6 percent of the full professors were women.
2. 7.5 percent of the associate professors were women.
3. 8.5 percent of the assistant professors were women.
4. 9.8 percent of the instructors were women.

At the high enrollment institutions:

1. 4.3 percent of the full professors were women.
2. 10.1 percent of the associate professors were women.
3. 12.7 percent of the assistant professors were women.
4. 20.4 percent of the instructors were women.

The table below (Harris, 1970) shows statistics for the same four ranks from five of the institutions in Parrish's study and two additional institutions of comparable standing, Brown and U.C.L.A.

The overall average percentages of women at each level are:

1. 3.0 percent of the full professors are women.
2. 5.9 percent of the associate professors are women.
3. 7.0 percent of the assistant professors are women.
4. 21.2 percent of the instructors are women.

Only at the instructor level is there a marked increase in the percentage of women since 1960. Harris states that one would expect the women who were associate professors in 1960 would be full professors in 1970, raising those average percentage figures to the 7.5 percent reported by Parrish. Similarly, the assistant professors and instructors should also have gained proportionally. Table 2.1 shows they did not.

TABLE 2.1

Percentages of Women Faculty at Selected Institutions 1969-70

Institution	Professor	Associate	Assistant	Instructor
Brown University	05	06	05	04
University of California Berkeley	02.3	05.3	05	18.9
University of California Los Angeles	03.6	07	10	36
University of Chicago	02	06	11.6	12.2
Columbia University (excl. Barnard)	02.2	01.5	06.6	07.2
University of Michigan	04.3	10.8	01.2	40
Stanford University	01.6	04.4	09.6	30

Similar findings are true at the University of Chicago in 1969:

1. 2.2 percent of the full professors were women.
2. 6.0 percent of the associate professors were women.
3. 27 percent of the lecturers were women.
4. 24 percent of the research assistants were women.
5. 57 percent of the undergraduate lecturers were women.

At Columbia over 50 percent of the men who earned their Ph.D.'s in 1963-64 have been given tenure; none of the women in this group have been promoted to rank of associate professor with tenure (Harris, 1970).

Most women in colleges and universities are likely to be at the bottom of the academic hierarchy, tend to be in marginal positions, and experience difficulty achieving promotions (Oltman, 1970).

Critics may say that hidden in these statistics is the fact that female faculty members do not have as much experience as their male counterparts. Forty-eight percent of the women compared to 34 percent of the men have 20 or more years of professional teaching experience (Dunham, et al., 1966).

It seems reasonable to conclude that the overall distribution of women in institutions of higher education is highly suggestive of discriminatory attitudes; however, research into this problem is handicapped by the obvious difficulty related to the data gathering procedures.

The status of women in the Pennsylvania Department of Education is reflective of the status of women in other areas of higher education. The findings reveal that from August 1, 1970, to December 1, 1971, there was no significant increase in the numbers of women employees (Table 2.2). Furthermore when considering salary, the upper level for women remained far below the upper value for men (Beers and Fields, 1972).

A common explanation for the relatively low proportion of professional women in the Pennsylvania Department of Education is that the supply of qualified women is limited. However, the Bureau of Educational Statistics indicates that in the public school districts in Pennsylvania:

TABLE 2.2

Selected Status Factors of Women in
The Pennsylvania Department of Education

August 1, 1970	December 1, 1971
Women numbered 104 (20 percent)	Women numbered 108 (21 percent)
Men numbered 418 (80 percent)	Men numbered 415 (79 percent)
No women, but 10 percent of the men, were above pay range 43	No women, but 11 percent of the men, were above pay range 45
The highest biweekly salary for women was $651; 13 percent of the men earned more than $651	The highest biweekly salary for women was $684; 16 percent of the men earned more than $684

1. 12,495 women have master's degrees.
2. 1045 women have master's degrees plus one year.
3. 824 women have master's degrees plus two years.
4. 126 women have doctorate degrees.

This supply of qualified women would be even greater if those employed in colleges and universities had been considered as possible candidates for Department of Education positions.

While there are little data related to professional women employed at the post-secondary level in vocational education, it seems valid to draw some inferences from the data presented in Table 2.3 (U.S. Department of Health, Education, and Welfare, 1973).

Post-secondary enrollment by sex reveals that 60.7 percent are male and 39.3 percent are female. By present standards of equality, females

appear to be fairly represented. However, when we examine sex distribution by program we find obvious sex typing by occupation. According to Merton (1968), "Occupations can be described as 'sex-typed' when a very large majority of those in them are of one sex and when there is an associated normative expectation that this is as it should be" (p. 67).

The limited curricula choices in vocational education for women are, for the most part, extensions of the work women have done in the home. Females make up 87.7 percent of those in health, 92.8 percent of those in home economics and 75.5 percent of those in office programs.

No major occupational group illustrates as well as the skilled trades the effect of the concept of "sex-typing" by occupations. Technical programs are 92.3 percent male and trade and industry programs are 89.1 percent male.

The basic requirements that run throughout the skilled trades are finger and hand dexterity and eye-hand coordination (abilities required for typing and other business occupations performed by women) together with an aptitude for form and space perception (Hedges, 1970).

The aptitudes required for such skilled crafts as office machine repairman, radio and television repairman, automobile mechanic and aircraft mechanic are found as frequently among female as male students (U.S. Department of Labor, 1958).

Nor should strength requirements in the trades exclude women. Many of these occupations require "light strength," defined as the ability to lift a maximum of 20 pounds.

TABLE 2.3

Percentage Distribution of Enrollment in Vocational Education Programs, by Sex
Fiscal Years 1970-1977

	1970	1971	1972	1977 (Projected)
Total	100.0	100.0	100.0	100.0
By Level				
All Programs				
Male	45.0	44.3	44.6	43.0
Female	55.0	55.7	55.4	57.0
Secondary				
Male	37.4	--	--	36.0
Female	62.6	--	--	64.0
Post-secondary				
Male	60.7	--	--	60.0
Female	39.3	--	--	40.0
Adult				
Male	53.9	--	--	52.0
Female	46.1	--	--	48.0
By Program				
Agriculture				
Male	--	95.9	94.6	92.0
Female	--	4.1	5.4	8.0
Distribution				
Male	--	55.3	54.7	54.0
Female	--	44.7	45.3	46.0
Health				
Male	--	12.3	15.3	17.0
Female	--	87.7	84.7	83.0
Home Economics				
Male	--	7.2	8.4	10.0
Female	--	92.8	91.6	90.0
Office				
Male	--	24.5	23.6	25.0
Female	--	75.5	76.4	75.0

TABLE 2.3 (Continued)

	1970	1971	1972	1977 (Projected)
Total	100.0	100.0	100.0	100.0
Technical				
Male	--	92.3	90.2	91.0
Female	--	7.7	9.8	9.0
Trades and Industry				
Male	--	89.1	88.3	87.0
Female	--	10.9	11.7	13.0

In summary, the occupational dispersion of women in vocational education programs is reflective of the distribution of women faculty in vocational programs. The typing of occupations as male or female has consequences for both sexes.

It is evident that the dynamics of recruitment and involvements of women in occupational groups that are sex typed as "masculine" militates against the participation of women. Sex-typing by occupation is a reality in vocational education, since the traditional route to teaching a skill in a post-secondary institution is preceded by actual employment in the field. Furthermore, these processes are integral to the culture and may not be intentionally exclusionary.

Dual Role Conflict

The role conflict literature stresses ways in which individuals are able to cope with competing and conflicting obligations. There is no social role toward which there is no ambivalence. Whether the role is anticipated in the future or one currently held, there are negative as

well as positive feelings toward every role. It follows from this that one can anticipate some ambivalence among women toward all family and work roles (Rossi, 1966).

The mass media perpetuates the illusion that the traditional role of women is changing from traditional to quasi-equalitarian and finally to fully equalitarian. However, it has previously been documented that a professional career with relatively high pay and status is difficult for a woman to achieve. Often a career necessitates rejection of established cultural norms (over one-half of professional women surveyed by USOE have never been married contrasted to but 12 percent of the men) and subjection to frequent questioning, rigorous competition, and often isolation.

Attitudes toward the married professional woman are crucial because of the influence they exert on the professional woman's attitudes toward herself. The bulk of the research on attitudes toward the employed woman has focused on the employed mother. Siegel and Haas (1963) found that employed mothers encountered frequent disapproval for combining maternal and work roles. However, it was also found that the higher the educational level of the mother the more positive the attitude toward employment. Finally, strongly positive attitudes toward the employed mother were found when there were no young children and she was working for financial reasons.

Kaley (1967) studied the attitudes of married professional men and women toward the married professional woman's dual role. The views of professional men were considered important because they represent the majority of the professional woman's associates. This peer group with

whom she interacts often serves as a reference group for self-appraisal and influences her decisions for further training and often determines the extent of her professional participation.

Kaley hypothesized that since liberal views are frequently associated with high levels of education, professional men, more than any other male group, would have more favorable attitudes toward the married professional woman. However, it was found that men and women in the sample differed significantly in their attitudes concerning the married professional woman's ability to fulfill her home and career obligations. The professional man expressed a negative attitude toward his female colleague's ability to cope adequately with home and work roles.

Other research supports this finding. Nelson and Goldman (1969) investigated the attitudes of men and women toward the employment of married women. Over a six year period the results seemed to indicate that both men and women had developed favorable attitudes toward married women's employment. However, it is important to note that although the males' responses were favorable, there was complete rejection of the dual role for their wives. Perhaps this suggests that there was no genuine change in attitude.

Both Kaley (1967) and Nelson and Goldman (1969) concluded that the women in the respective studies expressed a positive attitude toward the professional women's ability to cope with home and career.

Mead and Kaplan (1965) investigated the attitudes of male and female civil service employees on women's employment. The findings seemed to indicate that men at all grade levels believed that men were

superior to women in supervisory positions, while women at all grade levels reported no differences in the supervisory performance of men and women.

Bailyn's (1964) findings seem to suggest that there was considerable conflict for the married employed woman who saw her career as a separate entity, while the married employed woman who saw her career as an extension of her family role experienced little or no role conflict.

A discussion related to role conflict would be incomplete if it did not include some of the research concerning the children of employed women.

Hartley (1960) found that not only do the children of working mothers perceive the mother's role as an extension of her traditional responsibilities but most of the working mothers also perceive their work as an extension of their nurturant role.

Nye and Hoffman (1963) found that children of working mothers are no more likely than children of non-working mothers to be delinquent, nervous, withdrawn or anti-social. They are no more likely to show neurotic symptoms, or perform poorly in school. However, the quality of child care received is critical. Children need security; a constant turnover of parent substitutes can be harmful to young children (Maccoby, 1958).

Greenburg, et al. (1961) did a study comparing working married women and non-working married women and concluded that there was no significant difference between the two groups' attitudes toward their children. In addition, working women appeared to be less authoritarian and more equalitarian in their attitudes.

From the research discussed it seems obvious that a woman will continue to experience conflict between her home-work roles. If she does not achieve the traditional role, she is likely to feel unfulfilled as a woman; and if she undertakes the traditional role solely, she is likely to feel frustrated as a professional.

Aspirations

Thinking about career aspirations has generally related directly to men rather than women. A man works toward some goal that the sociologist can locate on the stratification grid; it can be related to his starting point in order to measure mobility; and its components such as education, money and occupation can be tested for consistency (Turner, 1964).

To ask a man about his "aspirations" is appropriate since many features of his life are focused about an active pursuit of a particular station in society. In contrast, when women's aspirations are discussed it is by direct but questionable analogy. Obviously, women are questioned concerning their educational and occupational goals. However, the relative concentration of women college students in majors that are not markedly vocational in nature (see Digest of Educational Statistics, 1969) makes the interpretation of graduations in educational ambition in the same term as for men a doubtful procedure (Turner, 1964).

The problem of women's aspirations is more complex than that of men's. Consequently, investigation into women's aspirations has several dimensions and as a result several conclusions. A theoretically consistent body of data exists which enables us to predict achievement

behavior as a function of the strength of the achievement nature, but it applies to men. The sparse data that are available for women are contradictory and inconsistent with the achievement theories that exist for men.

Crandall, et al. (1962) found in their study of children in the first three grades that the brighter the girl, the less expectation she had of being successful on intellectual tasks, and that duller girls have higher expectations. The boys were not only more realistic in their expectations, but they had higher standards and a feeling that they, rather than fate, determined whether they succeeded or failed.

Sears (1962) found that affiliation rather than achievement needs of girls correlated with academic success.

Sears (1963) found that girls who conformed to adult demands when they were four or five had mothers who tolerated dependence and discouraged aggression. Similarly Kagen and Moss (1962) found girls who were over-protected through the age of three became "typical" passive females.

Crandall, et al. (1964) found in a study of girls in grades two through four that girls who were high achievers had mothers who were less affectionate and nurturant. Furthermore, when the mother exhibited a nuturing attitude toward her son and a hostile attitude toward her daughter during their pre-school years, both had high achievement motivation levels as adults.

Bardwick (1971) believes that girls tend to fuse the need to achieve with the need to affiliate, using achievement as a means of securing acceptance and love.

Veroff (1969) suggests that for boys the achievement motive is easily cued by internal standards of excellence, but for girls external support is critically important. Veroff's study seems to support the findings of Sears (1963, 1964).

Much of the current available literature concerning women's aspirations is directly related to high school and college females. The literature comes to basically the same conclusions:

1. Most girls, both in high school and college, when asked what they plan to do in the future, will state that marriage and children are their major goals (Empey, 1958; Douvan and Kaye, 1956).
2. Most girls are interested in vocational education only to the extent that such activities provide them with a way of spending their time until marriage. In addition, this education will supply them with a vague "insurance policy" (Seigel and Curtis, 1963).
3. A survey of freshmen at the University of Minnesota revealed that both men and women agreed that although it was fine for a woman to work, a "normal" girl would not need to seek outlets outside the home (Hewer and Neubeck, 1964).

In view of what is currently known concerning adult women, these aspirations are hardly realistic:

1. Almost half (45 percent) of all mothers with children between the ages of six and seventeen work outside the home.

2. One-third (32 percent) of all mothers with children between the ages of three and six work outside the home.
3. One-fourth (23 percent) of all mothers with children under the age of three are working.

Furthermore, these percentages refer only to families in which the mother is living with her husband. Obviously the percentage of working mothers in father-absent families would make these statistics even higher (U.S. Department of Labor, 1969).

Turner (1964) suggests a distinctive pattern of values associated with high aspirations in women. Deferred gratification was found to be associated with high aspirations in men but not women; endorsement of individuality was associated with high aspirations in women but not in men.

Turner's findings seem to support the research relative to status. Few women achieve positions of high status; therefore, to do so a woman must value individuality.

French and Lesser (1964) reported differences in achievement motivation for men and women. When male subjects were placed in situations which test intelligence and leadership, they consistently showed increased achievement-motivation scores.

Results for women were inconsistent. The authors contribute this to the alternative goals available for women. A man's primary goal is almost universally success in his job; this has never been true for a woman. What represents achievement for a woman is not universally agreed upon.

The authors further separate women according to their intellectual and traditional role.

Their findings, employing arousal cues in experimental situations, are neither surprising nor enlightening:

1. Women high in intellectual role orientations respond with increased achievement motivation when aroused by intellectual cues.
2. Women high in traditional role orientations respond with increased achievement motivation when aroused by traditional role cues.

Davis and Olsen (1965) investigated the "professionalizing effect" of the four years girls spend in a university working toward a nursing degree. Students were asked to evaluate statements supporting what they called the "orthodox view" and the "reform view." The reform view was represented by statements such as: "Radical alternations in the division of labor in the family ought to be made so that women can make full contributions to social progress." Statements representing the orthodox view included: "Regardless of her worldy accomplishment a woman who never marries is more to be pitied than emulated." The responses of the female students to these statements were measured when they entered school and again at graduation. Davis and Olsen concluded that most of the students took the orthodox stand, believing that the woman's primary role is at home. Furthermore, three years in school did not change their initial attitudes.

The authors circulated a second set of statements. Again they concluded that "home and family" was ranked in first place. Despite these results the authors did a third study with the hypothesis being that

years in school might increase the quality of the students' professional commitment. From entry to graduation no increase in professional involvement was found.

Turner (1964) concluded specific measures of ambition convey rather different meanings for men and women: educational and occupational aspirations are related to material gains for men, but women's educational and career aspirations bear little relationship to their material expectations. This observation further complicates the study of female aspirations and possibly should warn educators not to compare aspiration levels of men and women.

Horner (1969) concluded that there was increasing evidence that the motive to avoid success is apparent in otherwise achievement-motivated young women. When these women are faced with a conflict between their feminine image and expressing their competencies, they adjust their behaviors to internalized sex role stereotypes. The data suggests these women pay for sublimation of aspirations through feelings of frustration, hostility and aggression.

There is little research related to women who have been married for more than ten years and who have in that decade devoted themselves primarily to their traditional roles.

Baruch (1967) in a study of responses to the Thermatic Apperception Test found that ten to fifteen years after marriage women who had been college students exhibited an increase in achievement-motivation.

Sundheim (1963) reports that the highest achievement motivation levels were found in women majoring in science. College women majoring

in language had a medium achievement score and those in education had the lowest achievement scores. Women majoring in education had the highest affiliation need scores.

Much work clearly remains to be done. However, the writer agrees with Bardwich (1971):

> But there is another kind of female college student, closer to the masculine model who has had a longstanding interest in academic competition and is achieving successfully. Either because experimenters are not tapping the right variables or because she actually represents a very small part of the female population, there are few studies in which this type of student emerges in important percentages. My own hunch is that there are a few middle-class American college women who have internalized a really independent motive to achieve and who will achieve, social success be damned . . . . I am beginning to see a new feminine pattern emerging in which interpersonal success and traditional behaviors remain important while the achievement of success becomes equally important (p. 186).

III

PROCEDURE

The main purpose of this study was to complete a comparative analysis of the perceptions of female vocational faculty members as seen by themselves and college administrators. This chapter describes procedures used in developing the research instrument, selection of the two sample groups, data gathering techniques, and statistical methods used for data treatment.

Development of the Instruments

Two instruments were written to collect data for the study:

1. a twenty-five item Equalitarian Perception Scale,
2. a fourteen item Female Demographic Data questionnaire (Appendix C).

To construct the twenty-five item Equalitarian Perception Scale the following steps were taken:

1. After a thorough review of the literature, a large number of favorable and unfavorable statements were written regarding equalitarianism.
2. Approximately equal numbers of favorable and unfavorable statements were collected from these items.
3. The items were administered to a panel of judges including faculty, graduate students and female professionals. They were asked to indicate their opinions regarding each statement by determining whether they strongly agreed, agreed,

were undecided, disagreed or strongly disagreed that each item appeared to measure what it was intended to measure.

4. The twenty-five items with the greatest discriminatory powers were selected.
5. Finally a second panel of judges were asked to rate each item to determine the instrument reliability. The Inter-Judge reliability on the Equalitarian Perception Scale was found to be 0.693.

In summary, the Likert-type scale was designed such that the total score provided an Equalitarian Perception Measure. Scoring ranged from Strongly Agree (5) through Strongly Disagree (1). In addition, the instrument contained three subscales:

1. role-conflict, tapped by items 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 22, 23, and 25;
2. advancement possibilities, tapped by items 2, 6, 10, 16, and 20;
3. career aspirations, tapped by items 4, 8, 12, 14, 18, and 24.

The Female Demographic Data Questionnaire was reviewed by members of the Department of Vocational Education. During the process of constructing this questionnaire three revisions were necessary to eliminate ambiguous and unnecessary items.

Selection of the Sample

The study consisted of two distinct populations, public community college presidents and public community college female vocational faculty.

The population of public community college presidents was 850. From this population, 350 presidents were randomly selected. The procedure used to determine the experimental sample size was developed by Krejcie and Morgan in 1960.

The materials sent to each selected college president (Appendix A) included:

1. a cover letter explaining the study and requesting a college catalog,
2. a two-page Equalitarian Perception Scale,
3. a 9" x 12" pre-addressed stamped envelope.

Four follow-up letters were mailed (Appendix B), one approximately every two weeks. However, it should be explained that only two follow-up letters were sent to non-respondents. The other two follow-up letters were sent to respondents who returned questionnaires but did not return college catalogs. A flow diagram of the sampling strategy is shown in Figure 3.1.

The second population consisted of public community college female vocational faculty. The entire population consisted of approximately 10,000* women. From this sub-population 500 women were randomly selected. The procedure used to determine the experimental sample size was developed by Krejcie and Morgan in 1960.

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*About 3000 women faculty were identified from the 254 college catalogs provided by the administrators who responded to their questionnaire. From this it was concluded that if 3000 vocational women faculty were employed at 254 colleges, X would be employed at 850 community colleges.

$$\frac{3000}{254} = \frac{X}{850} \qquad X = 10,039$$

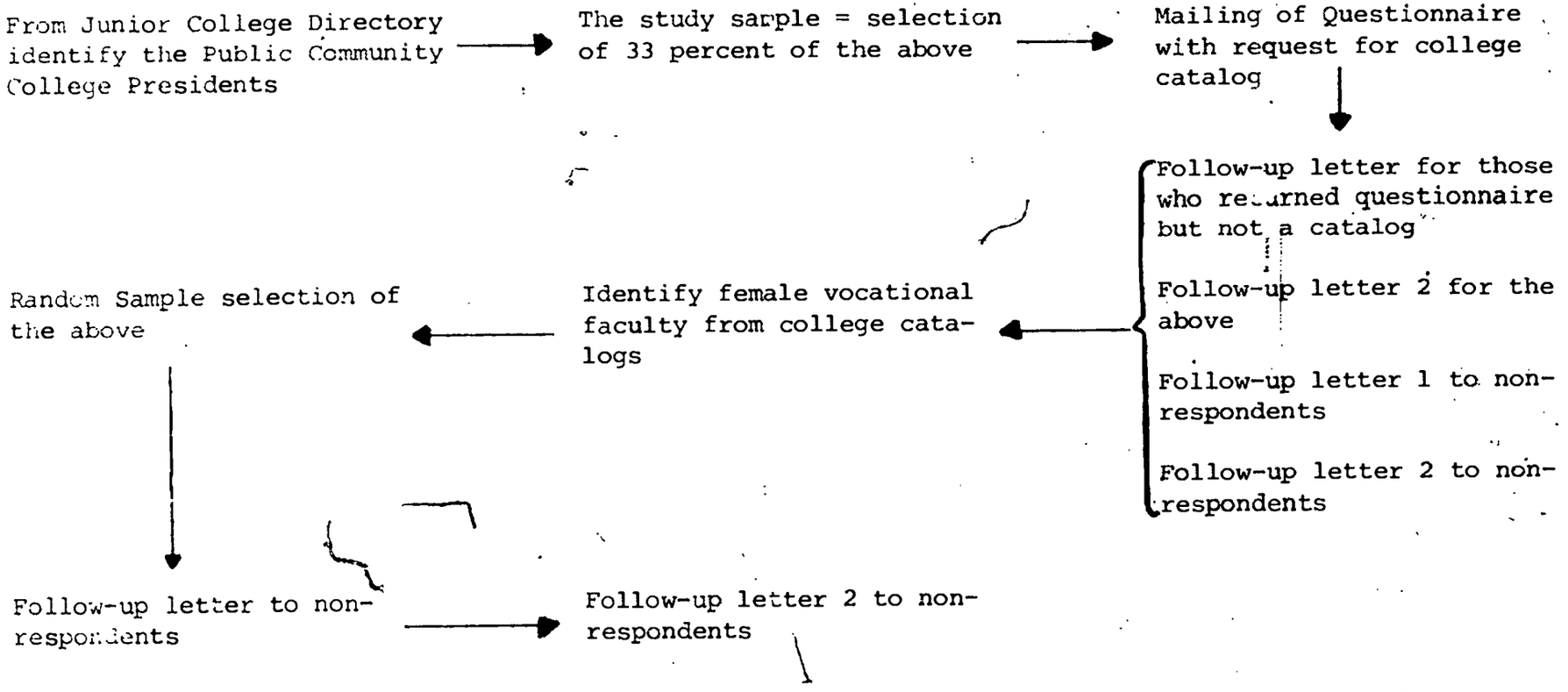


Figure 3.1. Flow Diagram of Sampling Strategy

The materials sent to each vocational female faculty member (Appendix C) included:

1. a cover letter explaining the study,
2. a two-page Equalitarian Perception Scale,
3. a one-page Female Demographic Data Questionnaire,
4. a pre-addressed, stamped envelope.

An examination of the distribution of public community colleges by accreditation region is shown in Table 3.1.

The first sample (i.e., community college presidents) was distributed in approximately the same proportions as found in the Junior College Directory (Conner, 1972). In addition, the second sample (i.e., female vocational faculty) was also representative of the original population.

Results

The original sample size for public community college presidents was 350. The sampling results were as follows:

1. Ninety percent (307 of 350) of the original sample returned questionnaires. From these 297 (83 percent) were usable, while the remaining questionnaires were returned incomplete.
2. College catalogs were provided by 72.5 percent (N=254) of the presidents.

TABLE 3.1

Random Sampling Results By Accreditation Region

Accreditation Region	Number and Percent of Community Colleges/ Accreditation Region*		Number and Percent of College President's Sampled/Accreditation Region		Number and Percent of Vocational Female Faculty Sampled/Accreditation Region	
	N	Percent	N	Percent	N	Percent
1. Middle States	111	12.8	32	10.8	44	12.0
2. North Central	300	34.7	114	38.4	141	38.5
3. New England	39	4.5	11	3.7	12	3.3
4. Northwest	62	7.2	19	6.4	34	9.3
5. Southern	253	29.2	84	28.3	76	20.8
6. Western	100	11.6	37	12.4	59	16.1
TOTALS	865	100.0	297	100.0	366	100.0

*See Appendix D for states in each accreditation region.

The original sample size for female vocational faculty was 500. The sampling results were as follows:

1. From the original population, 74 percent returned completed questionnaires in response to the regular mailing and follow-up strategy.
2. Twenty-five questionnaires were returned by the United States Postal Service as undeliverable.

Analysis

The statistical methodology used in this study included the Likert Attitude Scale Analysis, Multiple Regression Analysis (MRA) and Behrens Fisher Test t'.

The Likert Attitude Scale Analysis was used to answer Part 1 and 2 of the study.

> The Likert Scales tend to perform very well when it comes to a reliable, rough ordering of people with regard to a particular attitude. Apart from their relative ease of construction, these scales have two other advantages: first, they provide more precise information about the respondent's degree of agreement or disagreement, and respondents usually prefer this to a simple agree/disagree scale. Second, it becomes possible to include items whose manifest content is not obviously related to the attitude in question, so that the subtler and deeper ramifications of an attitude can be explored (Oppenheim, 1966, p. 141).

The program used for the Likert Scale Analysis is available in package form at The Pennsylvania State University Computation Center under the title of Likrt.

Multiple Regression Analysis (MRA) was used to analyze Part 4 of the study and for further interpretation of Part 2 and Part 3.

The multiple regression model is traditionally used to predict the value of some criterion (desired outcome) from a set of independent variables, as mathematically expressed in the linear function where:

$$y = b_o + b_1x_1 + b_2x_2 + \ldots + b_kx_k + e$$

y = dependent variable

$x_1, x_2, \ldots x_k$ = independent variable

$b_o, b_1, b_2, \ldots b_k$ = partial regression coefficients

e = error term

The underlying assumption required for MRA are as follows (Li, 1967):

1. Each array of y of the population follows the normal distribution.
2. The regression of y on $x_1, x_2 \ldots, x_n$ is linear.
3. The variance of all arrays of y of the population are equal.
4. The samples are drawn at random.
5. The x-values remain constant for all samples and do not change from sample to sample.

The program used for the MRA written by M. C. Hallburg (1969) is available in package form at The Pennsylvania State University Computation Center under the title of QSASE.

Behrens Fisher Test t' was used to answer Part 3 of the study. Kohr (1970) showed that this statistical procedure worked well with only a slight loss of power compared to the t test when all assumptions were met (i.e., normal distribution, equal sample sizes, and equal sample

variances). However, when the assumptions were not met, as is the case for this study ($n_1 \neq n_2$), Behrens Fisher Test $\underline{t}'$ is superior to the t test.

The program used for $\underline{t}'$ is available in package form from The Pennsylvania State University Computation Center under the title of Population Mean Tests with Unpaired Observations.

IV

FINDINGS

Introduction

The results of this investigation are reported here in terms of the research questions presented in the statement of the problem. They are presented sequentially as they appear in the statement of the problem. All statistical information relevant to each question in the study is presented in table form and is discussed sufficiently only to interpret its meaning. Conclusions and discussion supported by this data are reported in Chapter VI.

Question 1. How do public community college presidents perceive professional women vocational faculty in terms of:

a. dual-role conflict?

b. advancement possibilities?

c. career aspirations?

a. Dual-role conflict. The total maximum possible score for role conflict is 70. A score of 70 was interpreted to mean that college administrators perceive the female faculty as experiencing a minimal amount of role conflict. The range of scores in this subscale was from 41 to 64 with 45 percent of the administrators having an obtained score in the 51-55 range, (Table 4.1). This seemed to indicate that most administrators agreed that the female faculty does experience some degree of role conflict.

A five-point Likert scale (5 Strongly Agree to 1 Strongly Disagree, with 3 being the undecided category) was provided for responses. To

TABLE 4.1

Scores and Frequency of Each for Dual-Role Conflict: Subscale 1
(Community College Presidents)

Obtained Score	Frequency	Percent
41	1	0.3
42	1	0.3
43	1	0.3
44	2	0.7
45	2	0.7
46	5	1.7
47	10	3.4
48	20	6.7
49	20	6.7
50	21	7.1
51	28	9.4
52	30	10.1
53	29	9.8
54	30	10.1
55	21	7.1
56	15	5.1
57	20	6.7
58	13	4.4
59	13	4.4
60	5	1.7
61	7	2.4
62	1	0.3
63	0	0.0
64	2	0.7

simplify reporting the results, the agree categories (4 and 5) were grouped together as were the disagree categories (1 and 2).

Over 90 percent of the college administrator's agreed that:

1. It is fine for a woman to work if her children are adequately cared for.
2. It is possible to be successful at both marriage and a career.
3. Women who want full equality should be prepared to accept equal responsibility. (It is interesting to note that 99 percent agreed with this item and of that 99 percent, 64 percent strongly agreed.)
4. A coeducational faculty provides a healthy atmosphere.

Over 33 percent of the administrators were undecided on the following items:

1. A mother's working can be easily accepted by a child.
2. Marriage is an asset for professional women.
3. For professional women, children are an asset.
4. Professional women tend to think of employment as a lifetime career.

Over 65 percent of the administrators sampled disagreed on the following items:

1. Intellectual achievement of women is viewed as competitively aggressive behavior.
2. Women in supervisory positions have difficulty dealing with males in subordinate positions.

3. Career women play down feminine appearance in order to be taken seriously.

For a complete item analysis of this subscale including frequency and percent, see Table 4.2.

b. Advancement possibilities. The maximum possible score for the advancement possibilities subscale was 25, attainment of which was interpreted to mean that college administrators perceive the advancement possibilities of female faculty as being excellent. The response range of scores was from 3 to 25. However, only five of the 297 administrators had such high scores. Table 4.3 illustrates the distribution of these scores. The results seemed to indicate that administrators were divided concerning their agreement on this subscale.

When subscale 2 was analyzed by item, apparent inconsistent results were seen. Over 40 percent of the administrators agreed that:

1. The possibilities for a woman to be promoted to the next academic rank when eligible are only fair.
2. In this institution women are not as likely to achieve positions of leadership as men.

In sharp contrast over 80 percent of these same administrators also agreed that:

1. The higher the educational attainment of women the greater the chances for their advancement.
2. Women successfully compete with men at this institution.

As a result, one can only speculate as to the possible and/or probable reasons for these inconsistencies. Possibly these findings should alert the reader to the fact that these statements may represent the multi-dimensional aspects of advancement possibilities rather than a

TABLE 4.2

Item Analysis, Dual-Role Conflict: Subscale 1
(Community College Presidents)

Items	Percent Agree	Percent Undecided	Percent Disagree
Item 1, It is fine for a woman to work if her children are adequately cared for.	92	5	3
Item 3, Women can live in productive harmony with men filling complementary and supplementary roles.	86	6	8
Item 5, A mother's working can be easily accepted by a child.	42	33	25
Item 7, Marriage is an asset for professional women.	39	41	20
Item 9, For professional women, children are an asset.	25	49	25*
Item 11, It is possible to be successful at both marriage and a career.	91	5	4
Item 13, Professional women tend to think of employment as a lifetime career.	52	33	14*
Item 15, A woman's first responsibility is to be a feminine companion of men and a mother.	20	22	58
Item 17, Women who want full equality should be prepared to accept equal responsibility.	99	1	0
Item 19, Intellectual achievement of women is viewed as competitively aggressive behavior.	17	14	69
Item 21, Women in supervisory positions have difficulty dealing with males in subordinate positions.	18	17	65
Item 22, A coeducational faculty provides a healthy atmosphere.	98	2	0

TABLE 4.2 (Continued)

Items	Percent Agree	Percent Undecided	Percent Disagree
Item 23, Women play down feminine appearance in order to be taken seriously.	6	20	74
Item 25, Women have unique qualities to bring to the classroom that are not present in male faculty.	63	21	16

TABLE 4.3

Scores and Frequency of Each for Advancement Possibilities: Subscale 2 (Community College Presidents)

Obtained Score	Frequency	Percent
8	1	0.3
9	1	0.3
10	2	0.7
11	1	0.3
12	8	2.7
13	8	2.7
14	12	4.0
15	20	6.7
16	23	7.7
17	27	9.1
18	53	17.8
19	37	12.5
20	42	14.1
21	20	6.7
22	12	4.0
23	16	5.4
24	9	3.0
25	5	1.7

uni-dimensional measurement. For example, a difference may exist between the real and ideal. The most pronounced inconsistency lies with the "ideal"; ideally women (like men) should obtain greater opportunities for advancement in direct relationship to their educational attainment while in reality administrators believe this to be not true.

For a complete item analysis of this subscale see Table 4.4.

TABLE 4.4

Item Analysis, Advancement Possibilities: Subscale 2
(Community College Presidents)

Items	Percent Agree	Percent Undecided	Percent Disagree
Item 2, The possibilities for a woman to be promoted to the next academic rank when eligible are only fair.	45	7	48
Item 6, The higher the educational attainment of women the greater the chances for their advancement.	86	6	8
Item 10, In this institution women are not as likely to achieve positions of leadership as men.	39	5	56
Item 16, Women successfully compete with men at this institution.	82	6	11*
Item 20, In general professional women are on par with professional men at this institution.	90	2	8

*Totals did not add to 100 percent because of rounding error.

c. Career aspirations. The maximum possible score for the career aspirations subscale is 30. The maximum score was interpreted as meaning that college administrators perceive the female faculty as having high career aspirations. The actual range of scores on this subscale was from 14 to 28 with only 5 of the 297 administrators having scores of 28. As shown in Table 4.5, over half (56 percent) of those sampled had scores from 21 to 23. From this it would appear that most administrators agreed female faculty have moderately high career aspirations.

TABLE 4.5

Scores and Frequency of Each for Career Aspirations: Subscale 3 (Community College Presidents)

Obtained Score	Frequency	Percent
14	1	0.3
15	2	0.7
16	2	0.7
17	2	0.7
18	16	5.4
19	15	5.1
20	28	9.4
21	49	16.5
22	63	21.2
23	56	18.9
24	23	7.7
25	19	6.4
26	12	4.0
27	4	1.3
28	5	1.7

When analyzing the career aspirations of professional women as perceived by administrators (Table 4.6), an apparent inconsistency was found. Over 90 percent of the administrators agreed that:

1. Women have as much need to achieve as men.
2. Professional women can realistically expect to have a life-long career.

On the other hand, over 70 percent of these same administrators were either undecided or disagreed that:

1. Most women would like to end their educational careers as full professors.
2. Most women would like to be promoted to an administrative position.

In conclusion the total scale provides an Equalitarian Perception Measure with a maximum possible score of 125. The maximum score was interpreted to mean that college administrators perceive the female faculty as being equal with the male faculty. The scores ranged from 74 to 113. The results derived from the 25 item Perception Scale seemed to indicate that administrator perceptions concerning female faculty were not uniformly equalitarian. See Table 4.7 for a complete score analysis including frequency and percent.

Question 2. What is the relationship between the administrator's total number of years teaching and his perception of the female faculty members:

a. dual-role conflict?

b. advancement possibilities?

c. career aspirations?

TABLE 4.6

Item Analysis, Career Aspirations: Subscale 3
(Community College Presidents)

Item	Percent Agree	Percent Undecided	Percent Disagree
Item 4, Professional women can realistically expect to have a lifelong career.	90	7	2*
Item 8, Women have as much need to achieve as men.	95	3	2
Item 12, A woman's professional career should be subservient to her husband's.	12	15	72*
Item 14, Most women would like to be promoted to an administrative position.	19	38	43
Item 18, Most women would rather be promoted by merit than by seniority.	65	28	6*
Item 24, Most women would like to end their educational careers as full professors.	23	55	22

*Totals did not add to 100 percent because of rounding error.

TABLE 4.7

Scores and Frequency of Each for Equalitarian Perception Measure: Totals (Community College Presidents)

Obtained Score	Frequency	Percent
74	1	0.3
75	2	0.7
76	0	0.0
77	2	0.7
78	0	0.0
79	2	0.7
80	2	0.7
81	2	0.7
82	1	0.3
83	2	0.7
84	7	2.4
85	13	4.4
86	9	3.0
87	14	4.7
88	16	5.4
89	18	6.1
90	17	5.7
91	20	6.7
92	20	6.7
93	21	7.1
94	23	7.7
95	10	3.4
96	10	3.4
97	8	2.7
98	13	4.4
99	7	2.4
100	9	3.0
101	9	3.0
102	8	2.7
103	2	0.7
104	5	1.7
105	3	1.0
106	3	1.0
107	3	1.0
108	2	0.7
109	2	0.7
110	3	1.0
111	1	0.3
112	1	0.3
113	3	1.0

a. Dual-role conflict. Multiple regression analysis was conducted to examine the total amount of predictive informative available from the 13 independent variables on this subscale. The overall multiple R was tested for significance by using the F-Ratio with k and N-k-1 degrees of freedom. This is a test of the null hypothesis that all partial regression coefficients are equal to zero. The F-ratio is obtained by dividing the mean squares regression (MSR) by the mean squares error (MSE). The overall F-Ratio for this model was not significant beyond the .05 level.

Therefore to answer question 2a, there is no significant relationship between total number of years teaching and administrator's perceptions concerning role-conflict.

b. Advancement possibilities. The relationship between each of the six independent variables and the criterion was computed with MRA. There were no variables that yielded a significant relationship at the .05 level. Therefore, to answer question 2b, there is no significant relationship between total number of years teaching and the administrator's perceptions concerning advancement possibilities for female faculty.

c. Career aspirations. The relationship between each of the five independent variables and the criterion was computed with MRA. There were no variables that yielded a significant relationship at the .05 level. Therefore to answer question 2c, there is no significant relationship between total number of years teaching and the administrator's perceptions concerning career aspirations of female faculty.

Question 3. What is the relationship between the Administrator's total number of years in Administration and his perception of the female faculty members:

a. dual-role conflict?

b. advancement possibilities?

c. career aspirations?

a. Dual-role conflict. An inspection of the 14 independent variables revealed that the only variables significantly correlated with the criterion (i.e., total years in administration) at the .05 level were role conflict items 9 and 19. A multiple regression analysis was computed to determine the amount of unique information available from the 14 independent variables in predicting the criterion. The F-Ratio was found to be 2.046 and was significant at the .05 level. A restricted model was calculated to determine which variable possessed the most information useful for prediction. Table 4.8 provides the results for this restricted model analysis. The F-ratio for the restricted model is 8.01 and is significant beyond the .05 level. Consequently, to answer question 3a, those administrators with the greatest number of years in administration most often agreed that for professional women children are a liability, and intellectual achievement is not viewed as aggressive behavior.

b. Advancement possibilities. There were no variables that yielded a significant relationship at the .05 level. Therefore to answer question 3b, there is no significant relationship between total number of years in administration and the administrator's perceptions concerning advancement possibilities for female faculty.

c. Career aspirations. A multiple regression analysis was computed to determine the amount of unique information available from the six independent variables in predicting the criterion. The F-ratio was found to be 2.758, which was significant at the .05 level. A restricted model was calculated. Table 4.9 provides the results of this restricted model analysis. The F-ratio for the restricted model is 14.06 and is significant beyond the .05 level. Consequently one can conclude that those administrators with the greatest number of years in administration are most likely to agree that professional women can realistically expect to have a life-long career.

TABLE 4.8

Regression Effect of the Significant Independent Variables on the Role-Conflict Subscale by Number of Years in Administration

Variables No.	Name	Partial Regression Coefficient	Standard Error	Student t
1.	RC (9)	1.068	0.51	2.07*
2.	RC (19)	-1.541	0.46	3.33*
	Intercept	13.70	1.98	

Standard Error of Estimate = 7.57
F-Ratio for the restricted model = 8.01
Coefficient of Determination $(\bar{R}^2)^a$ = 0.05

Note: [a]Adjusted for degrees of freedom
*Significant at .05

Question 4. What is the relationship between school size and administrator's perception of the female faculty members:

a. dual-role conflict?

b. advancement possibilities?

c. career aspirations?

a. Dual-role conflict. Multiple regression analysis was conducted to examine the total amount of predictive information available from the 13 independent variables in this subscale. The overall F-ratio for this model was not significant beyond the .05 level. Therefore, to answer question 4a, there is no significant relationship between school size and the administrator's perceptions concerning role conflict.

TABLE 4.9

Regression Effect of the Significant Independent Variable on the Career Aspiration Subscale by Number of Years in Administration

Variables No.	Name	Partial Regression Coefficient	Standard Error	Student t
1.	CA (4)	2.09	0.559	3.75*
	Intercept	4.40	2.39	

Standard Error of Estimate = 7.58
F-Ratio for the restricted model = 14.06
Coefficient of Determination $(R^2)^a$ = 0.04

Note: [a]Adjusted for Degrees of Freedom
*Significant at .05

b. Advancement possibilities. Multiple regression analysis was conducted to examine the total amount of predictive information available from the six independent variables on this subscale. The F-ratio was found to be 2.87 and was significant at the .05 level. A restricted model was calculated to determine which variables possessed the most information useful for prediction. The F-ratio for the restricted model

(Table 4.10) was 7.56 and was significant beyond the .05 level. Therefore, to answer question 4b, on the average an administrator from a large school most often agreed that the possibilities for a woman to be promoted to the next academic rank when eligible are good.

c. Career aspirations. Multiple regression analysis was conducted to examine the total amount of predictive information available from the five independent variables on this subscale. The overall F-ratio for this model was not significant beyond the .05 level. Therefore, to answer question 4c, there is no significant relationship between school size and the administrator's perception concerning career aspirations of female faculty.

TABLE 4.10

Regression Effect of the Significant Independent Variable on the Advancement Possibilities Subscale by School Size

Variables No.	Name	Partial Regression Coefficient	Standard Error	Student t
1.	AP (2)	-438.36	159.36	2.75*
	Intercept	4095.57	520.30	

Standard Error of Estimate = 4034.36
F-Ratio for the restricted model = 7.56
Coefficient of Determination $(\bar{R}^2)^a$ = 0.02

Note: [a]Adjusted for Degrees of Freedom
*Significant at .05

Question 5. What are the employment characteristics of public community college presidents in terms of:

a. teaching experience?

b. administration experience?

The distribution of two-year college presidents by years of teaching experience is shown in Figure 4.1. A small percentage (3.7 percent) have had no teaching experience; however, a significant majority (47 percent) have had from one to nine years teaching experience.

The mean number of years spent in administration for this sample was 13.4 (Figure 4.2), with a standard deviation of 7.6 (i.e., 68 percent of the college presidents sampled have spent from 5.8 to 21.0 years in administration). However, it is important to note that the years spent in teaching and administration are not mutually exclusive.

To complete Part 2 of the study, the following questions were investigated.

Question 6. How do female vocational education faculty members at public community colleges perceive their:

a. dual-role conflict?

b. advancement possibilities?

c. career aspirations?

A five-point Likert scale (5 Strongly Agree to 1 Strongly Disagree, with 3 being the undecided category) was provided for responses. To simplify reporting the results, the agree categories (4 and 5) and the disagree categories (1 and 2) were grouped together.

a. Dual-role conflict. The maximum possible range of scores for role conflict was from 14 to 70. A score of 70 was interpreted to mean that the vocational female faculty experience a minimal amount of role conflict. The range of scores on this subscale was from 39 to 65 with 89.2 percent of the women having an obtained score in the 47 to 59 range (Table 4.11). The scores seem to indicate that most female faculty perceive some degree of role conflict.

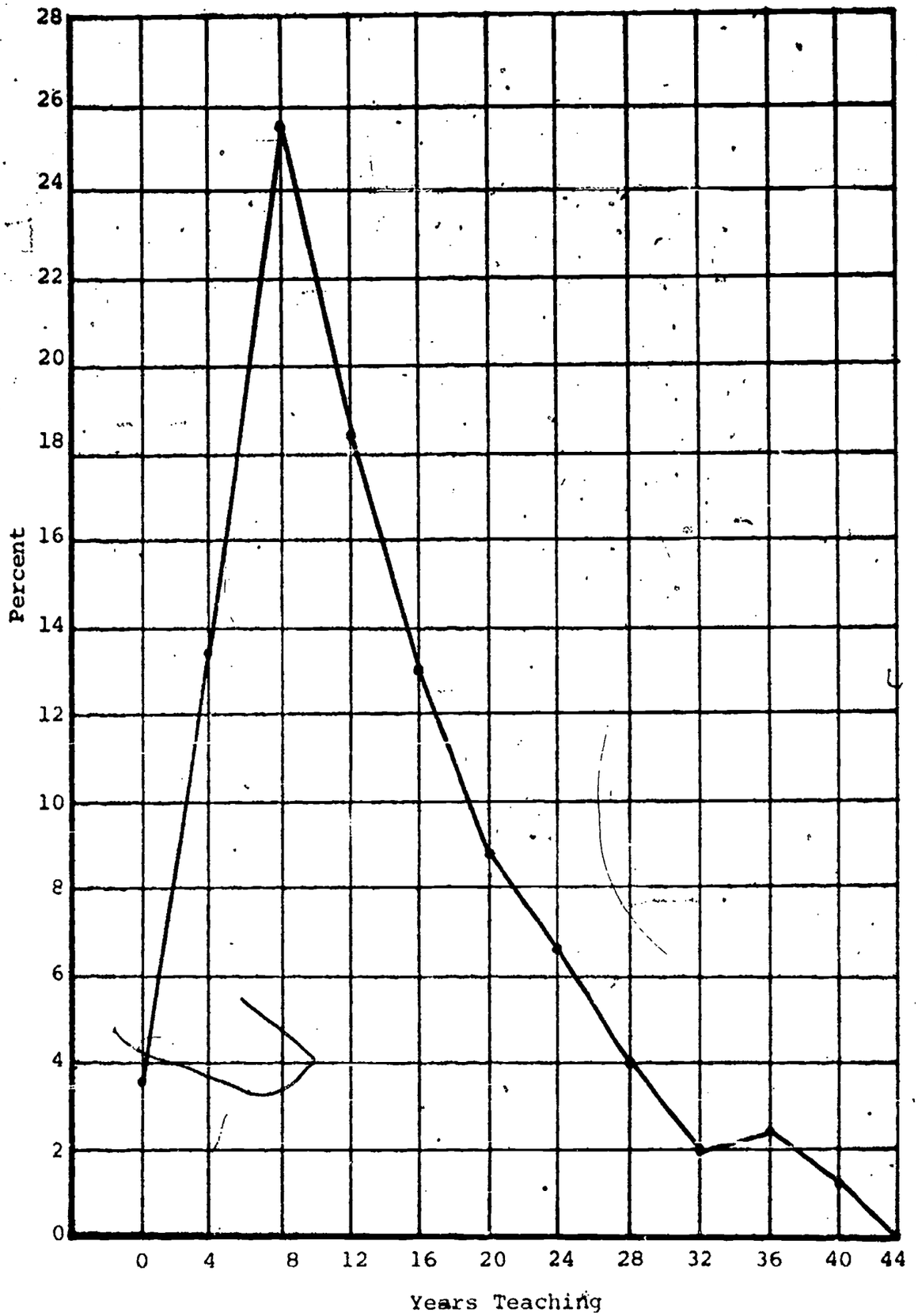


Figure 4.1. Distribution of Public Community College Presidents by Years of Teaching

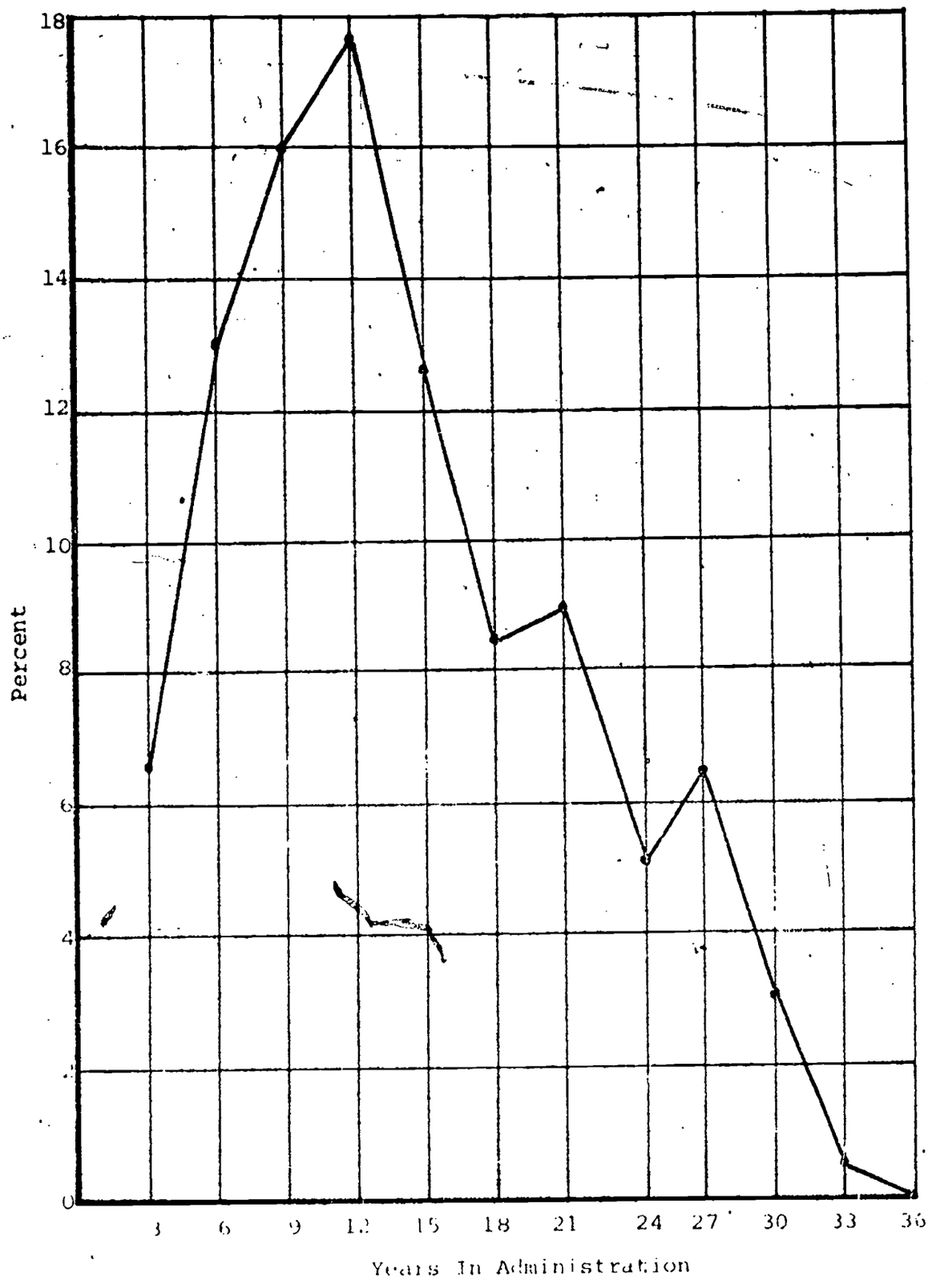


Figure 4.2. Distribution of Public Community College Presidents by Years of Administration Experience

TABLE 4.11

Scores and Frequency of Each for Dual-Role Conflict: Subscale 1 (Female Vocational Faculty)

Obtained Score	Frequency	Percent
39	1	0.3
40	0	0.0
41	0	0.0
42	3	0.8
43	0	0.0
44	2	0.5
45	4	1.1
46	7	1.9
47	13	3.6
48	17	4.6
49	18	4.9
50	33	9.0
51	21	5.7
52	33	9.0
53	38	10.4
54	31	8.5
55	37	10.1
56	30	8.2
57	28	7.7
58	18	4.9
59	10	2.7
60	7	1.9
61	8	2.2
62	4	1.1
63	1	0.3
64	2	0.5
65	2	0.5

Over 90 percent of the vocational female faculty agreed that:

1. It is fine for a woman to work if her children are adequately cared for.
2. It is possible to be successful at both marriage and a career.
3. Women who want full equality should be prepared to accept equal responsibility.
4. A coeducational faculty provides a healthy atmosphere.

Two statements seemed to create strong ambivalent feelings among the women. They are:

1. Marriage is an asset for professional women.
2. For professional women, children are an asset.

Since over 55 percent of the women either disagreed or were undecided on these two items, there seems to be support for the hypothesis that career women did experience serious role conflict as it related to children and marriage.

However, even though role conflict existed, these women seem to be committed to their profession. Over 70 percent of the vocational female faculty agreed that professional women tend to think of employment as a lifetime career. Similarly, these findings seem to support the findings of Eycle (1968) who concluded that those women who view their jobs as lifetime employment are committed to their profession.

Another item which elicited strong ambivalent feelings was: Intellectual achievement of women is viewed as competitively aggressive behavior (49 percent agreed, 35 percent disagreed). The issue masked in this statement is related to society's standard measure of "masculinity" and "femininity." This topic is discussed in a later chapter.

However, it should be noted from the data that new norms are emerging and thus more flexible roles and behavior patterns are evolving for women. Over 55 percent of the women sampled disagreed that:

1. Women in supervisory positions have difficulty dealing with males in subordinate positions.
2. Career women play down feminine appearance in order to be taken seriously.

As role freedom becomes a reality and "masculinity" and "femininity" are no longer standard measures on a single scale, ambivalence among female faculty concerning their dual roles ought to diminish. A complete item analysis of this subscale including frequency and percent is presented in Table 4.12.

Advancement Possibilities. The maximum possible score for this subscale was 25, attainment of which was interpreted to mean that vocational female faculty perceive their advancement possibilities as being excellent. The response range of scores was from 5 to 25. However, only four of the 366 women sampled had scores of 25 (Table 4.13). From the sample, 54 percent had scores of 15 or less. These results seemed to indicate that over half of the female faculty members sampled perceived their advancement possibilities as being poor.

When subscale two is examined by item, this division of agreement concerning the possibilities for advancement becomes more pronounced. Only 40 percent of the women sampled agreed that:

1. Women successfully compete with men at this institution.
2. In general, professional women are on par with professional men at this institution.

TABLE 4.12

Item Analysis, Dual-Role Conflict: Subscale 1
(Female Vocational Faculty)

Item	Percent Agree	Percent Undecided	Percent Disagree
1. It is fine for a woman to work if her children are adequately cared for.	94	3	3
3. Women can live in productive harmony with men filling complementary and supplementary roles.	85	6	9
5. A mother's working can be easily accepted by a child.	63	22	15
7. Marriage is an asset for professional women.	44	38	18
9. For professional women, children are an asset.	38	41	21
11. It is possible to be successful at both marriage and a career.	91	8	1
13. Professional women tend to think of employment as a lifetime career.	70	16	14
15. A woman's first responsibility is to be a feminine companion of men and a mother.	17	13	70
17. Women who want full equality should be prepared to accept equal responsibility.	98	1	0
19. Intellectual achievement of women is viewed as competitively aggressive behavior.	49	17	34
21. Women in supervisory positions have difficulty dealing with males in subordinate positions.	19	25	56
22. A coeducational faculty provides a healthy atmosphere.	97	1	1

TABLE 4.12 (Continued)

Item	Percent Agree	Percent Undecided	Percent Disagree
23. Women play down feminine appearance in order to be taken seriously.	7	9	83
25. Women have unique qualities to bring to the classroom that are not present in male faculty.	63	19	18

TABLE 4.13

Scores and Frequency of Each for Advancement Possibilities: Subscale 2 (Female Vocational Faculty)

Obtained Score	Frequency	Percent
5	3	0.8
6	2	0.5
7	1	0.3
8	13	3.6
9	17	4.6
10	14	3.8
11	28	7.7
12	31	8.5
13	28	7.7
14	37	10.1
15	31	8.5
16	45	12.3
17	29	7.9
18	18	4.9
19	23	6.3
20	15	4.1
21	11	3.0
22	3	0.8
23	8	2.2
24	5	1.4
25	4	1.1

In addition, over 65 percent of the women agreed that: In this institution women are not as likely to achieve positions of leadership as men. Finally, a majority (76 percent) agreed that: The possibilities for a woman to be promoted to the next academic rank when eligible are only fair. A complete item analysis of this subscale is shown in Table 4.14.

In conclusion, the data seemed to indicate that most female vocational faculty members perceived their advancement possibilities as being poor.

Career Aspirations. The maximum possible score for the career aspirations subscale was 30. The maximum score was interpreted to mean that female vocational public community college faculty have high career aspirations. The range of scores was from 14 to 30 with only one of the 366 women having a score of 30. Of those sampled 67 percent had scores from 20-24 (Table 4.15). From these results it would appear that most women have moderately high career aspirations.

However, when analyzing the career aspirations subscale by item (Table 4.16) inconsistencies with the total subscale score are found. Only 23 percent of the women agreed that: Most women would like to end their educational careers as full professors. In addition, only 16 percent agreed that: Most women would like to be promoted to an administrative position.

In contrast, over 90 percent of these same women agreed that:

1. Women have as much need to achieve as men.
2. Professional women can realistically expect to have a lifelong career.

TABLE 4.14

Item Analysis, Advancement Possibilities: Subscale: 2
(Female Vocational Faculty)

	Item	Percent Agree	Percent Undecided	Percent Disagree
2.	The possibilities for a woman to be promoted to the next academic rank when eligible are only fair.	66	11	22
6.	The higher the educational attainment of women the greater the chances for their advancement.	73	12	14
10.	In this institution women are not as likely to achieve positions of leadership as men.	64	8	27
16.	Women successfully compete with men at this institution.	46	16	38
20.	In general professional women are on par with professional men at this institution.	54	15	31

TABLE 4.15

Scores and Frequency of Each for Career Aspirations: Subscale 3 (Female Vocational Faculty)

Obtained Score	Frequency	Percent
14	2	0.5
15	1	0.3
16	4	1.1
17	8	2.2
18	14	3.8
19	34	9.3
20	38	10.4
21	45	12.3
22	54	14.8
23	66	18.0
24	43	11.7
25	24	6.6
26	19	5.2
27	7	1.9
28	3	0.8
29	3	0.8
30	1	0.3

The results reported above may reflect a known limitation of the Likert scale. A total score may be obtained in many different ways. Therefore, it is possible for two or more identical scores to have totally different meanings. For this reason, the pattern of responses or the item analysis becomes more meaningful than the total score. This may be true for this subscale.

In summary when analyzing the total subscale score it could be concluded that vocational female faculty have moderately high career aspirations. However, an item analysis seems to indicate that these women have relatively low career aspirations. These results also seem to support the conclusions drawn from subscale two (advancement

TABLE 4.16

Item Analysis, Career Aspirations: Subscale: 3
(Female Vocational Faculty)

	Item	Percent Agree	Percent Undecided	Percent Disagree
4.	Professional women can realistically expect to have a lifelong career.	92	5	3
8.	Women have as much need to achieve as men.	97	2	1
12.	A woman's professional career should be subservient to her husband's.	18	14	68
14.	Most women would like to be promoted to an administrative position.	16	32	52
18.	Most women would rather be promoted by merit than by seniority.	75	20	5
24.	Most women would like to end their educational careers as full professors.	23	36	41

possibilities); since these women viewed their advancement possibilities poorly, their career aspirations were low. This issue is fully discussed in Chapter VI.

The total scale provides an Equalitarian Perception Measure with a maximum possible score of 125. The maximum score was interpreted to mean that female faculty agreed they are equal with the male faculty. The scores ranged from 72 to 112 (Table 4.17). The results derived from the 25-item perception scale seemed to indicate that vocational female faculty do not uniformly agree they are equal with the male faculty.

To complete Part 3 of the study, the following questions were investigated.

Question 7. Is there a statistically significant difference between female faculty perceptions of their dual-role and their dual-role as perceived by administrators?

The Behren Fisher t' Test was computed to answer Question 7. The obtained t value was not significant at the .05 level. In other words, no significant difference between female faculty perceptions of their dual-role and their dual-role as perceived by administrators was found.

Question 8. Is there statistically significant differences between female faculty perceptions of their advancement possibilities and their advancement possibilities as perceived by administrators?

The Behren Fisher t' Test was again used to answer Question 8. The obtained t was 12.44 and was significant beyond the .05 level (Table

TABLE 4.17

Scores and Frequency of Each for Equalitarian Perception Measure (Female Vocational Faculty)

Obtained Score	Frequency	Percent
72	2	0.5
73	1	0.3
74	2	0.5
75	0	0.0
76	0	0.0
77	4	1.1
78	4	1.1
79	8	2.2
80	6	1.6
81	5	1.4
82	15	4.1
83	11	3.0
84	13	3.6
85	15	4.1
86	23	6.3
87	20	5.5
88	15	4.1
89	35	9.6
90	21	5.7
91	20	5.5
92	19	5.2
93	22	6.0
94	20	5.5
95	12	3.3
96	15	4.1
97	13	3.6
98	6	1.6
99	6	1.6
100	6	1.6
101	4	1.1
102	8	2.2
103	3	0.8
104	2	0.5
105	0	0.0
106	6	1.6
107	1	0.3
108	0	0.0
109	0	0.0
110	22	0.5
111	0	0.0
112	11	0.3

4.18). Therefore, significant differences between how female faculty perceive their advancement possibilities and how their advancement possibilities are perceived by administrators were found.

TABLE 4.18

Group Means for Advancement Possibilities: Subscale 2
(Female Vocational Faculty)

	Number of Observations	Mean	Variance	Standard Deviation	t
Administrators	297	18.29	9.65	3.10	12.44*
Vocational female faculty	366	14.84	16.21	4.02	

*Significant at .05 level.

The mean on this subscale for administrators was 18.29 in comparison with the mean for vocational female faculty which was 14.84. The differences in the means points to the fact that administrator's perceptions regarding promotion are significantly higher than found for women faculty.

By way of supplementary analysis, a 95 percent confidence interval was also investigated (Figure 4.3). The major point derived from Figure 4.3 is that, in addition to the existence of significant differences between these two groups, a polarity of attitudes was evident.

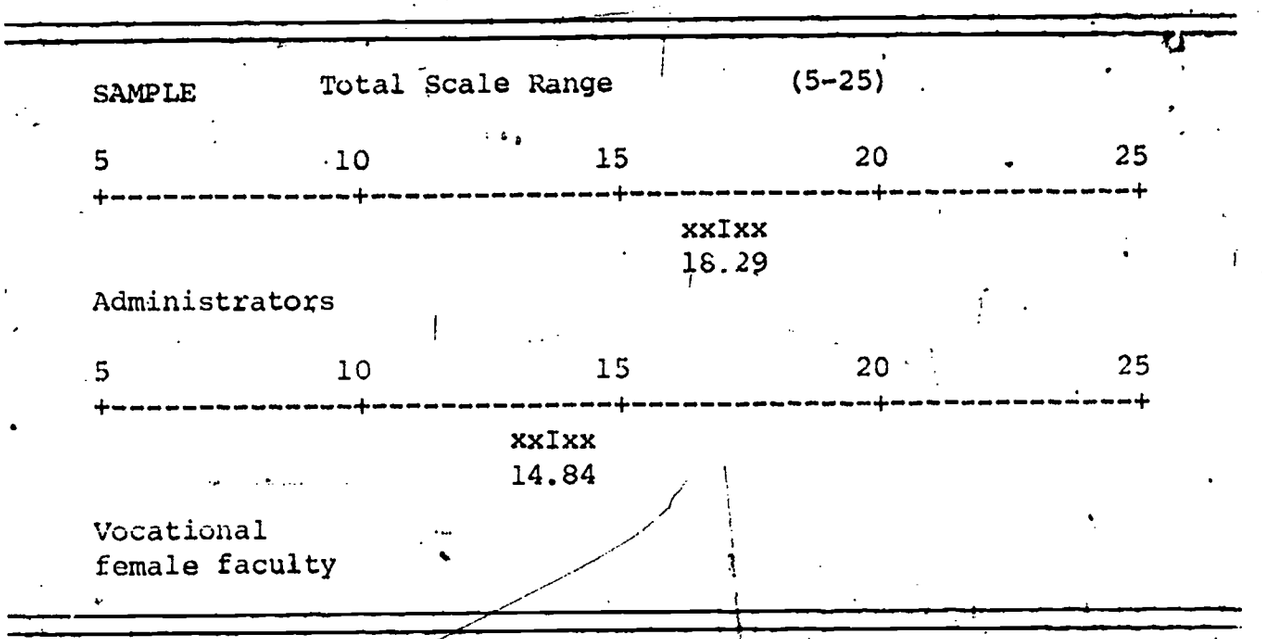


Figure 4.3. Ninety-five Percent Confidence Intervals for Group Sample Means

Question 9. Is there a statistically significant difference between the perceived career aspirations of professional women and the aspiration levels of these women as perceived by administrators?

The Behren Fisher t' Test was computed to answer Question 9. No significant differences between the perceived career aspirations of professional women and the career aspiration levels of these women as perceived by administrators was found.

Question 10. Is there a significant difference between the total equalitarian perception scale of professional women and that of administrators?

The Behren's Fisher t' Test was computed to answer Question 10. The obtained t shown in Table 4.19 is 5.7 and was significant at the .05 level.

The mean on the total scale for administrators was 93.2 while for the female faculty it was 90.1. The direction of the mean difference seemed to indicate that college presidents were more convinced of the women's equality than the women themselves.

TABLE 4.19

Group Means for Entire Equalitarian Perception Scale
(Female Vocational Faculty)

	Number of Observations	Mean	Variance	Standard Deviation	Student t
Administrators	297	93.2	49.8	7.1	5.7*
Vocational Female Faculty	366	90.1	46.2	6.8	

*Significant at the .05 level

V

ANALYSIS OF THE FEMALE VOCATIONAL FACULTY

Demographic Data

This chapter answers Questions 11 through 19 which assessed the characteristics of female vocational faculty members who are employed full-time at public community colleges. It provides information related to educational achievement, current academic rank, marital status, number of children, type of appointment, salary, work experience (both outside education and in education), and promotions received while employed at a public community college.

Question 11. What are the demographic characteristics of public community college vocational female faculty in terms of:

a. vocational area?

b. highest degree attained?

c. academic rank?

d. marital status?

e. number of children?

f. distribution of children by age group?

g. age?

h. salary?

i. work experience outside education?

j. teaching experience at present community college?

k. teaching experience by level (i.e., elementary, secondary, two-year post-secondary, four-year college)?

l. promotions received at present institution?

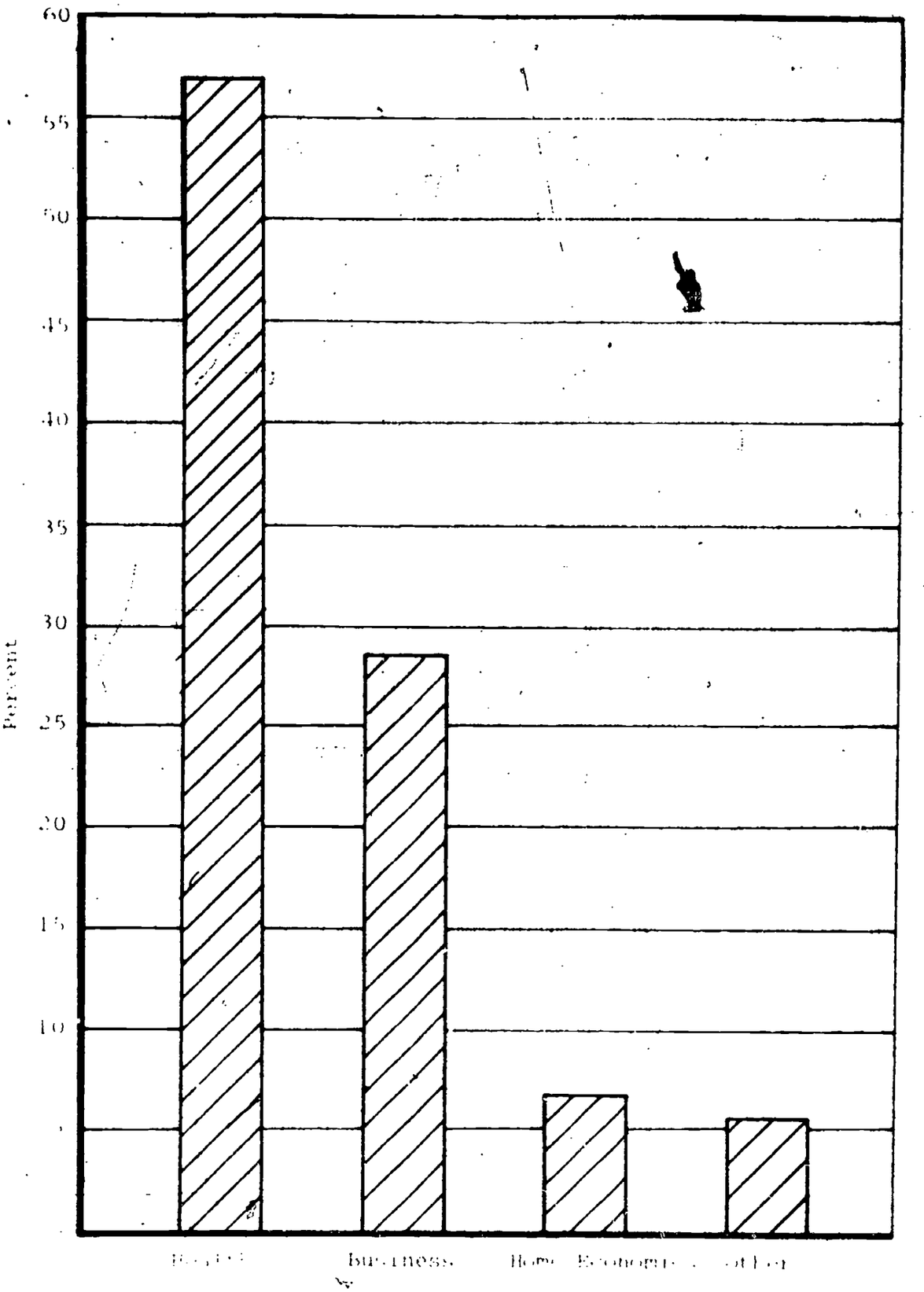
m. laboratory and lecture hours at present institution?

As shown by Figure 5.1, Health and Business Related programs account for approximately 85 percent of all vocational female faculty with a small percentage found in programs categorized as "Gainful Home Economics" and "Other." It can be concluded that the other vocational programs (i.e., Agriculture, Distributive, Technical, and Trades and Industry) are dominated by male faculty. These findings are in agreement with the findings of Kay (1969), United States Department of Health, Education, and Welfare (1973), and Beers and Stank (1971).

From these findings it becomes obvious that "sex typing" by occupation is a reality in existing vocational education programs. There is little evidence at present to suggest that any significant changes are occurring.

Furthermore, an examination of community college catalogs used in this study showed that on the average 71 percent of all the faculty at community colleges were male, 29 percent were female, and from this 29 percent, 13 percent were vocational female. These percentages are shown graphically in Figure 5.2. It should be noted that all the research presented in this study concerning the female vocational faculty members is drawn from the 13 percent.

The distribution of degrees held by women in the study sample was displayed in Figure 5.3. The bachelor's degree is the highest degree attained by about 46 percent, while 52.8 percent held master's degrees and 1.6 percent had completed the doctorate.


60
55
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Business
Home Economics

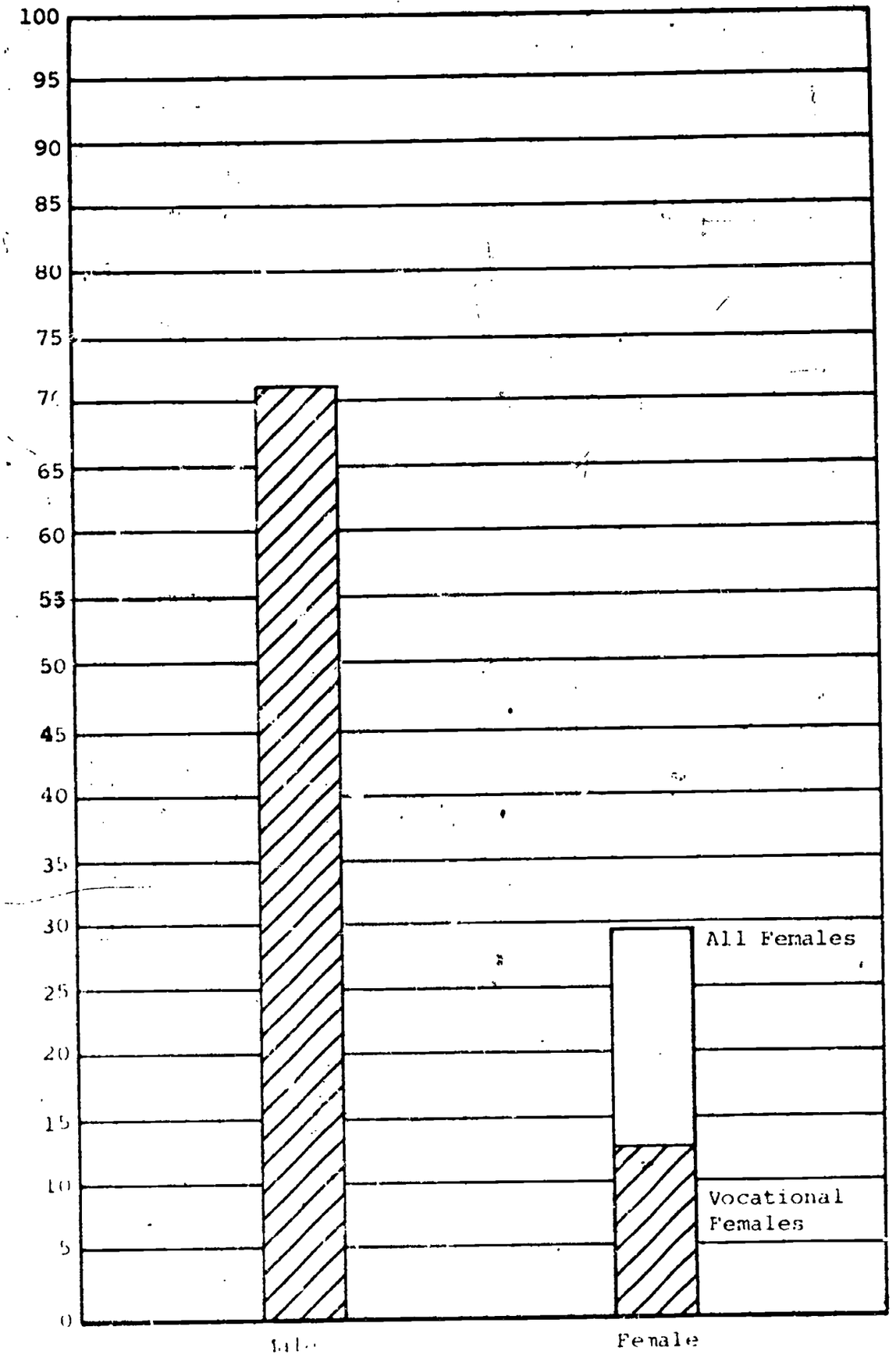


Figure 5.2. Distribution of Community College Faculty By Sex

In comparison, Figure 5.3 also illustrates the distribution of degrees for two-year college men, women, (Bayer, 1970) and vocational women. Approximately 17.2 percent of the men, 16.9 percent of the women, and 45.5 percent of the vocational women held only the bachelor's degrees. Sixty-three percent of the men, 67.7 percent of the women, and 52.8 percent of vocational women held master's degrees. Six percent of the men, 22 percent of the women and 1.6 percent of vocational women held the doctorate. These findings seemed to indicate the educational achievement level of vocational female faculty at the community college is slightly lower than the national norm for college faculty of both sexes.

Figure 5.4 illustrates the distribution of academic rank for two-year college men, women, and vocational women. After a cursory inspection of Figure 5.4 one may conclude that a large number of female vocational faculty are employed at each academic rank. However, the reader should be cautioned when interpreting the data. Almost 50 percent of the women sampled stated there was no academic rank designated at their respective institutions. Consequently, the percentages derived for academic rank for vocational females were based on a small sample (N=177). In contrast, the data reported in Figure 5.4 for two-year college men and women were based on 60,000 respondents (Bayer, 1970). The limitations of this comparison are obvious.

The marital status of the women sampled in this study was compared with that of all women who work. Of the 34 million employed women (U.S. Department of Labor, 1971) 18 percent are widowed, divorced, or separated, as compared to 13 percent of female vocational faculty. Twenty-four percent of the nation's working women are single, as

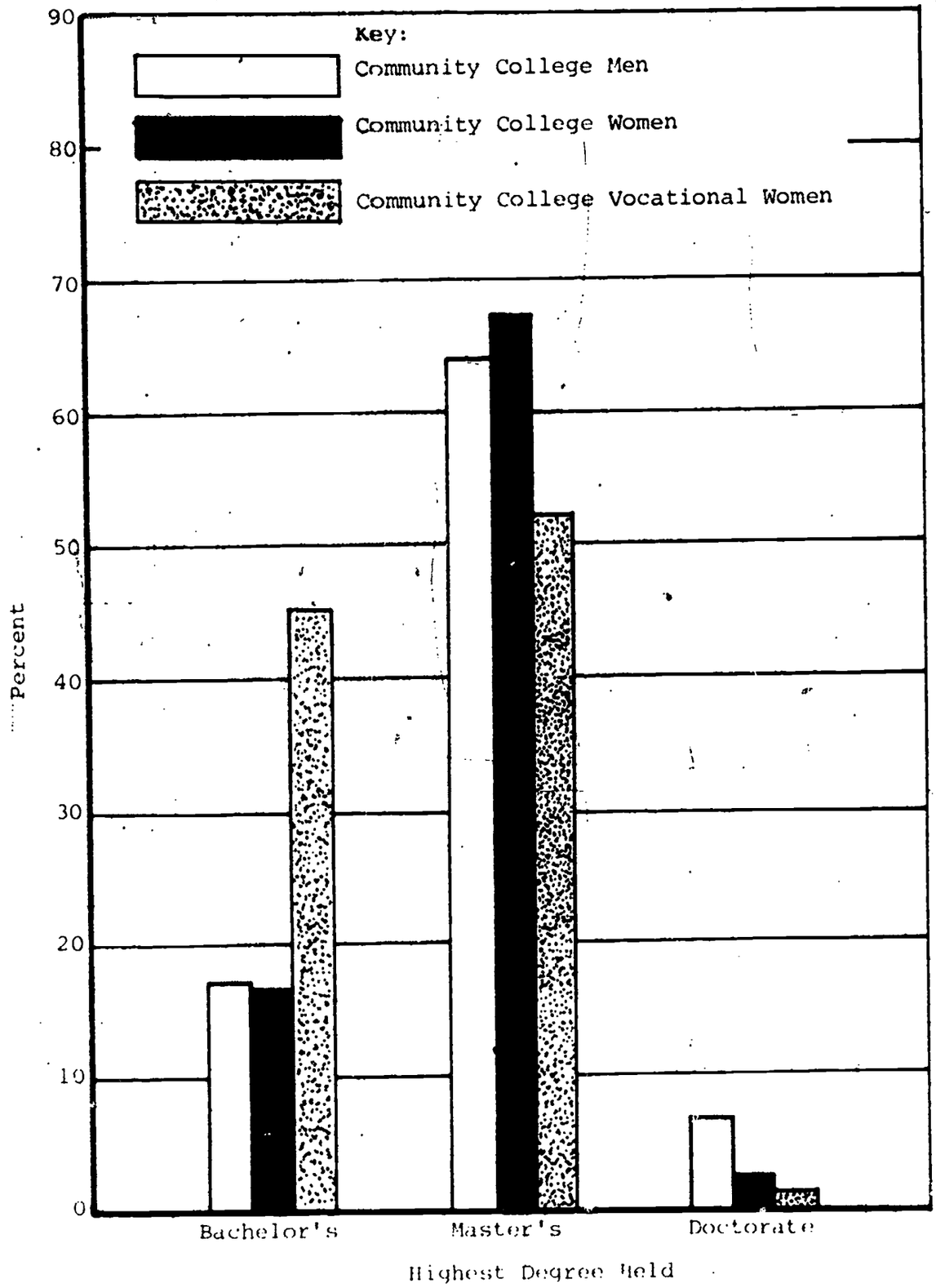


Figure 5.3. Distribution of Degrees for 2 Year College Men, Women and Vocational Women

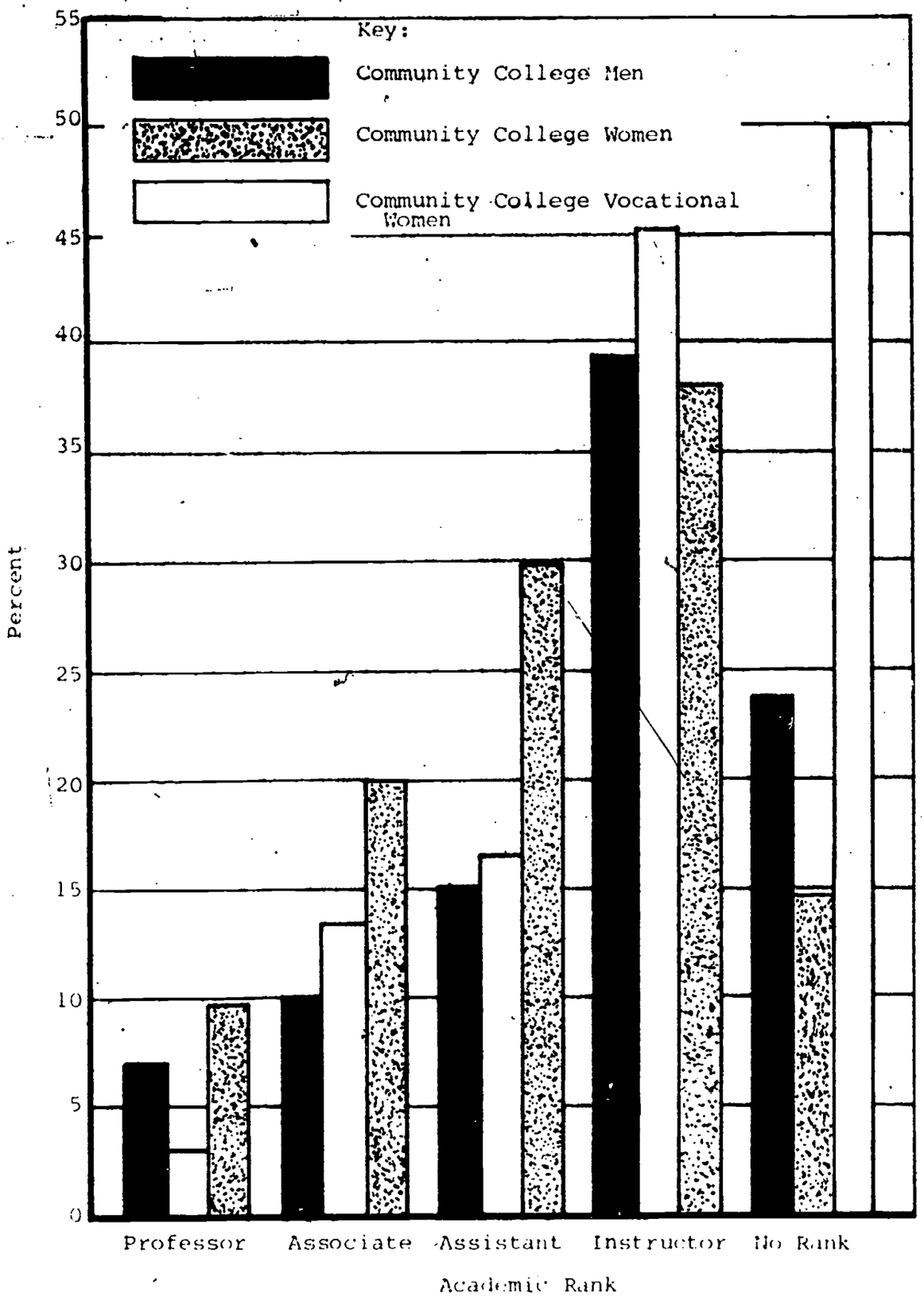


Figure 5.4. Academic Rank Distribution for 2 Year College Men, Women, and Vocational Women

compared to 20 percent of female vocational faculty and 58 percent of the former were married as compared to 67 percent of female vocational faculty.

The interruption of women's career patterns in association with child bearing is a major consideration in any assessment of the role and status of professional women. The distribution of the number of children per female vocational faculty is shown in Figure 5.5. A more complete breakdown of this distribution, by age group, is provided in Figure 5.6. From the distribution of the number of children of vocational female faculty (Figure 5.5), it is noted that 35.4 percent were childless, 40.7 percent had one or two children, and the number of children for the remaining 19.0 percent ranged from three to seven. Figure 5.6 illustrates the percentage of children of female vocational faculty by age group. This statistic is considered noteworthy because of the assumption that women with preschool children are most likely to remain at home for child raising purposes. Less than 15 percent of the women working had children from birth to five years old, 69.9 percent had children from 6 to 18 years old and 15.0 percent had children over 18 years. These findings revealed that during the infancy and early years of their children's lives these professional women may experience a change in priorities, with a resulting interrupted career pattern.

The U.S. Women's Bureau in 1967 reported that 28.7 percent of all mothers with children under six years were working and 48.6 percent of all mothers with children 6 to 17 were working. The most significant differences between all women workers and vocational female faculty is that almost twice as many women in the total work force (28.7 percent as compared to 14.9 percent) have children under the age of six.

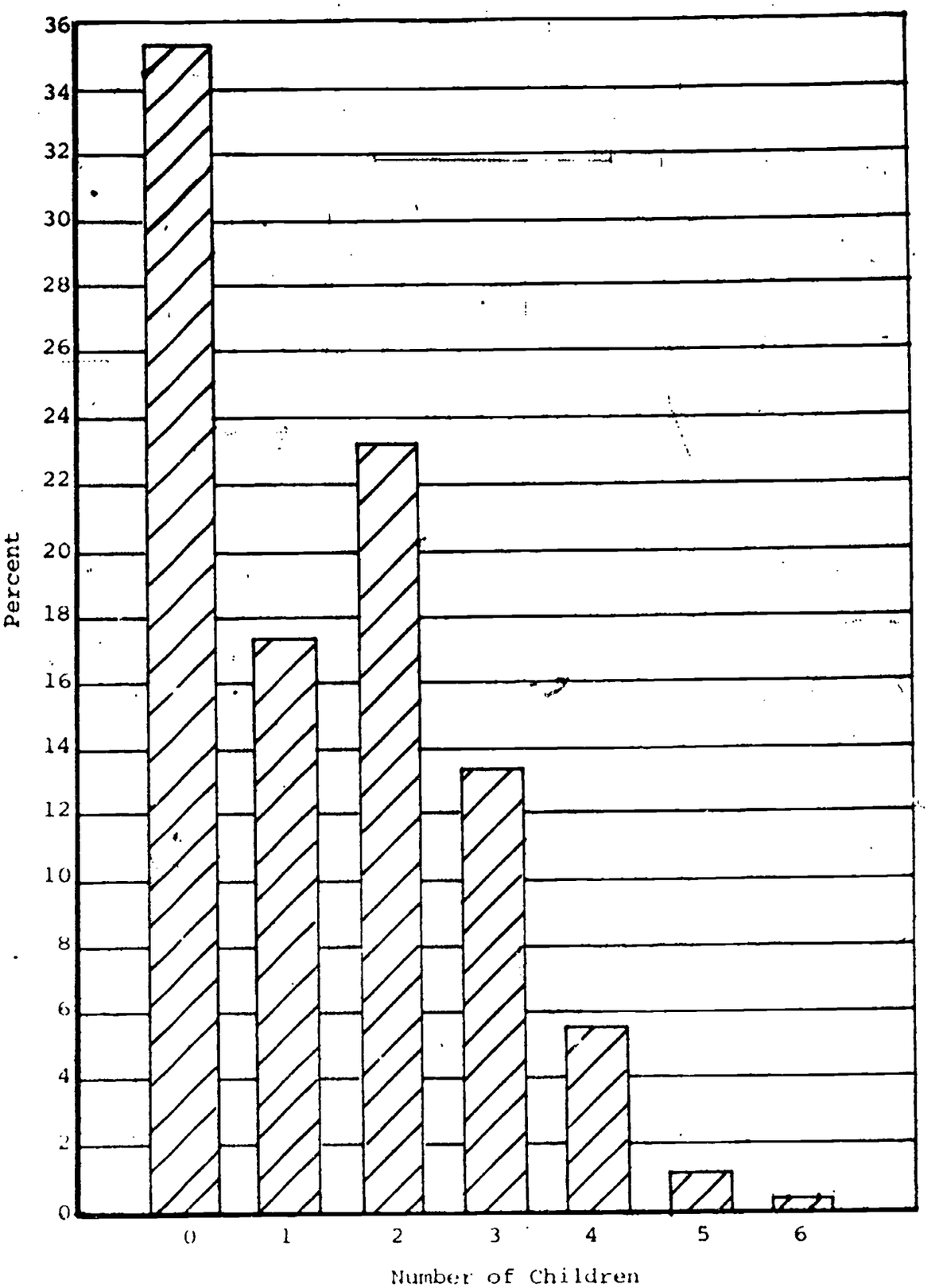


Figure 5.5. Distribution of the Number of Children of Female Vocational Faculty

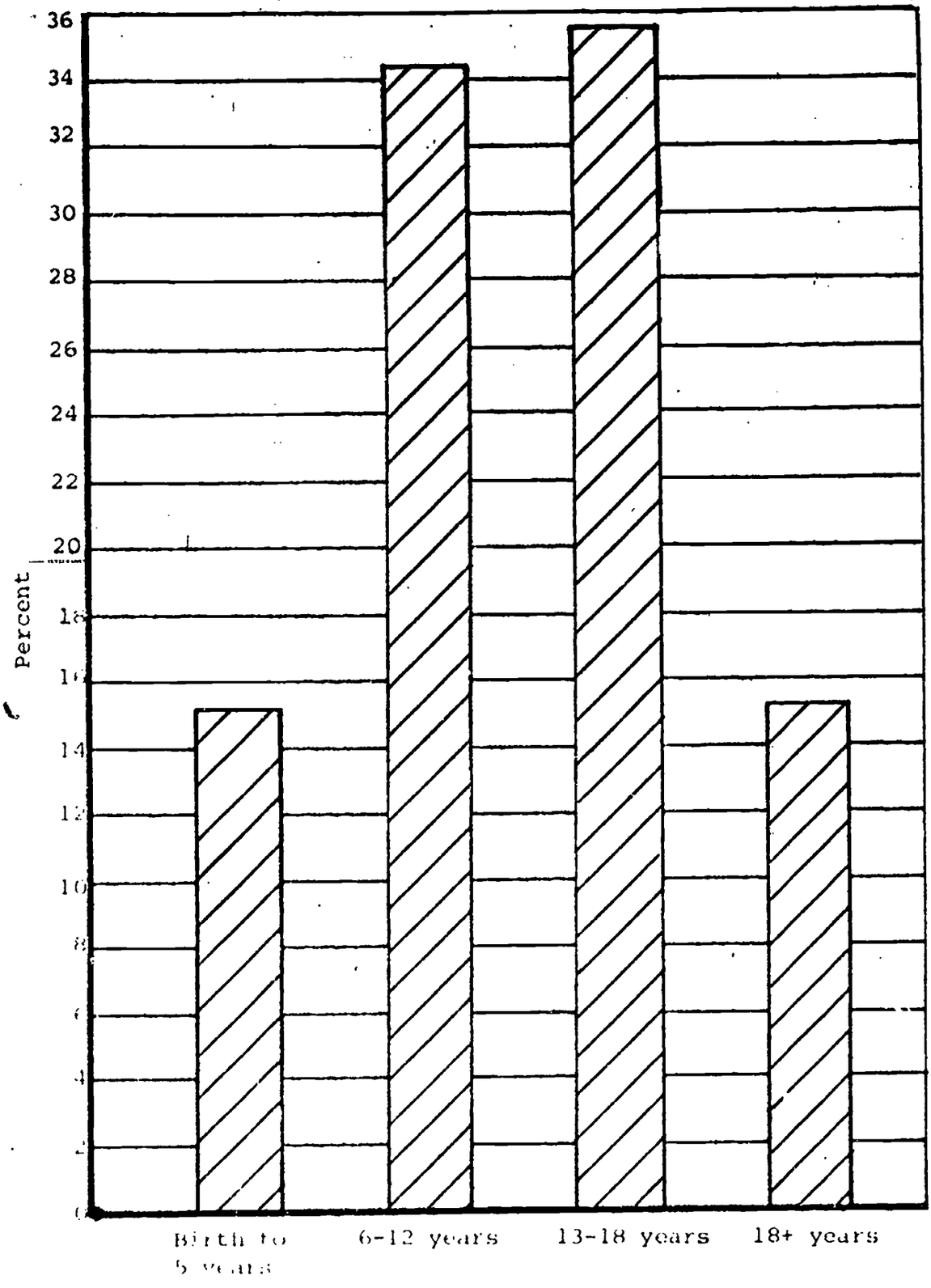


Figure [illegible]. Percent of Children of Female Vocational Faculty by Age Group

Considering the difficulties associated with rearing any young children while also working full-time, such a high rate of participation may well indicate a need for many women to achieve economic self-sufficiency.

The age distribution of full-time female vocational faculty is presented in Figure 5.7. Their mean age was 41.8 years with a standard deviation of 10.2 years (i.e., 68 percent of all the women sampled are between 31.6 and 52.0 years old). These findings were in agreement with Kay (1969) who reported that 16.9 percent of the women in post-secondary vocational education were under 30, 48.7 percent were 40 to 44 years old, and 34.4 percent were over 45.

Employment Characteristics

Figure 5.8 shows the distribution of salary for female vocational faculty members. The mean salary was $12,907.04 with a rather large standard deviation of $3,228.07 (i.e., 68 percent of the women sampled earn between $9,679 and $16,135).

Most of the women in the sample indicate work experience outside of education (Figure 5.9). Sixty-two percent of the women had previous work experience ranging from 1 to 10 years.

The distribution of the number of years employed at their present institution (i.e., public community college) is shown in Figure 5.10. The average number of years was 6.13 with a standard deviation of 4.6 (i.e., 68 percent of the women sampled had worked from 1.5 to 10.7 years at their respective community college). It should be pointed out that public community colleges are relatively late comers to the higher education scene, with half of the existing community colleges having been

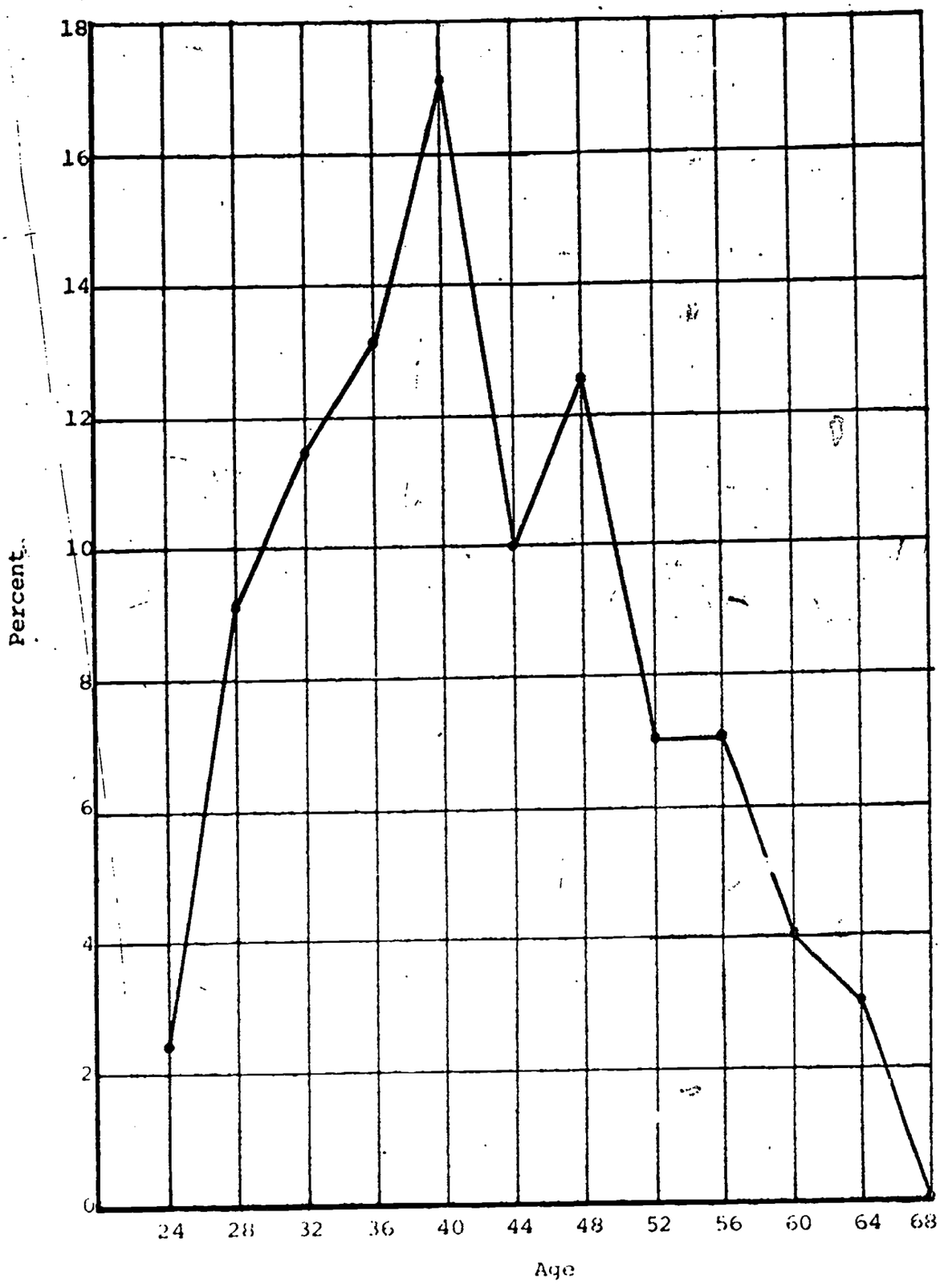


Figure 5.7. Age Distribution of Full-Time Female Vocational Faculty

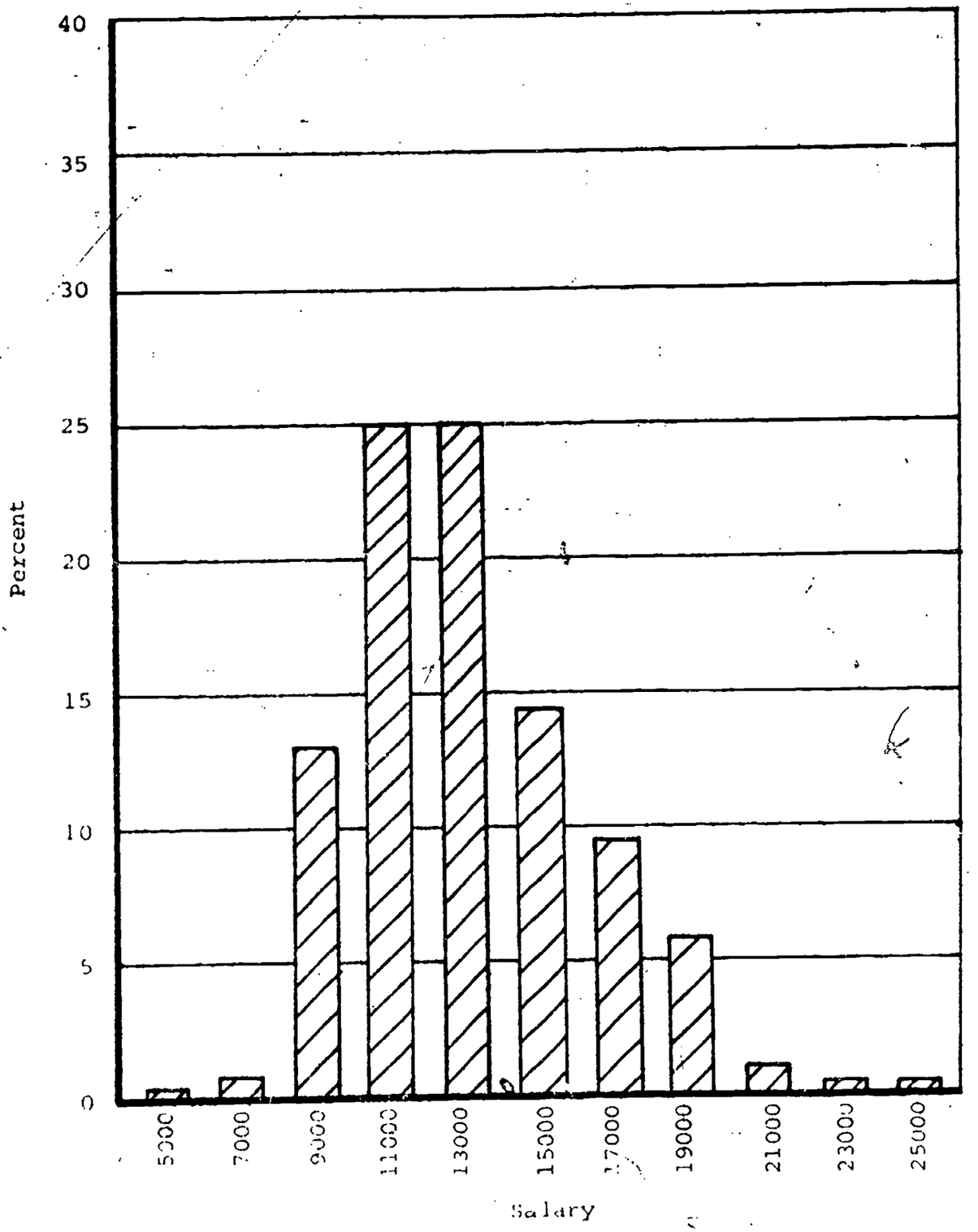


Figure 5.4. Salary Distribution for Vocational Female Faculty

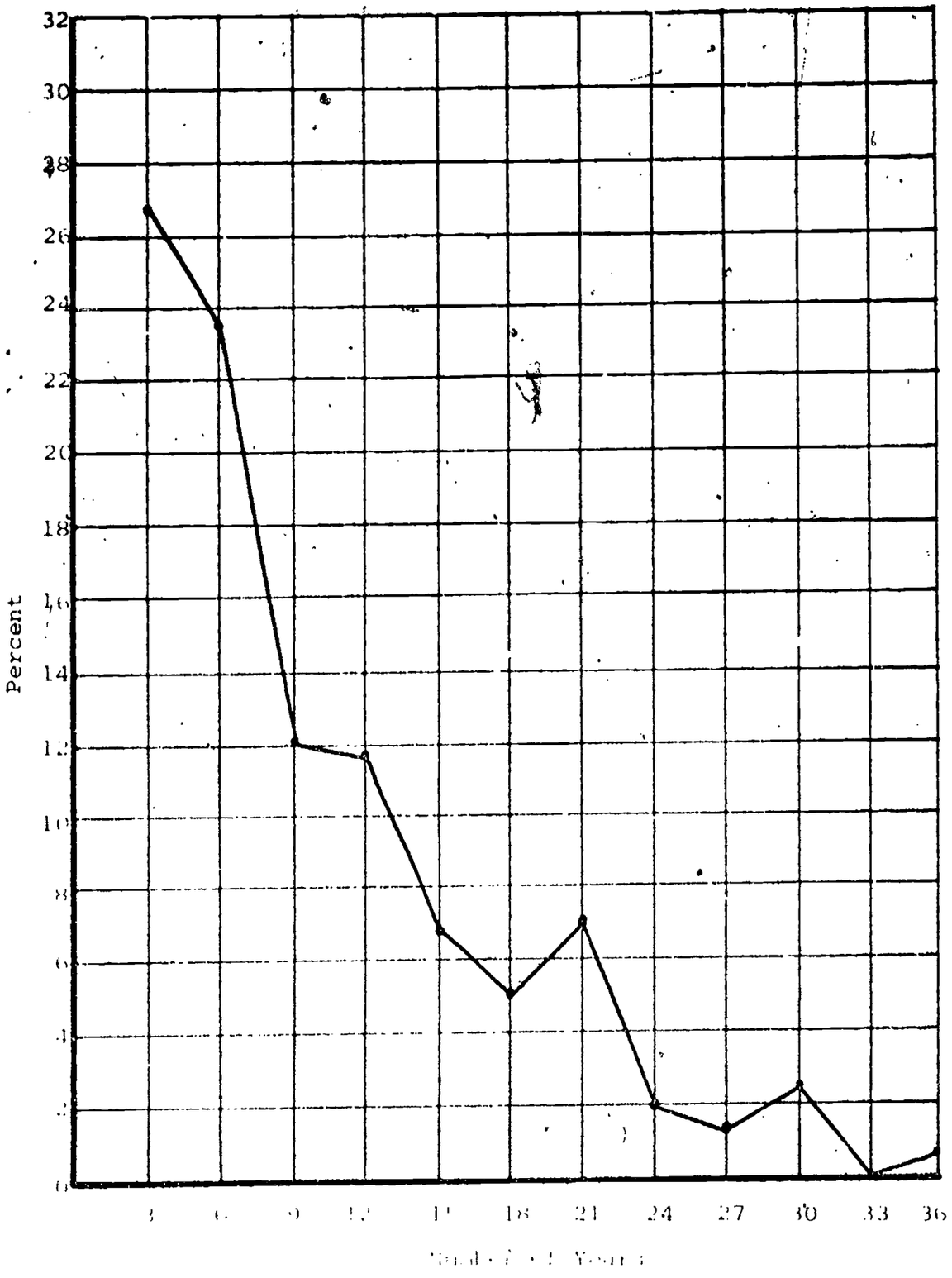
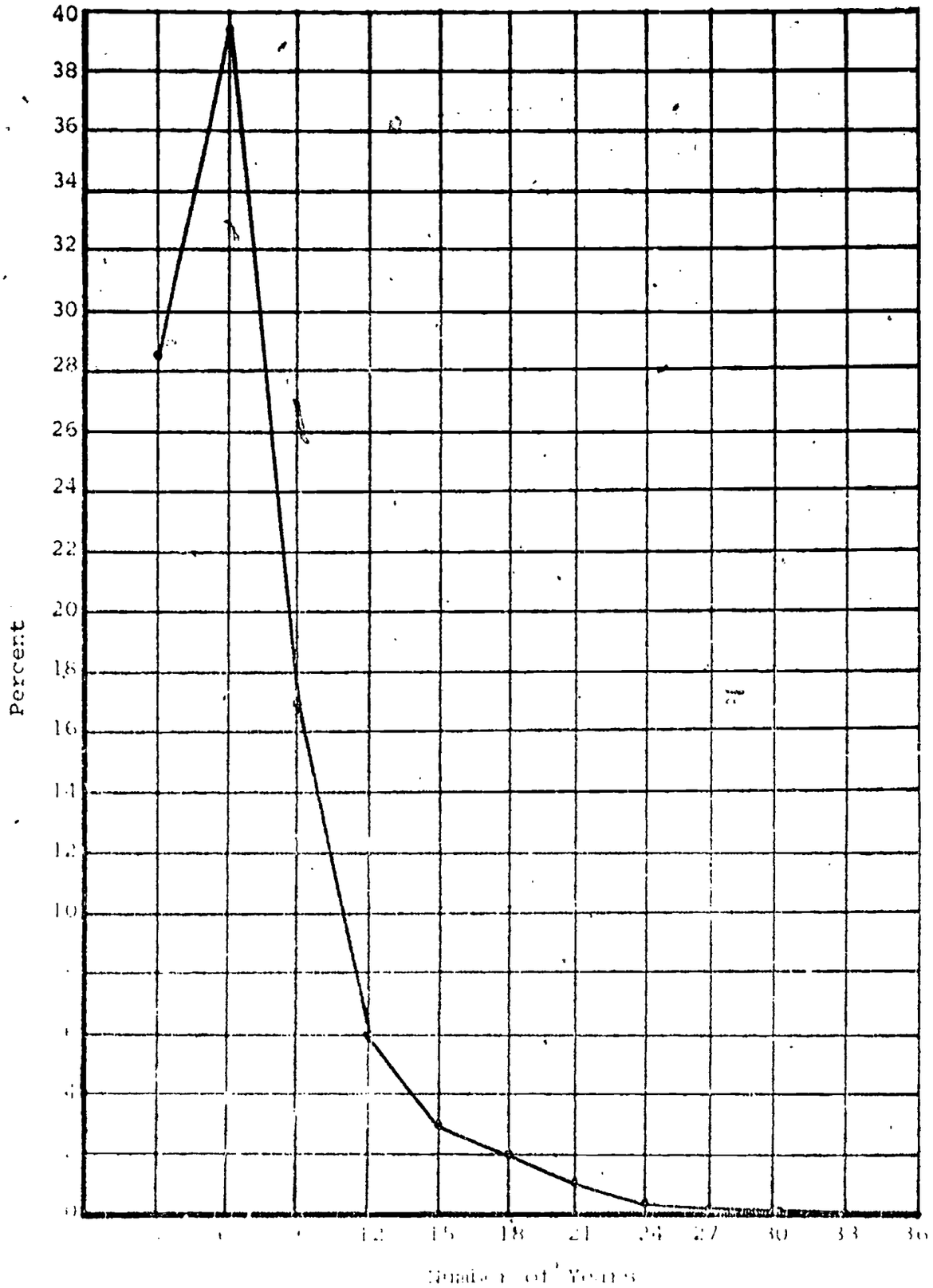


Figure [illegible]. Distribution of Years Employed Outside Education for Vocational Female Faculty



[illegible] Distribution of Years Employed at Present Institution for Female Vocational Faculty

established since 1954 (Connor, 1973). In view of this, the likelihood of the mean length of teaching service at a community college being larger is not great.

Finally, it should be noted that when the total number of years employed outside education is added to the total number of years teaching at each level, the women in the study sample had approximately 16 years of paid employment. With their mean age being 41 years, this seemed to indicate that most of these women have been employed since they were 25 years old.

Female faculty have had teaching experience in a variety of institutions including elementary, secondary and four-year colleges. Figure 5.11 displays the distribution of these other teaching experiences. Of interest is the fact that over one-fourth of the sample has had secondary school experience. Also a total of 16 percent indicated some previous teaching experience in a senior college. In addition, the average number of years employed per institution type is presented in Figure 5.12. Those with four-year college teaching experience had a mean length of service of 3.6 years, while those with previous secondary level experience worked in that capacity for 4.5 years. Finally, the eight percent with elementary school experience had a mean of 3.7 years.

Promotions Received at Present Public Community College

Since almost 50 percent of the sample were employed at institutions where there was no academic rank designated, the percentages reported here are not representative. Approximately 38 percent of the remaining [illegible] of the women faculty had been promoted from Instructor to Assistant

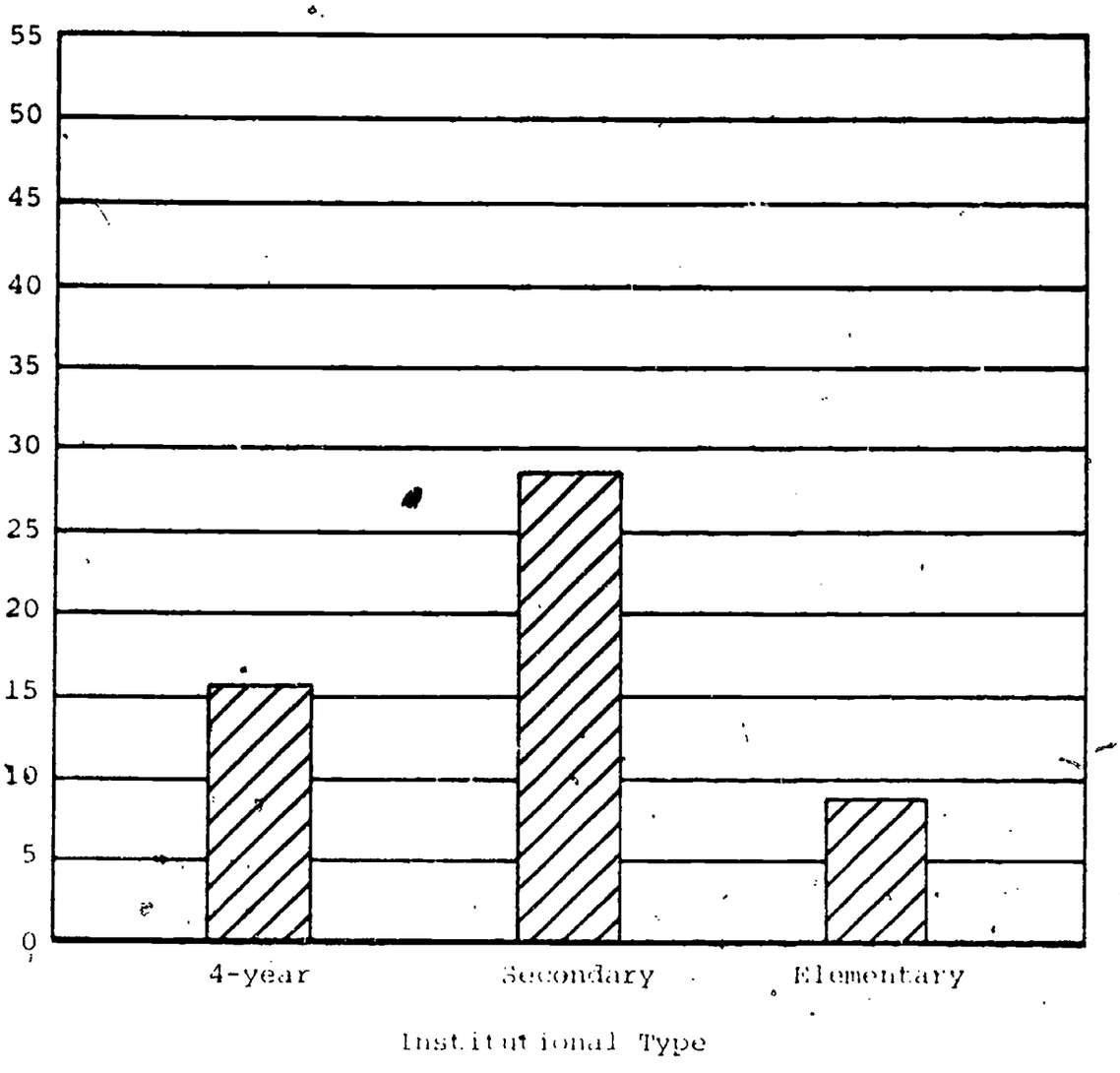


Figure 5.11. Percent of Teaching Experience Other Than Community College by Level for Female Vocational Faculty

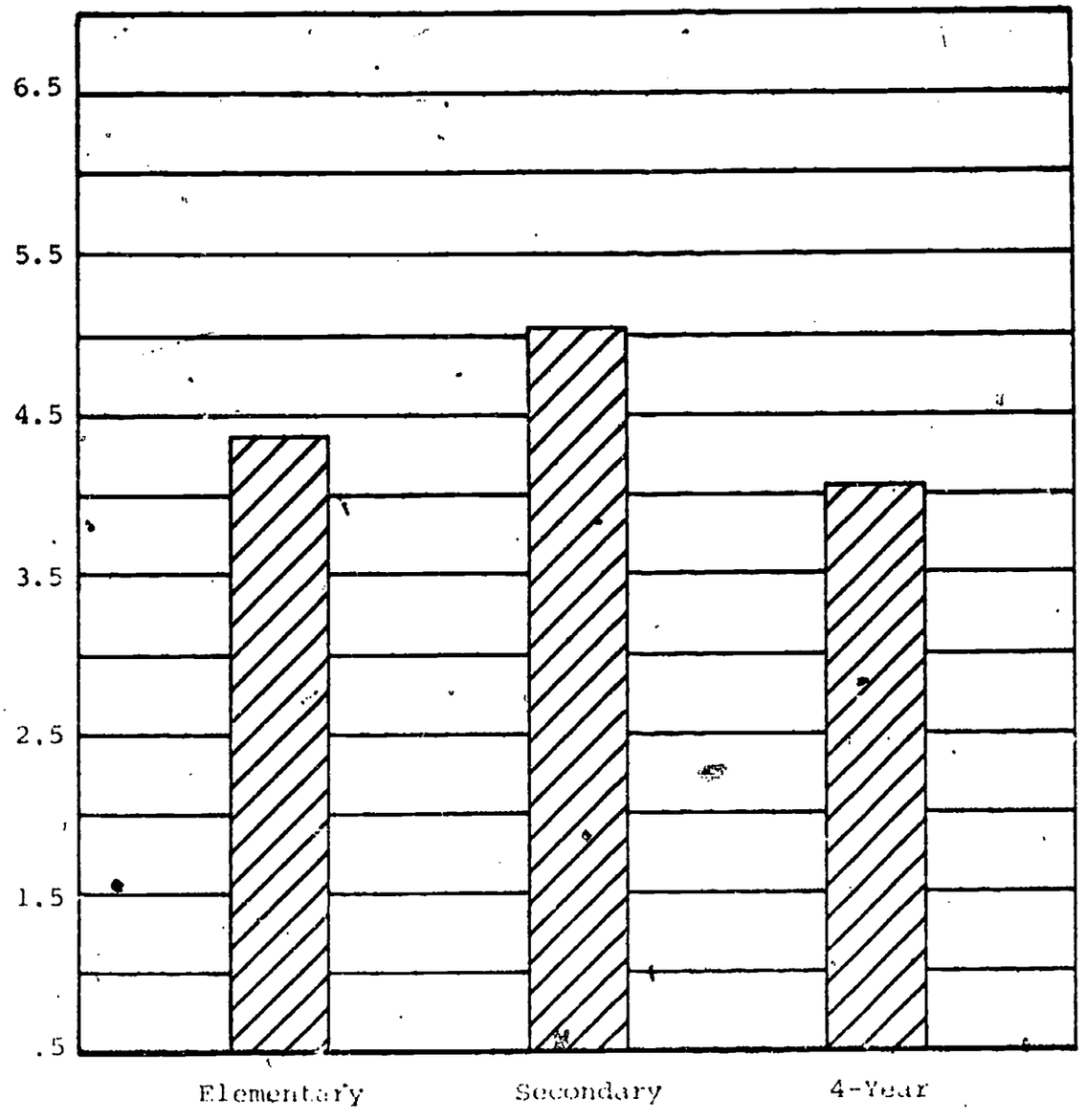


Figure 5.12. Average Number of Years Employed by Level for Female Vocational Faculty

Professor. Twenty-five percent had been promoted from Assistant to Associate Professor, while 13 percent indicated being promoted from Associate to Full Professor.

In addition, some women moved from teaching to teaching/administration or to full-time administration. Approximately 3.2 percent moved from full-time teaching to full-time administration. Sixteen percent went from full-time teaching to some teaching/administration combination. Finally 4.4 percent went from a teaching/administration responsibility to full-time administration.

Laboratory and lecture hours of female faculty employed full-time are shown in Figure 5.13. The average time spent in lecture was 9.0 hours, while the average time allocated to the laboratory related activities was 13.0 hours. Consequently, for female vocational teachers, the average week consisted of 22 contact hours. These findings seemed to be in agreement with Bayer (1970) who found that over 50 percent of the faculty at two-year colleges teach in excess of 13 hours per week.

Approximately 18 percent of the women sampled had both teaching and administrative duties. The average amount of time spent by the women in this category included 15 hours per week (Figure 5.14) in teaching related activities and was 19 hours each week (Figure 5.15) for administrative duties (i.e., total of 34 hours/week).

One can question the addition of administrative responsibilities with no corresponding reduction in teaching hours. Perhaps it is not a movement into true administration. However, if it is a movement into administration the additional work load is the cost of advancement.

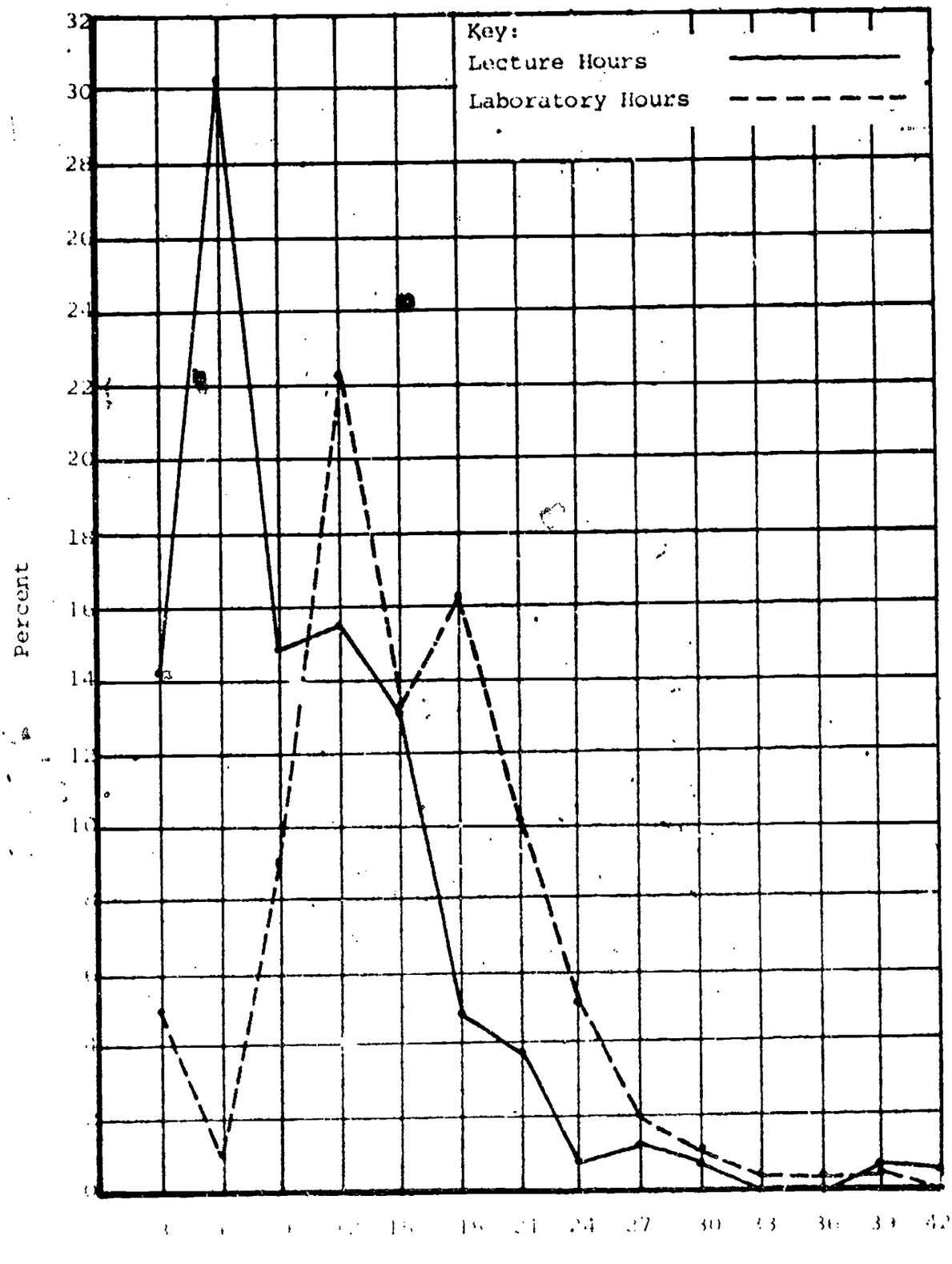


Figure [illegible]

[illegible] Lecture and Laboratory Hours for Full Time [illegible] Faculty

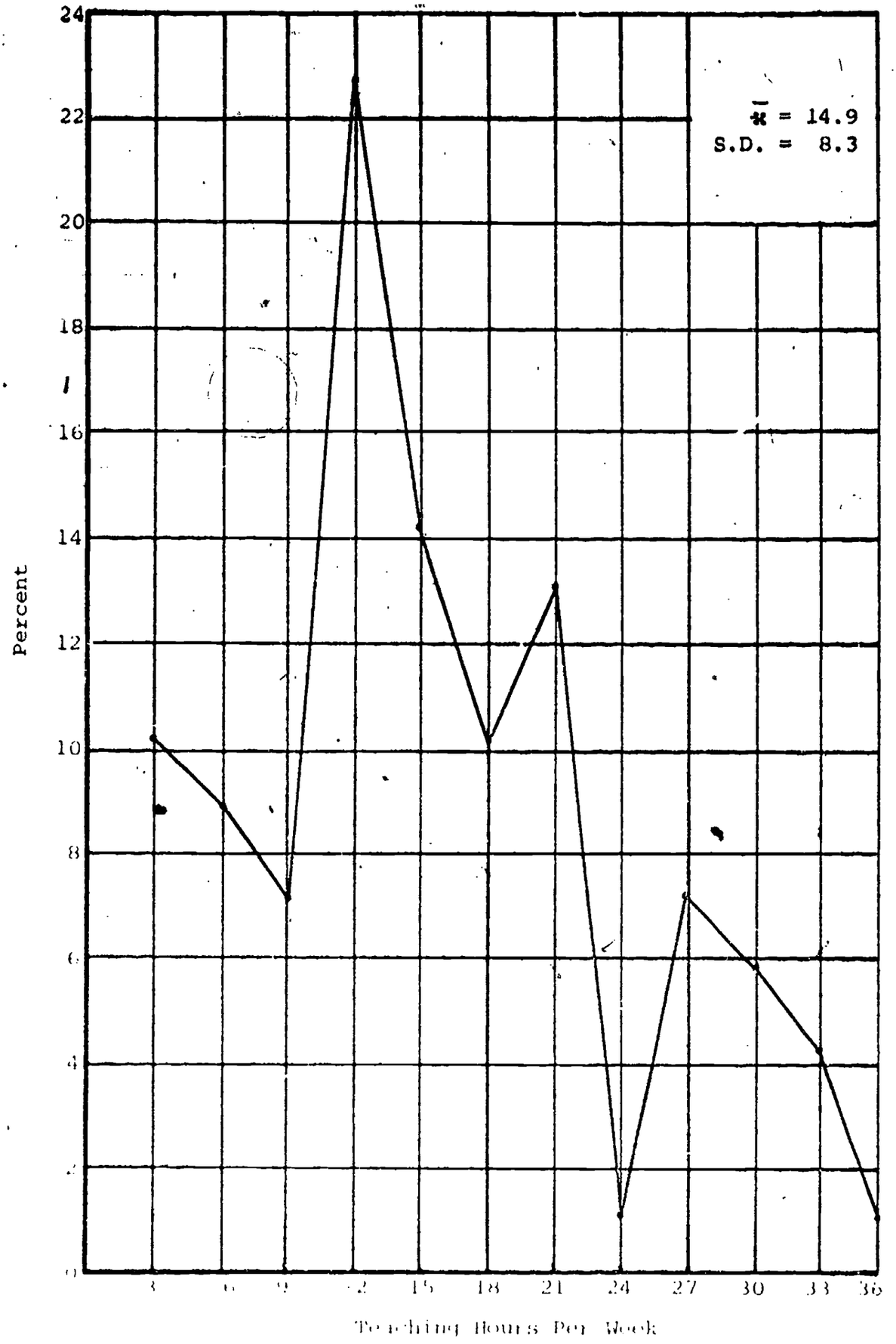


Figure 5.15. Teaching Hours For Female Vocational Faculty With Both Teaching/Administrative Duties

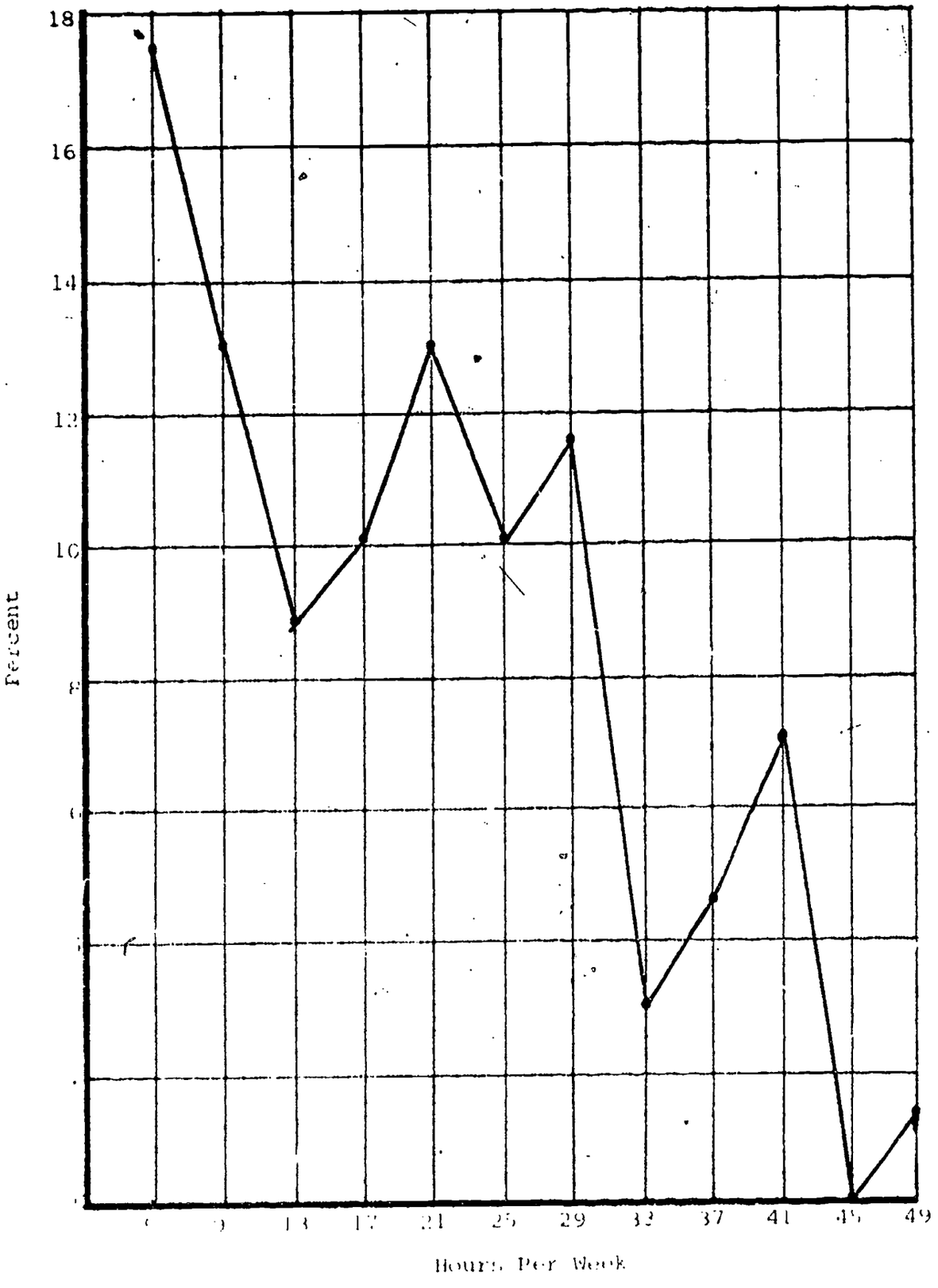


Figure [illegible]. Administrative Hours for Female Vocational Faculty With Both Teaching/Administrative Duties

Question 12. What is the relationship between the salary of female vocational faculty members and their:

a. age?

b. number of years employed outside education?

c. number of years employed at their present institution?

d. highest degree attained?

e. marital status?

Multiple regression analysis was conducted to examine the total amount of predictive information available from the six independent variables tested above. The F-ratio was found to be 15.4 and was significant at the .05 level. A restricted model was calculated to determine which variables possess the most information useful for prediction. The F-ratio for the restricted model shown in Table 5.1 was 27.50 and was significant at the .05 level.

Therefore, to answer question 12, on the average female vocational faculty members with the highest salary were:

a. the oldest.

b. teaching at their respective institutions for the longest period of time.

c. single.

In addition, the negative regression coefficients shown in Table 5.1 indicate that there was a negative relationship between state certification, the associate degree and the bachelor's degree. The negative regression coefficients can be interpreted to mean that those faculty members holding those degrees as the highest attained degree earn the lowest salaries.

Conversely, one could speculate that those holding graduate degrees would earn the highest salaries. However, it should be pointed out that the regression did not show this as a significant relationship, probably because the number of teachers with graduate degrees was small.

The seven dependent variables studied for questions 13 through 19 were as follows:

13. What is the relationship between highest degree held and:

14. What is the relationship between marital status and:

15. What is the relationship between number of children and:

TABLE 5.1

Regression Analysis Between the Six Independent Variables in the Restricted Model and the Dependent Variable (i.e. salary)

Variables No.	Name	Partial Regression Coefficient	Standard Error	Student t
1	Age	61.48	17.27	3.55*
2	Number of Years at Present Institution	237.62	39.67	5.98*
3	State Board Exams	-2234.81	623.71	3.58*
4	Associate Degree	-2446.23	863.48	2.83*
5	Bachelor's Degree	-1936.10	321.23	6.02*
6	Single	1032.39	370.37	2.78*
	Intercept	9570.55	709.07	

TABLE 5.1 (Continued)

Variables No.	Name	Partial Regression Coefficient	Standard Error	Student t
	Standard Error of Estimate = 2493.94			
	F-ratio for the restricted model = 27.50			
	Coefficient of determination $(\bar{R}^2)^a$ = 0.36			

Note: [a]Adjusted for degrees of freedom

*Significant at .05 level

16. What is the relationship between number of years employed outside education and:

17. What is the relationship between number of years at present institution and:

18. What is the relationship between age and:

19. What is the relationship between salary and:

The independent variable suffixes for each of the dependent variables were:

a. dual-role conflict,

b. advancement possibilities, and

c. career aspirations.

MRA was used to answer the questions listed above. Table 5.1 illustrates the results. Only two significant relationships were found. They were:

Question 13c. What is the relationship between [illegible] degree held and career aspirations? On the average women with

TABLE 5.2

Relationships for Vocational Female Faculty Demographic Variables

	(a) dual-role conflict	(b) advancement possibilities	(c) career aspirations
What is the relationship between highest degree held and:	NS	NS	*
What is the relationship between marital status and:	NS	NS	NS
What is the relationship between age and:	NS	NS	NS
What is the relationship between number of years employed outside education and:	NS	NS	NS
What is the relationship between the number of years employed at present institution and:	NS	NS	NS
What is the relationsnip between number of children and:	NS	NS	NS
What is the relationship between salary and:	NS	NS	*

NS = Non-significant
* = Significant at .05 level

the highest degrees would rather be promoted by merit than by seniority, and would like to end their educational careers as full professors.

The restricted model results are shown in Table 5.3.

Question 19c. What is the relationship between salary and career aspirations? On the average those women with the highest salaries tend to think of employment as a lifetime career and believe women who want full equality should be prepared to accept equal responsibility.

The restricted model results are shown in Table 5.4.

TABLE 5.3

Regression Effect of the Significant Independent Variables on the Career Aspiration Subscale by Highest Degree Attained (Vocational Female Faculty)

Variables No.	Name	Partial Regression Coefficient	Standard Error	Student t
1	CA (18)	-0.11	0.05	2.07*
2	CA (24)	0.10	0.04	2.39*
	Intercept	4.52	0.25	

Standard Error of Estimate = 0.85

F-ratio for the restricted model = 4.93

Coefficient of determination $(R^2)^a$ = 0.02

Note: [a]Adjusted for degrees of freedom

*Significant at .05 level

TABLE 5.4

Regression Effect of the Significant Independent Variables on the Career Aspiration Subscale by Salary (Vocational Female Faculty)

Variables No.	Name	Partial Regression Coefficient	Standard Error	Student t
1	CA (8)	-786.2	385.0	2.04*
2	CA (12)	551.8	216.6	2.54*
	Intercept	17188.65	2007.65	

Standard Error of Estimate = 3336.7

F-ratio for the restricted model = 3.94

Coefficient of Determination $(\bar{R}^2)^a$ = 0.02

Note: [a]Adjusted for degrees of freedom
*Significant at .05 level

VI

SUMMARY, DISCUSSION AND RECOMMENDATIONS

Summary

An examination of the perceptions of public community college presidents regarding professional women faculty in terms of dual-role conflict, advancement possibilities and career aspirations revealed the following:

1. The presidents (all of whom were male) agreed that professional women vocational faculty do experience some degree of role conflict.
2. There are apparent inconsistencies in the administrators' perceptions toward the advancement possibilities of female vocational faculty. For example, over 40 percent of the presidents sampled perceived that [in their respective institutions] women were not as likely to achieve positions of leadership as men. In contrast, over 80 percent of these same male presidents agreed that women faculty successfully compete with men faculty [at their respective institutions].
3. Most administrators perceived female faculty as having moderately high career aspirations.

In addition, those administrators with the greatest number of years in administration most often agreed that for professional women children are a liability, intellectual achievement is not viewed as aggressive behavior, and professional women can realistically expect to have a lifelong career.

Finally, those administrators from large schools most often agreed that the possibilities for promotion to the next academic rank when eligible are good.

An examination of the perceptions of female vocational education faculty members at public community colleges with regard to dual-role conflict, advancement possibilities and career aspirations revealed the following:

1. Vocational female faculty were ambivalent concerning their dual-role.
2. Most female vocational faculty members perceived their advancement possibilities as being poor.
3. Seemingly supportive of the above findings, these women also had low career aspirations.

When the perceptions of female vocational faculty members were compared to those of college presidents, the most significant finding was that administrator's perceptions regarding promotion are significantly higher than found for women faculty.

The collected demographic data relative to professional women in vocational education at public community colleges revealed the following:

1. The bachelor's degree was the highest degree attained by approximately 46 percent of the women, 53 percent had master's degrees, and less than two percent had received their doctorates.
2. Almost 50 percent of the women sampled were employed at institutions where there was no designated academic rank.

Consequently, the percentages derived for academic rank are based on a small sample and no firm conclusions concerning this variable can be made.

3. Over 67 percent of the females sampled were married, 21 percent single, and the remaining 12 percent were divorced or widowed.
4. The average number of children per female faculty member was two. Less than 15 percent of the women had children from 6 to 18 years and the remaining had children over 18 years.
5. The mean age of the full-time vocational female faculty member was 41.8 years.
6. The mean salary for these women was $12,907 with a rather large standard deviation of $3228.
7. Over 85 percent of the women in the sample have had work experience outside of education.
8. The average number of years teaching at the community college level for the study sample was six years.
9. These women have had teaching experience in a variety of institutional settings including elementary, secondary and four-year colleges.
10. Finally, while teaching at their respective colleges, the average time spent in lecture was nine hours per week, while the average time allocated to laboratory related activities was 13 hours per week. Consequently, the average week consisted of 22 contact hours.

Discussion

"The point I think is not to be against marriage but to humanize marriage and also to add to that other life style alternatives" (source unknown).

While some researchers believe statistical analysis of data is the only legitimate type of research, this investigator believes that for the purposes of this study it would be unfortunate not to include some of the descriptive data that were collected though unsolicited. As a result, some of those data are included in the following discussion on dual-role conflict, advancement possibilities, and career aspirations.

Dual-Role Conflict

The responses concerning dual-role conflict revealed the ambivalences, gratifications, conflicts and frustrations that these professional women experienced in their attempts to conform to or transcend a culturally defined role.

We have, with academic calm, raised the question of the role of women in society at large and specifically, in the teaching profession. But the responses from several of the samples indicate the subject is laden with emotion. For example:

> It is possible with <u>much effort</u> by both husband and wife--just "making arrangements" to sustain a family structure of three in the face of two diverse schedules can become an overwhelming, unending task--makes me threaten some days that I'm going to kill myself and lie to the Lord about it!

Another respondent wrote:

> Please send the study results--anonymity be damned!

A high percentage of the women sampled expressed a positive attitude toward the professional married woman's ability simultaneously to manage home and career responsibilities. However, it would appear that the freedom to work has not resulted in mothers who are free of guilt or resentment.

For example, respondents wrote:

> My responses are a mixed bag because I am. As a professional career oriented woman I enjoy succeeding, doing my job well and advancing and being an intellectual equal with men on the staff. I often work harder and get better results, but I also recognize because of my area (family life) and my experience that homes and families of working women miss some vital touches. Time is limited and school often takes priority--children lack the full attention they need and deserve. There are some professional jealousies because my husband and I are on the same staff but many shared experiences. I often find full liberation or equality has resulted in my opportunity to do two jobs--as my husband does not share home responsibilities--and I sometimes long for just a "housewifing" job. However, the long term goals of a career--the challenges and frustrations must be worth it since I'm still at it and expect to be for a good many years.

> The married professional woman with a family must continue to fulfill her familial responsibilities whereas the married professional man usually relegates such to his wife. Thus, given two individuals, one male, the other female, with equal educational backgrounds, experiences and family the woman must juggle her professional and familial responsibilities while the male concentrates on his professional growth. This situation will continue to prevail as long as males feel their responsibilities can be fulfilled by financial means alone.

> The child's need for mothering must come first. A successful career NEVER justifies an emotionally disturbed child.

> Responsibility in raising a family and to a husband are first and foremost in order for a woman to function in her career with peace of mind and fulfillment in her job.

One woman in responding to the statement, marriage is an asset for professional women, wrote:

> Marriage is a personal asset. I suspect it is what makes me a "delightful bitch" instead of a plain one-- (and that is a professional asset!).
>
> Realistically children are a consideration. This should be a shared responsibility of both parents but usually is not.

One very perceptive woman, nearly 50 years old, wrote:

> I believe the responsibilities for children are not shared equally by men and women, but younger men may be accepting a greater share--I believe strongly that it is as vital to men as to women that women move from a dependent to an independent status, and that it will improve human relationships--society will be better when women are encouraged to think and men to feel.

In conclusion it seems that the mass media and some social scientists have helped to perpetuate the myth that the traditional role of the modern professional woman is undergoing a dramatic change. However, from these study results, no new trends seem to be emerging. If we closely examine the families of these women, we find the major responsibility for the home and children is still assumed by the mother. The discovery of a trend toward a greater sharing of familial responsibilities would have been encouraging to this investigator.

Advancement Possibilities

"I had to do much more than the men just to be accepted as competent" (respondent).

Examination of the perceived advancement possibilities for women in vocational education at public community colleges gives no basis for optimism. When 76 percent of the female faculty sampled agreed that their possibilities for promotion when eligible were poor, no other conclusion could be drawn. In addition, when one considers this applies to women who are in traditionally women's occupations and who comprise 13 percent of the total faculty, the findings support this premise.

Concerning advancement possibilities, the comments of some faculty members speak for themselves:

> We are trying our damnedest, we are striving to be successful--but I don't think we are yet because of enduring lack of acceptance by some male faculty and all male administrators.
>
> There are few men in allied health vocational education--hence rank and salary for women in these fields are not discriminatory. However, I believe the position of women in general vocational education (clerical, accounting, etc.) is inferior to men.
>
> Women do not have the same opportunities as men at this college. Women are under represented on the faculty and even more so on the administrative level. The Board of Vocational and Technical Education for this district is all male.

According to Kreps (1970) academic job prospects appear bleak. Completion for academic appointments is likely to become keener in the next few years as the supply grows and the demand for services slows. At the moment, many two-year college administrators are aware of the small number of women on their faculties. Should women's opportunities truly become at least as good as those of men with similar backgrounds, the predicted shortage of academic jobs may come to be interpreted as a battle of the sexes, although similar competition among males has always been applauded.

Educational institutions are under pressure to see that the competitive process is free of sex bias, and to observe this rule even when the shortage of jobs means that men as well as women go unemployed. However, their responsibilities go beyond mere employment and should be extended to advancement opportunities as well. From the study results it appeared that once one is employed, the opportunities for advancement are more limited than found for their male colleagues, as perceived by respondents.

For example, one respondent, age 50; salary, $10,500; 24 years of teaching/administrative experience wrote:

> The questionnaire revealed many interesting things from over our campus. I am the only woman chairman of any department. No other chairman teaches more than 12 hours with two preparations. I have 17 hours with five different preparations. Since I am not a woman libber, I have accepted my duties without questioning them; but it does make one sit back and wonder.

If the quality of higher education is to be enriched and made more effective through a fuller utilization of women educators, community colleges must include themselves among those that begin the painful process of change.

Career Aspirations

There is a continuing body of research which with frustration consistency concludes that women refuse to compete for the top jobs. Paul Wolfle (1954) has summarized some of the earlier studies of competitiveness in working women, and concluded:

> Taken at their face value these studies point clearly to the conclusion that the typical goal of an employed woman is not promotion and advancement in her chosen field. The strongest wish is for marriage and a home. When that wish cannot be realized, continuation in the same or a similar job is a more frequent goal than is promotion. The typical employed woman, in short, is not in competition with the employed man (Wolfle, p. 235).

However, Wolfle warns against taking the results at face value and suggests that perhaps the noncompetitiveness of women may be a defensive reaction against sex discrimination (Bernard, 1964). Similarly the findings from this study may indicate that since women view their advancement possibilities as being poor, they have low career aspirations.

In addition, some of the current research concerning women's aspirations concludes that women more than men, are motivated by affiliation needs (McClelland, 1972). Possibly, since affiliation needs are more easily met through teaching than through administration, over 50 percent of the study sample did not want to be promoted to an administrative position.

Concerning the item: Most women would like to be promoted to an administrative position, some respondents replied:

> This bothers me, for I personally declined an administrative position as I enjoy the one to one contact.
>
> However we have a strong faculty and none of us would view an administrative position as a goal or position improvement.
>
> I don't consider a transfer from teaching to administration a promotion!

It was found (Astin and Panos, 1969) that women are more likely than men to have an initially low level of aspiration for graduate education including the doctorate and to change to an even lower level during the four years of undergraduate school.

In addition, academic women at the faculty and/or research level do not enjoy full colleague relationships with the men with whom they work. Perhaps because social norms ba[illegible]ross-sex intimacy in work groups (Bernard, 1964), colleagues and clients tend to respond to a woman's "sex-status" rather than her "occupational status," thereby denying her access to experiences that would help her career (Caplow, 1954).

It is difficult to arrive at any firm conclusions concerning aspiration levels of professional women. Even if a college woman aspires to graduate school, she has less chance of attaining such education than her male counterpart (Wallace, 1966). Being engaged to be married was

found to be unrelated to graduate school expectations for women (Wallace, 1966). One study (Wegner, 1969) found that 76 percent of the men but only 56 percent of the women who aspired to graduate education actually did so. One can suspect that marriage may be a major intervening factor resulting in a lower percentage of women enrolling in graduate school.

In the U.S. women are taught that their most important goals are marriage and motherhood and even career-oriented women believe that their husband's occupational needs should take precedence over their own (Rossi, 1972).

In an attempt to explain the unresolved sex differences related to low aspiration levels of women, Horner (1970) proposed the presence of the "motive to avoid success" as a "psychological barrier to achievement in women" (p. 62). Her research suggests that women are anxious about success and that the motive to avoid success exists and receives its impetus from the expectancy held by most women that success, especially in competitive achievement situations, will be followed by social rejection and feelings of being unfeminine or inadequate as a woman.

The comments she noted through personal interviews seem to speak for themselves.

> When a girl asks me what marks I got last semester I answer, "Not so good--only one 'A,'" when a boy asks the same question, I say very brightly with a note of surprise, "Imagine, I got an 'A!'

> One of the nicest techniques is to spell long words incorrectly once in a while. My boyfriend seems to get a great kick out of it and writes back, "Honey, you certainly don't know how to spell."

> Mother used to tell me to lay off the brains on dates because glasses made me look too intellectual anyhow.

> I sometimes "play dumb" on dates but it leaves a bad taste (p. 70).

The problem delineated in the above statements will persist until the adult sex roles of women are redefined. Concurring, Horner (1970) concluded that:

> In light of the high and if anything increasing incidence of the motive to avoid success in our data, it seems apparent that most otherwise achievement-motivated young women when faced with a conflict between their feminine image and expressing their competencies or developing their abilities and interests adjust their behaviors to their internalized sex role stereotypes (p. 67).

In conclusion the low aspiration levels of the vocational female faculty became increasingly difficult to explain. Possibly they are, as Horner suggests, present because of the "motive to avoid success." It may merely be a means of decreasing "cognitive dissonance" as a result of their perceived low advancement possibilities. In either case additional research is needed.

Recommendations

1. Special efforts be made to recruit women for all vocational areas rather than be restricted to the traditional "woman's occupations."
2. Modification of requirements for entry into vocational teaching areas so as to reduce the defacto sexual segregation presently found in most vocational categories.
3. The removal of artificial restrictions which hold that some jobs are masculine while others are feminine.
4. Specific education aimed at reducing role conflict in females prior to and/or during job preparation.

5. The competitive process be free of sex bias, and that this rule be observed even when the shortage of jobs means that men as well as women go unemployed.
6. Since the administrators view the women's advancement possibilities more favorably than the women themselves do, active attempts be made to encourage women to assert themselves more in these directions.
7. Special efforts be made to assist and encourage professional vocational women to pursue advanced degrees.
8. Repeat the study in three to five years to ascertain if there has been any change in perceptions of opportunities for these women.
9. Repeat the study with male public community college vocational faculty in order to determine the relationships between their perceptions on these matters and those of their women colleagues.
10. Educators at all levels should open new vistas of occupational employment to girls through promoting an awareness of women as employed persons.
11. Conduct additional research on the career aspirations of mature women.

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APPENDIX A

Cover Letter to Community College President
Equalitarian Perception Scale

November 30, 1973

Dear Sir:

As a member of the academic community, I am sure you are aware of the need for additional meaningful research concerning professional women in higher education.

The Department of Vocational Education at The Pennsylvania State University is conducting a nationwide study designed to:

1. determine the status of professional employment of women in vocational education at public community colleges;
2. determine the similarities and differences of perceptions of female vocational faculty members as seen by themselves and college administrators.

You have been randomly selected to be one of the administrator respondents for this investigation. Your role in this effort is twofold: First, we need your latest catalog, from which we can randomly sample several of your female vocational program faculty; secondly, we need to know how you perceive the place of female vocational program faculty in two-year colleges.

You and your college have been carefully coded so as to preserve your anonymity. Furthermore, your responses will be grouped with those of other administrators, and only averages and other statistical values will be reported.

Would you take ten minutes out of your busy schedule to complete this 25-item questionnaire? Also, would you please send us your most recent catalog, along with your responses, in the enclosed pre-addressed postage-paid envelope?

Thank you for your most invaluable assistance. Best wishes.

Sincerely yours,

PART I

Instructions: Please write in the correct response.

Your total years teaching experience _____.

Your total years administration experience _____.

PART II

Instructions: The best answer to each statement is your personal opinion. There are five possible responses for each statement:

SA	(Strongly Agree)
A	(Agree)
U	(Undecided)
D	(Disagree)
SD	(Strongly Disagree)

Please circle only one of the five responses with pen or pencil.

1.	It is fine for a woman to work if her children are adequately cared for.	SA A U D SD
2.	The possibilities for a woman to be promoted to the next academic rank when eligible are only fair.	SA A U D SD
3.	Women can live in productive harmony with men filling complementary and supplementary roles.	SA A U D SD
4.	Professional women can realistically expect to have a life-long career.	SA A U D SD
5.	A mother's working can be easily accepted by a child.	SA A U D SD
6.	The higher the educational attainment of women the greater the chances for their advancement.	SA A U D SD
7.	Marriage is an asset for professional women.	SA A U D SD
8.	Women have as much need to achieve as men.	SA A U D SD
9.	For professional women children are an asset.	SA A U D SD

10.	In this institution women are not as likely to achieve positions of leadership as men.	SA A U D SD
11.	It is possible to be successful at both marriage and a career.	SA A U D SD
12.	A woman's professional career should be subservient to her husband's.	SA A U D SD
13.	Professional women tend to think of employment as a life-time career.	SA A U D SD
14.	Most women would like to be promoted to an administrative position.	SA A U D SD
15.	A woman's first responsibility is to be a feminine companion of men and a mother.	SA A U D SD
16.	Women successfully compete with men at this institution.	SA A U D SD
17.	Women who want full equality should be prepared to accept equal responsibility.	SA A U D SD
18.	Most women would rather be promoted by merit rather than by seniority.	SA A U D SD
19.	Intellectual achievement of women is viewed as competitively aggressive behavior.	SA A U D SD
20.	In general professional women are on par with professional men at this institution.	SA A U D SD
21.	Women in supervisory positions have difficulty dealing with males in subordinate positions.	SA A U D SD
22.	A coeducational faculty provides a healthy atmosphere.	SA A U D SD
23.	Career women play down feminine appearance in order to be taken seriously.	SA A U D SD
24.	Most women would like to end their educational careers as full professors.	SA A U D SD
25.	Women have unique qualities to bring to the classroom that are not present in male faculty.	SA A U D SD

APPENDIX B

Follow-Up Letter to Non-Respondents (College Presidents)
Follow-Up Letter to Respondents

December 17, 1973

Dear Sir:

You may recall receiving a letter dated November 30 and a questionnaire regarding a study designed to:

1. determine the status of professional employment of women in vocational education at public community colleges;
2. determine the similarities and differences of perceptions of female vocational faculty members as seen by themselves and college administrators.

We randomly selected a rather small group, which necessitates a good return in order to complete an accurate assessment of the goals mentioned above.

Since we have not heard from you, we are again asking you to assist us in completing this effort. Would you take 10 minutes out of your busy schedule to complete this 25 item questionnaire? Also, would you please send us your most recent catalog, along with your responses?

A new questionnaire is enclosed for your convenience. Thank you again for your most invaluable assistance. Best wishes.

Sincerely yours,

December, 1973

Dear Sir:

On November 30, we sent you a letter and questionnaire dealing with the role of female vocational program faculty in public two-year colleges. We have received your completed questionnaire and want to thank you for taking the time to assist us.

We did find, however, that you forgot to send us the most recent catalog of your college. Since we need your catalog to use in randomly selecting several of your female vocational program faculty, we are asking you to send us one at your earliest convenience. In the event a catalog is not available, a list of your faculty, identified by sex, academic rank, and teaching assignment, would suffice.

Thanks again for your invaluable assistance. We plan to share our results with you, which will be available in the late spring or early summer.

Sincerely,

January, 1974

Dear Sir:

On January 5, we sent you a letter and questionnaire dealing with the role of female vocational program faculty in public two-year colleges. We have received your completed questionnaire and want to thank you for taking the time to assist us.

We did find, however, that you forgot to send us the most recent catalog of your college. Since we need your catalog to use in randomly selecting several of your female vocational program faculty, we are asking you to send us one at your earliest convenience. In the event a catalog is not available, a list of your faculty, identified by sex, academic rank, and teaching assignment, would suffice.

Thanks again for your invaluable assistance. We plan to share our results with you, which will be available in the late spring or early summer.

Sincerely,

January 10, 1974

Dear Sir:

You may recall receiving a letter dated December 17 and a questionnaire regarding a study designed to:

1. determine the status of professional employment of women in vocational education at public community colleges;
2. determine the similarities and differences of perceptions of female vocational faculty members as seen by themselves and college administrators.

We randomly selected a rather small group, which necessitates a good return in order to complete an accurate assessment of the goals mentioned above.

Since we have not heard from you, we are again asking you to assist us in completing this effort. Would you take 10 minutes out of your busy schedule to complete this 25 item questionnaire? Also, would you please send us your most recent catalog, along with your responses?

A new questionnaire is enclosed for your convenience. Thank you again for your most invaluable assistance. Best wishes.

Sincerely yours,

APPENDIX C

Cover Letter to Female Faculty
Equalitarian Perception Scale
Questionnaire

January 18, 1974

Dear Colleague:

As a member of the academic community, I am sure you are aware of the need for additional meaningful research concerning professional women in higher education.

The Department of Vocational Education at The Pennsylvania State University is conducting a nationwide study designed to:

1. determine the status of professional employment of women in vocational education at public community colleges;

2. determine the similarities and difference of perceptions of female vocational faculty members as seen by themselves and college administrators.

You have been randomly selected to be one of the female faculty respondents for this investigation. You have been carefully coded so as to preserve your anonymity. Furthermore, your responses will be grouped with those of other faculty members and only averages and other statistical values will be reported.

Would you take fifteen minutes out of your busy schedule to complete this questionnaire?

Thank you for your most invaluable assistance. Best wishes.

Sincerely,

This study is designed to protect your identity and to keep your responses confidential. In this section please circle the letter or write in the choice that indicates your response. All comments are welcome: use the back of the sheets if necessary.

1. Highest educational level attained

   1. High school diploma or equivalent
   2. Board Examinations - State Certification - Licensing
   3. Associate Degree
   4. Bachelor's Degree
   5. Master's Degree
   6. Doctorate

2. Rank

   1. Professor
   2. Associate professor
   3. Assistant professor
   4. Instructor
   5. Lecturer
   6. No rank designated

3. Present Marital Status

   1. Single
   2. Married
   3. Widowed
   4. Other

4. Number of Children (Circle 1)

   0-1-2-3-4-5-6-7+

5. Number of children in each age group

   1. 0- 5 _____
   2. 6-12 _____
   3. 13-18 _____
   4. 18+ _____

6. Type of Appointment

   1. Permanent
   2. Probationary

7. Present annual salary (prior to deductions) $ _____

8. Birth year 19__

9. Number of years employed outside education _____.

10. Number of years employed at present institution _____.

11. Number of years teaching at each level

1. 4-yr. college _____
2. 2-yr. post secondary _____
3. Secondary _____
4. Elementary _____

12. Academic promotions received at present institution (Check all that apply)

_____ 1. Instructor to Assistant Professor
_____ 2. Assistant to Associate Professor
_____ 3. Associate to Full-Professor
_____ 4. There is no academic rank at this institution

13. Other promotions received at present institution

_____ 1. Full-time teaching to full-time administration
_____ 2. Full time teaching to teaching/administration
_____ 3. Teaching/administration to full-time administration

14. If full-time faculty go to No. 14a

If full-time administrator go to No. 14b

If faculty/administrator go to No. 14c

a. Teaching contact hours per week

A. Lecture _____ hours
B. Laboratory/Shop _____ hours

b. Administrative hours/week _____

c. Both teaching and administrative hours/week.

1. Teaching _____ hours
2. Administrative _____ hours

Instructions: The best answer to each statement is your personal opinion. There are five possible responses for each statement:

SA	(Strongly Agree)
A	(Agree)
U	(Undecided)
D	(Disagree)
SD	(Strongly Disagree)

Please circle only one of the five responses with pen or pencil.

1.	It is fine for a woman to work if her children are adequately cared for.	SA A U D SD
2.	The possibilities for a woman to be promoted to the next academic rank when eligible are only fair.	SA A U D SD
3.	Women can live in productive harmony with men filling complementary and supplementary roles.	SA A U D SD
4.	Professional women can realistically expect to have a life-long career.	SA A U D SD
5.	A mother's working can be easily accepted by a child.	SA A U D SD
6.	The higher the educational attainment of women the greater the chances for their advancement.	SA A U D SD
7.	Marriage is an asset for professional women.	SA A U D SD
8.	Women have as much need to achieve as men.	SA A U D SD
9.	For professional women children are an asset.	SA A U D SD
10.	In this institution women are not as likely to achieve positions of leadership as men.	SA A U D SD
11.	It is possible to be successful at both marriage and a career.	SA A U D SD
12.	A woman's professional career should be subservient to her husband's.	SA A U D SD
13.	Professional women tend to think of employment as a life-time career.	SA A U D SD
14.	Most women would like to be promoted to an administrative position.	SA A U D SD

15.	A woman's first responsibility is to be a feminine companion of men and a mother.	SA	A	U	D	SD
16.	Women successfully compete with men at this institution.	SA	A	U	D	SD
17.	Women who want full equality should be prepared to accept equal responsibility.	SA	A	U	D	SD
18.	Most women would rather be promoted by merit rather than by seniority.	SA	A	U	D	SD
19.	Intellectual achievement of women is viewed as competitively aggressive behavior.	SA	A	U	D	SD
20.	In general professional women are on par with professional men at this institution.	SA	A	U	D	SD
21.	Women in supervisory positions have difficulty dealing with males in subordinate positions.	SA	A	U	D	SD
22.	A coeducational faculty provides a healthy atmosphere.	SA	A	U	D	SD
23.	Career women play down feminine appearance in order to be taken seriously.	SA	A	U	D	SD
24.	Most women would like to end their educational careers as full professors.	SA	A	U	D	SD
25.	Women have unique qualities to bring to the classroom that are not present in male faculty.	SA	A	U	D	SD

APPENDIX D

Follow-Up Letter to Female Non-Respondents

Dear Colleague:

You may recall receiving a letter dated February and a questionnaire regarding a study designed to:

1. determine the status of professional employment of women in vocational education at public community colleges:
2. determine the similarities and differences of perceptions of female vocational faculty members as seen by themselves and college administrators.

We randomly selected a rather small group, which necessitates a good return in order to complete an accurate assessment of the goals mentioned above.

Since we have not heard from you, we are again asking you to assist us in completing this effort. Would you take 15 minutes out of your busy schedule to complete this questionnaire?

A new questionnaire is enclosed for your convenience. Thank you again for your most invaluable assistance. Best wishes.

Sincerely yours,

APPENDIX E

States in Each Accreditation Region

Middle States MS (1)

Delaware
Maryland
New York
New Jersey
Pennsylvania

North Central Associa' n NC (2)

Arizona
Arkansas
Colorado
Illinois
Indiana
Iowa
Kansas
Michigan
Minnesota
Missouri
Nebraska
New Mexico
North Dakota
South Dakota
Ohio
Oklahoma
West Virginia
Wisconsin
Wyoming

New England NE (3)

Massachusetts
Rhode Island
Vermont
New Hampshire
Connecticut
Maine

Northwest NW (4)

Alaska
Montana
Nevada
Idaho
Oregon
Utah
Washington

Southern Association SA (5)

Alabama
Florida
Georgia
Kentucky
Louisiana
Mississippi
North Carolina
South Carolina
Tennessee
Virginia
Texas

WA (6)

California
Hawaii