

Journal of Student Financial Aid

Volume 15 | Issue 2

Article 1

7-1-1985

An Analysis of Differences in Salaries Among Male and Female Financial Aid Administrators

Kathryn A. Kapsak

Follow this and additional works at: <https://ir.library.louisville.edu/jsfa>

Recommended Citation

Kapsak, Kathryn A. (1985) "An Analysis of Differences in Salaries Among Male and Female Financial Aid Administrators," *Journal of Student Financial Aid*: Vol. 15 : Iss. 2 , Article 1.

Available at: <https://ir.library.louisville.edu/jsfa/vol15/iss2/1>

This Issue Article is brought to you for free and open access by ThinkIR: The University of Louisville's Institutional Repository. It has been accepted for inclusion in *Journal of Student Financial Aid* by an authorized administrator of ThinkIR: The University of Louisville's Institutional Repository. For more information, please contact thinkir@louisville.edu.

An Analysis of Differences in Salaries Among Male and Female Financial Aid Administrators

by Kathryn A. Kapsak

Since the founding of the National Association of Student Financial Aid Administrators, intense interest has been paid to improving the salary situations of aid administrators on our nation's campuses. Historically the salaries of financial aid administrators have been among the lowest of any administrative position in post-secondary education (Davis, 1983).

However, in recent years, significant gains in the salaries of aid administrators have been observed at almost all levels and institutional types. For example, between 1977 and 1981 the median salary for directors of financial aid at public and private institutions grew by 51 percent, from \$12,619 to \$19,054 (Davis, 1983). The median salary increased again between 1981 and 1983, from \$22,585 to \$23,976, or by 6.2 percent (Davis, 1984).

New data collected by the NASFAA Research Committee for the Career Paths and Activities Study again show another average salary increase, even though the increase only approximates the increase in the cost of living since autumn, 1983 (NASFAA Research Committee, 1985).

Table 1 displays the mean salaries of aid administrators by position for 1977, 1981, and 1984 while Table 2 depicts mean salaries of financial aid directors by institutional type for 1977, 1981, 1983, and 1984. The data indicate that aid administrators' average salaries are steadily improving.

Although salaries have generally improved in recent years, a new salary issue has received attention. This is the matter of differences in salaries paid to male and female administrators. Because females represent an increasing majority of all financial aid administrators, the lower salaries paid to females has drawn attention from researchers and other members of the financial aid profession.

Unpublished data from the 1981, 1983, and 1984 NASFAA surveys show that female administrators generally have received lower salaries than male administrators. The frequency distribution of salary data displayed in Table 3 illustrates the magnitude of the differences.

Kathryn Kapsak is an intern in the Pennsylvania Higher Education Assistance Agency, Harrisburg.

Table 1
Mean Annual Salary, by Position, all Institutional Types,
1977^a, 1981^b, and 1984^c

Position	Mean Salary		
	1977	1981	1984
Director			
M	\$16,809	\$23,253	\$25,443
n	(1156)	(1603)	(546)
Assist./Assoc. Director			
M	\$15,072	\$20,036	\$20,490
n	(100)	(396)	(263)
Financial Aid Counselor			
M	\$14,620	\$16,790	\$16,978
n	(158)	(304)	(277)
Total			
n	(1414)	(2308)	(1086)

^aNational Association of Student Financial Aid Administrators, 1978.

^bDavis, 1983.

^cNASFAA Research Committee, 1985.

Table 2
Mean Annual Salaries of Financial Aid Directors, by Institutional Type,
1977^a, 1981^b, 1983^c, and 1984^d

Institutional type	Mean Salary			
	1977	1981	1983	1984
Four Yr. Public Colleges and Universities				
M	\$20,194	\$23,378	\$30,218	\$31,544
n	(288)	(711)	(376)	(101)
Four Yr. Private Colleges and Universities				
M	\$15,360	\$20,244	\$23,263	\$23,203
n	(476)	(777)	(682)	(187)
Two Yr. Public Colleges				
M	\$18,209	\$24,980	\$27,000	\$27,921
n	(141)	(392)	(357)	(115)
Two Yr. Private Colleges				
M	\$13,119	\$17,897	\$17,706	\$17,230
n	(42)	(68)	(80)	(26)
Other Institutions				
M	\$14,880	\$21,816	\$23,585	\$23,304
n	(180)	(486)	(164)	(115)
Total				
M	\$16,792	\$22,171	\$25,407	\$25,485
n	(1127)	(2434)	(1659)	(544)

^aNational Association of Student Financial Aid Administrators, 1978.

^bDavis, 1983.

^cDavis, 1984.

^dNASFAA Research Committee, 1985.

Table 3
Annual Salaries of Financial Aid Directors, by Gender, 1981a, 1983b, and 1984c

Salary	Number and percent by gender											
	1981			1983			1984					
	Male N	Male %	Female N	Female %	Male N	Male %	Female N	Female %	Male N	Male %	Female N	Female %
Less than \$15,000	42	4.4	147	23.0	14	1.9	110	16.6	6	2.2	43	16.5
\$15,000 - \$16,999	41	4.4	104	16.3	20	2.8	85	12.8	9	3.2	31	11.8
\$17,000 - \$18,999	79	8.3	95	14.8	40	5.5	87	13.1	21	7.4	38	14.5
\$19,000 - \$20,999	98	10.2	67	10.5	46	6.4	96	14.5	14	4.9	29	11.1
\$21,000 - \$23,999	184	19.3	84	13.2	87	12.0	94	14.2	40	14.1	39	14.9
\$24,000 - \$26,999	158	16.4	56	8.7	129	17.8	69	10.4	48	17.0	30	11.4
\$27,000 - \$29,999	128	13.3	38	5.9	92	12.7	52	7.8	34	12.0	20	7.6
\$30,000 - \$34,999	129	13.4	32	5.1	155	21.4	46	7.0	54	19.1	17	6.5
\$35,000 & above	98	10.3	16	2.5	141	19.5	23	3.6	57	20.1	15	5.7
Total	957	100.0	639	100.0	724	100.0	662	100.0	283	100.0	262	100.0
Approx. M	\$25,571		\$19,654		\$28,628		\$21,035		\$28,775		\$21,502	

aDavis, 1983.

bDavis, 1984.

cNASFAA Research Committee, 1985.

Clearly, female administrators' salaries are lower than those earned by males and they have been for the past three years. But this should not surprise anyone. Females in nearly all occupations are paid less than males (Bureau of the Census, 1984). Additionally, female college faculty members earned from \$1,500 to \$2,000 less than their male colleagues (Elder, 1975). Tuckman and Tuckman (1976) reported that male professors earn more than their female counterparts at each of assistant, associate, and full rank, with the greatest differential occurring at full rank. Other surveys reveal salary equity issues of women faculty and administrators (Gappa & Uehling, 1979; National Research Council, 1979; Bogart, 1981). The issue of salary equity between the sexes remains quite evident on college campuses.

Salary equity issues aside, it is not surprising that female aid administrators' salaries generally are lower because females are more frequently employed in lower-ranking positions which pay less and at institutions where mean salaries are lower. Furthermore, females generally have fewer years experience in financial aid and have less education than males. The data in Table 4 illustrates these points.

Table 4
Selected Characteristics of Financial Aid Administrators, by Gender, 1984^a

Characteristics	Male		Female	
	N	%	N	%
By Administrative Position				
Director	285	76.4	262	60.0
Assist./Assoc. Director	26	7.0	36	8.2
Financial Aid Counselor	62	16.6	139	31.8
Total	373	100.0	437	100.0
By Institutional Type				
Four Yr. Public Colleges and Universities	161	51.1	224	45.5
Four Yr. Private Colleges and Universities	55	17.5	107	21.7
Two Yr. Public Colleges	78	24.7	99	20.1
Private Vo-Tech Schools	21	6.7	63	12.8
Total	315	100.0	493	100.0
By Years in Financial Aid				
Less than 10 years	279	61.8	580	79.4
10 years or more	172	38.2	151	20.6
Total	451	100.0	731	100.0
By Level of Education				
Less than BA/BS Degree	21	4.6	189	25.9
BA/BS Degree	136	30.0	324	44.5
Master's Degree	267	59.0	203	27.9
Doctoral Degree	29	6.4	12	1.7
Total	453	100.0	728	100.0

^aNASFAA Research Committee, 1985.

Similarly, Sebree (1980) found female financial aid directors were more frequently employed at private institutions where the median range of salaries was \$10,001 to \$12,000, rather than at public institutions where the range of salaries was \$12,001 to \$14,000.

The data suggest that salary differences simply could be a function of differences in the characteristics and employment situations of males and females and not a consequence of one or more "gender-related" factors. Yet the nagging concern that female administrators are the object of gender-related salary discrimination persists.

The purpose of this paper is to analyze data from the Career Paths and Activities Study to assess the degree to which aid administrators' genders contribute to differences in their salaries. It is expected that there is no statistically significant difference in salary levels of male and female administrators when their level of education, marital status, years in current position, and years in the financial aid profession are similar.

Study Methodology

In order to determine salary equity, researchers have relied upon the usage of a statistical analysis known as multiple linear regression (Bergmann & Maxfield, 1975; Braskamp & Johnson, 1980; Brittingham, 1976). This type of analysis attempts to predict estimates of the effects of different factors on a particular variable (Fisher, 1980). However, there has been some concern as to the appropriateness of including certain variables in the analysis (Koch, 1982). One such variable is faculty rank. Because rank is in itself affected by discrimination, using it as a predictor of salary is redundant. Another questionable variable is academic discipline. Since some disciplines that are predominantly male are paid more than those that are predominantly female, discrimination may not show up in the analysis.

Muffo, Braskamp, and Langston (1979) suggested including as many variables as reasonable, then determining by a stepwise regression analysis which ones contribute significantly to the prediction equation. Then only those variables that contribute significantly to the equation need be included to analyze salary differentials.

The choice here was to include level of education, marital status, years in current position, and years in the financial aid profession as variables considered for the analysis. A chi-square analysis of each of these variables by gender and salary level indicated significant differences at almost every level of the variables, usually at the .01 level of significance. However, there were no significant differences between the salaries of male and female administrators who hold doctoral degrees and are single.

Separate comparisons of male and female salary ranges by positions and institutional types were performed. These analyses were done separately because the salary levels of males and females were shown to be quite different across positions and there were different proportions of males and females employed at these positions. Similarly, salary ranges and the proportion of males and females employed at various institutional types are also quite different.

A stepwise regression was performed on the variables to determine which should be included in the regression model. As a result of the analyses, it was discovered that level of education, years in current position, years in the financial aid profession, marital status and gender combined accounted for between 10 percent and 66 percent of the variance between salary levels of male and female administrators, with the typical variance at about 40 percent.

The number of respondents was sufficient for a reliable analysis of eleven groups: directors and assistant/associate directors, each at public universities, private universities, four year private colleges, two year public colleges, and private vocational-technical schools; and financial aid counselors at public universities. A correlation matrix was produced to determine the strength of the relationship between each of the variables and salary for males and females within each of these groups.

With but a few exceptions, years in the financial aid profession correlated the highest of any single variable with salary levels. Male and female directors at private universities and at two year public colleges showed slightly higher correlations of years in position with their salary levels. Perhaps affiliation with a particular institution is slightly more important to directors' salary levels at those types of institutions than are years of experience in financial aid. Years in position also showed a slightly higher correlation than years of experience in financial aid among female counselors at four year public colleges and universities.

Although the administrators' level of education generally correlated positively and significantly with their salary level, sometimes they did not. There were no statistically significant correlations between educational level and salary among directors at four year public colleges and universities or at private vo-tech schools. One possible reason for the absence of significant correlations is that educational levels at those institutions are quite similar, thereby reducing the variance and the potential for correlation. Among assistant/associate directors, the educational level of females was typically significantly related to salary level while the educational level of males was not. Again, reduced variance in educational level among males may account for this phenomenon.

Directors' marital status was not significantly correlated with their salary level. However, among assistant/associate directors, several statistically significant correlations were observed. Females at four year private colleges and private vo-tech schools were significantly more likely to have higher salaries if they were married. Female counselors at four year public colleges and universities were significantly less likely to have higher salaries if they were married. Whether these differences reflect patterns of salary policy or are a function of other characteristics of single and married administrators is unknown.

When all of the variables were combined, strong multiple correlations of .500 or greater were observed for each gender for administrators at almost all institutions and positions, with the exception of male directors at public universities (+ .453), female directors at private universities (+ .456), and female counselors at public universities (+ .326). However, all the multiple correlations were significant. Table 5 displays the correlations for males and females within each group.

The four variables were entered into the linear multiple regression to formulate a mathematical model equation. The analyses produced estimates, or beta weights, for each variable so that a least-squares regression equation took this form:

$$Y = X_1(\text{YRS IN FA}) + X_2(\text{YRS IN POS}) + X_3(\text{MAR STAT}) + X_4(\text{EDUC}) + \text{constant}$$

where Y is the criterion variable, salary, and X depicts the weights for the characteristics of the administrators, or the predictor variables.

The equations were estimated for each gender. To determine salary equity, the values of each of the characteristics for each of the females were substituted in the equation for males. When this was done, new estimates of the average expected earnings were derived.

When the values for females were entered in the male equations, similar salaries should have been predicted, if there were no gender-related differences in salaries when controlling for the variables noted above. However, significant differences were observed. The differences were statistically significant, by a paired-comparison t-test, for all but one group: directors at public universities.

For each of the eleven groups, the predicted salary was, on the average, higher than the observed salary. For example, the expected salary averaged \$2,706 more than the observed salary. Female assistant/associate directors made, on the average, \$3,703 less than expected. Female counselors' observed salaries were \$2,935 less than expected.

The differences among female directors were greatest at the private universities (\$2,917) and private vo-tech schools (\$5,398). Salary differences among assistant/associate directors were greatest at two year public colleges (\$5,453) and private universities (\$3,993). Female assistant/associate directors at public universities made \$3,181 less than expected, while females at four year private colleges made \$3,074 less than expected. (See Table 6).

Table 5

Zero - Order and Multiple Correlations Between Selected Independent Variables and Salary, by Position and Institutional Type

Institutional type	(n)	Yrs. in Fin. aid	Yrs. in Position	Variables			
				Level Educ.	Marital Status	Mult R	Combined R-sq.
<u>Director</u>							
4-Yr. Public Colleges and Universities							
Male	(61)	.394**	.240*	.205	.150	.453**	.205**
Female	(20)	.521**	.390*	.222	.118	.567**	.322
4-Yr. Private Universities							
Male	(33)	.463**	.515**	.373*	.257	.627**	.393**
Female	(34)	.148	.268	.392**	.072	.456**	.208
4-Yr. Private Colleges							
Male	(60)	.502**	.499**	.336**	.214	.594**	.353**
Female	(55)	.410**	.319**	.331**	.052	.537**	.288**
2-Yr. Public Colleges							
Male	(61)	.214*	.280*	.436**	.040	.514**	.264**
Female	(52)	.395**	.432**	.693**	-.127	.815**	.664**
Private Vo-Tech Schools							
Male	(13)	.622**	.456	-.242	-.042	.660**	.435
Female	(37)	.510**	.446**	.214	-.059	.561**	.315**
<u>Assistant/associate director</u>							
4-Yr. Public Colleges and Universities							
Male	(61)	.469**	.228*	-.180	.107	.508**	.258**
Female	(83)	.439**	.178*	.243*	.233*	.552**	.305**
4-Yr. Private Universities							
Male	(34)	.692**	.458**	.066	.316*	.766**	.587**
Female	(67)	.607**	.376**	.296**	.218*	.717**	.514**
4-Yr. Private Colleges							
Male	(33)	.611**	.324*	.035	.221	.696**	.485**
Female	(63)	.707**	.369**	.349**	.347**	.807**	.651**
2-Yr. Public Colleges							
Male	(26)	.503**	.384*	-.209	.376*	.701**	.492**
Female	(45)	.531**	.340*	.389**	.308*	.725**	.526**
Private Vo-Tech Schools							
Male	(25)	.501**	.347*	-.371*	.254	.694**	.482**
Female	(39)	.609**	.334*	.232	.480**	.749**	.561**
<u>Financial aid counselor</u>							
4-Yr. Public Colleges and Universities							
Male	(34)	.485**	.304*	.215	.214	.562**	.316**
Female	(111)	.234**	.264**	-.138	-.387**	.326**	.095

*p <.050. **p <.01.

Table 6
Mean Observed and Expected Annual Salaries of Female Aid Administrators,
by Position and Institutional Type

Institutional type	n	Mean Salary		Difference
		Observed	Expected	
		<u>Director</u>		
Four Yr. Public Colleges and Universities	21	\$30,143	\$30,966	-\$ 823
Four Yr. Private Universities	35	\$22,114	\$25,031	-\$2,917**
Four Yr. Private Colleges	56	\$18,830	\$21,272	-\$2,442**
Two Yr. Public Colleges	53	\$24,632	\$26,295	-\$1,663*
Private Vo-Tech Schools	38	\$19,631	\$25,029	-\$5,398**
		<u>Assist./assoc. director</u>		
Four Yr. Public Colleges and Universities	84	\$21,279	\$24,460	-\$3,181**
Four Yr. Private Universities	68	\$21,338	\$25,332	-\$3,994**
Four Yr. Private Colleges	64	\$20,390	\$23,465	-\$3,075**
Two Yr. Public Colleges	46	\$22,902	\$28,335	-\$5,433**
Private Vo-Tech Schools	40	\$23,737	\$27,039	-\$3,302**
		<u>Financial aid counselor</u>		
Four Yr. Public Colleges and Universities	111	\$17,185	\$20,120	-\$2,935**

*p <.05. **p <.01.

Not all females made less than expected, but the majority, about 72 percent, did. About 70 percent of the directors had lower-than-expected salaries. This pattern was most frequently observed at two year public colleges (72.2%) and at private vo-tech schools (89.0%). The greatest percentage of female directors making less than expected were employed at private universities (75.0%) and at four year private colleges (73.0%). Over three-fourths of the financial aid counselors had lower-than-expected salaries. Table 7 depicts the magnitude of the differences between observed and expected salaries of female aid administrators. When female directors made higher-than-expected salaries, the mean differences were generally smaller than when their salaries were lower-than-expected.

While the numbers in each cell in Table 8 are too small for reliable tests of statistical significance, it is interesting to note that when individual females' observed salaries are lower than the mean observed salary for all females, the differences between observed and expected salaries are much greater. Females whose observed salaries were above the observed female means, earned, on the average, more than expected on the basis of the male equation. This suggests that gender-related salary differences are most likely to appear among the lower-salaried females. Put another way, salary differences may be less gender-related as females' salaries generally increase.

Table 7
Mean Deviations of Observed from Expected Salaries of Female
Aid Administrators, by Position and Institutional Type

Institutional type	Salary Differentials					
	Director		Assist./assoc. director		Counselor	
	Less than expected	More than expected	Less than expected	More than expected	Less than expected	More than expected
Four Yr. Public Colleges and Universities	\$5,751	\$4,599	\$5,971	\$3,445	\$4,831	\$3,279
n	(11)	(10)	(59)	(25)	(85)	(26)
Four Yr. Private Universities	\$2,653	\$6,208	\$6,410	\$3,253	n.a.	n.a.
n	(22)	(13)	(51)	(17)		
Four Yr. Private Colleges	\$4,957	\$2,868	\$5,459	\$3,519	n.a.	n.a.
n	(38)	(18)	(47)	(17)		
Two Yr. Public Colleges	\$4,105	\$4,522	\$7,482	\$3,239	n.a.	n.a.
n	(38)	(15)	(32)	(14)		
Private Vo-Tech Schools	\$6,498	\$3,957	\$6,628	\$2,874	n.a.	n.a.
n	(34)	(4)	(26)	(14)		
Total						
n	(143)	(60)	(215)	(87)	(85)	(26)

Table 8
Mean Deviations of Observed from Expected Salaries When Observed
Salaries are Less Than and More Than the Observed Salary Mean,
by Position and Institutional Type

Institutional type	Difference in mean salary					
	Less than mean	More than mean	Less than mean	More than mean	Less than mean	More than mean
	Four Yr. Public Colleges and Universities	-\$4,885	+\$3,664	-\$7,022	+\$1,822	-\$5,638
n	(11)	(10)	(47)	(37)	(61)	(50)
Four Yr. Private Universities	-\$6,986	+\$ 892	-\$6,971	+\$ 683	n.a.	n.a.
n	(17)	(18)	(38)	(30)		
Four Yr. Private Colleges	-\$4,734	+\$ 854	-\$5,060	+\$ 249	n.a.	n.a.
n	(32)	(24)	(38)	(26)		
Two Yr. Public Colleges	-\$4,553	+\$1,112	-\$8,647	+\$ 5	n.a.	n.a.
n	(27)	(26)	(24)	(22)		
Private Vo-Tech Schools	-\$6,791	-\$5,664	-\$7,216	+\$ 66	n.a.	n.a.
n	(19)	(19)	(20)	(20)		
Total						
n	(106)	(97)	(167))	(135)	(61)	(50)

Discussion

The analyses demonstrate that aid administrators' salaries are influenced by their gender. Furthermore, the data show conclusively that female administrators generally do not benefit from this situation. The first, and most obvious, question raised from these data and analyses is: Why do females typically receive lower-than-expected salaries? Another equally interesting question is: Why are the magnitude of gender-related differences so much larger at some institutional types than at others? The Career Paths and Activities Study data are insufficient to answer either of these questions. Thus, only speculations are possible here.

It is possible that female aid administrators are often paid lower salaries than males simply because they are females. While these data do not prove that institutions discriminate against females in terms of their salaries, these salary differences may be another example of the historical pattern of gender-related salary discrimination exhibited in other positions in higher education and in other parts of the labor force.

If it is assumed that there is salary discrimination against female aid administrators, then one explanation for the institutional variation is possible. Gender-related salary differences were typically smaller at public institutions. Public institutions generally have large, effective affirmative action programs, which would make salary discrimination less likely to occur. Furthermore, public institutions and university systems often have published employee wage and salary schedules and employee job classification systems which pay all employees the same amounts for the same position.

The lower-than-expected salaries of females may partially be attributable to the manner in which some attained their positions. At smaller, private institutions it is not unusual for a female administrator to have been promoted to a director's position from a position as financial aid secretary or administrative assistant in an aid office. Since these non-professional positions are generally low-paying ones, perhaps the promotion to a professional position, albeit a low-salaried one, may be considered as a substitute for a higher salary that would be paid to someone entering the position from outside the office. An employee's current salary is partially a function of increments added annually to the salary at which he or she entered a profession. If females start out in the financial aid profession at lower salary levels, their opportunities for future higher salaries will be limited.

These data do not point the financial aid profession toward remedies for lower-than-expected female administrators' salaries. They only show that significant differences between salaries paid to males and females exist and that these differences are gender-related ones. It is hoped that wider knowledge of the differences will cause others to seek remedies. As more females enter the profession this issue must be addressed.

References

- Bergman, R. T., & Maxfield, M. How to Analyze the Fairness of Faculty Women's Salaries on Your Own Campus. *AAUP Bulletin*, 1975, 61, 262-265.
- Bogart, Karen. *Institutional Self-Study Guide on Sex Equity for Post-secondary Educational Institutions*. Washington, D.C.: American Institutes for Research, 1981.
- Braskamp, L. A., & Johnson, D. R. The Use of a Parity-Equity Model to Evaluate Faculty Salary Policies. *Research in Higher Education*, 1978, 8, 57-66.
- Brittingham, B. W. *Inequity and Inequality in Salaries: A Case Study in Methodology*. Paper presented at Annual Meeting of the Association for Institutional Research, Los Angeles, California, May, 1976.
- Bureau of the Census. *Earnings by Occupation and Education: 1980 Census of the Population, Volume 2, Subject Reports*. Washington, D.C.: Government Printing Office, 1984.
- Davis, Jerry S. *A Profession in Transition: Characteristics and Attitudes of the Financial Aid Administrator, Fall 1981*. Washington, D.C.: The National Association of Student Financial Aid Administrators, 1983.
- Davis, Jerry S. *Characteristics of Directors of Financial Aid, Their Institutions, and Their Staffs, 1983-1984*. Washington, D.C.: The National Association of Student Financial Aid Administrators, 1984.
- Elder, Peggy. Women in Higher Education: Qualified, Except for Sex. *NASPA Journal*, 1975, 13(2), 9-19.
- Fisher, Franklin M. Multiple Regression in Legal Proceedings. *Columbia Law Review*, 1980, 80, 702-736.
- Gappa, Judith M., & Uehling, Barbara S. *Women in Academe: Steps Toward Greater Equality*. AAHE-ERIC/Higher Education Research Report No. 1 ED 169873, American Association for Higher Education, 1979.
- Koch, James V. *Salary Equity Issues in Higher Education: Where Do We Stand?* (ERIC Document Reproduction Service No. ED 222 162). Washington, D.C.: American Association for Higher Education, 1982.

- Muffo, John A., Braskamp, Larry, & Langston, Ira W. Equal Pay for Equal Qualifications? A Model for Determining Race or Sex Discrimination in Salaries. In Pezullo, T. R., & Brittingham, B. E. (Eds.). *Salary Equity: Determining Sex Bias in Salaries among College and University Professors* (pp. 69-77). Lexington, Mass.: D. C. Heath & Company, 1979.
- NASFAA Research Committee. *Student Financial Aid Administrators' Paths and Activities*. Washington, D.C.: The National Association of Student Financial Aid Administrators, 1985.
- NASFAA Research Committee. *Characteristics and Attitudes of the Financial Aid Administrator*. Washington, D.C.: The National Association of Student Financial Aid Administrators, 1978.
- National Research Council, Commission on Human Resources. *Climbing the Academic Ladder: Doctoral Women Scientists in Academe*. (ED 180 332). Washington, D.C.: National Academy of Sciences, 1979.
- Pezullo, Thomas R., & Brittingham, B. E. (Eds.). *Salary Equity: Determining Sex Bias in Salaries among College and University Professors*. Lexington, Mass.: D.C. Heath & Company, 1979.
- Sebree, Evelyn A. (1980). Women in Student Financial Aid Administration in Institutions of Higher Education in Nine Southern States. (Doctoral Dissertation, The Florida State University, 1980). *Dissertation Abstracts International*, 41, 4103A.
- Tuckman, Barbara H., & Tuckman, Howard P. The Structure of Salaries at American Universities. *The Journal Of Higher Education*, 1976, 57, 51-63.