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Gender Differences in the Educational and Occupational Expectations of Rural Ohio Youth

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Females (N = 248) and males (N = 243), in grades 10 and 12 at four rural Ohio high schools, geographically representative of the state, were surveyed to ascertain their educational and occupational expectations. The young women showed significantly higher educational and occupational expectations than did the males. Areas of anticipated college study and occupational expectations were shown to be sex stereotypic. Results are presented with respect to previous findings and current conditions in rural schools.

INTRODUCTION

Research concerning the educational and occupational aspirations and expectations of males has been much more comprehensive than for females [1, 12, 15, 18]. More recently, researchers [2, 8, 9, 10] have pointed out the importance of investigating the differences between the aspirations and expectations of males and females.

Dunne, Elliott and Carlsen [8] stressed the need for an increased research base upon which theorists could map the female status attainment process. Gottfredson [11] in developing a theoretical model to guide the understanding and study of occupational aspirations stated: "The importance of social class, intelligence, and sex are often taken for granted; it would be helpful to systematically explain their importance" (p. 545).

Studies of the relationship between gender and aspirations and expectations have produced mixed results. Harrison [13], in a study of 160 selectively sampled tenth grade students, concluded that gender had no significant effect on aspirations or expectations. Likewise, Davis [4], in a study of rural and urban students in central South Carolina, and Powers [19], in a study of ninth grade students in Kentucky, found no significant differences between the aspirations or expectations of males and females.

Conversely, Marini and Greenberger [16], in a study of 2,495 eleventh grade students in Pennsylvania, found that males both aspired to and expected higher levels of educational attainment than did females. The females in a study conducted by Ohlendorf and Rafferty [17] were found to have higher occupational aspirations than the males. Lee [14] indicated the presence of a sex effect in the prediction of occupational aspirations and expectations, with females having higher aspirations and expectations than males.

Some studies have suggested that occupational aspirations and expectations are influenced by sex stereotyping. Falk and Salter [9] found that a majority of the young women in the Southern Youth Study desired occupations that were sex stereotypic for females, *e.g.*, beauticians, nurses, stenographers, and teachers. This finding was in agreement with an earlier report by DiSabatino [6], suggesting that sex-role stereotypes inhibit the freedom of women in making occupational choices. Dunne, Elliott and Carlsen [8] reported that the effect of sex stereotyped occupations on the occupational aspirations and expectations of females was lessening and that overcoming sex stereotyped occupational selection may be more difficult for males than for females. Gottfredson's [11] review of research and subsequent theoretical model pointed out that sex typing of occupational aspirations and expectations is clearly the norm and that continuation of sex typing is supported or encouraged by young males and females.

These studies point out the need for continued research regarding sex differences in aspirations and expectations which will lead to a greater understanding of this phenomenon. This paper reports research which examined the educational and occupational expectations of 491 rural Ohio tenth- and twelfth-grade students. The purpose was to answer the following questions:

1. Is there a significant difference between the educational and occupational expectations of rural Ohio tenth- and twelfth-grade students?
2. Are the educational and occupational expectations sex stereotypic as Gottfredson's [11] theoretical model would lead us to believe?

METHOD

The descriptive survey method of research was utilized in this study. Data were collected with the use of a questionnaire designed to answer the research questions posited for the study. Data reported here were gathered for a baseline study of rural high school education in

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Ohio. It was part of a planned longitudinal study aimed at identifying problems and changes in rural education in Ohio. These data were collected during the 1985-1986 academic years.

Population

For the purpose of this study a rural public high school in Ohio was one that met the following criteria: 1) located in a county outside a Standard Metropolitan Statistical Area, 2) located in a county with a total population under 40,000 people, 3) offered vocational agriculture as a high school course, and 4) had a high school enrollment of 500 or fewer students (average high school class size of under 125 students). Using the state's educational directory, 52 high schools that met the outlined criteria were identified. These 52 high schools served as the population for this study and were geographically stratified into four groups to account for the social and economic differences associated with location. One school was randomly selected from each of the four strata for participation in the study. The four selected schools constituted the sample for this study.

Subjects

Data relative to educational and occupational expectations were purposively collected from tenth- and twelfth-grade students in each of the four schools in the sample. Questionnaires were administered to a total of 498 students. Of the 498 questionnaires 7 were discarded because they were uncodeable or incomplete. The remaining 491 questionnaires were analyzed by gender to determine if sex differences occurred.

Instrumentation

Data relative to the educational and occupational expectations of the rural tenth- and twelfth-grade students in this study were collected using a researcher developed Student Information Questionnaire (SIQ). This instrument was developed following the questionnaire construction principles outlined by Dillman [5] and was modeled after instruments used in previous studies as identified in a review of related literature. The SIQ was a 30 question instrument which required about 20 minutes to complete. The questions dealt with career and educational expectations, parental influence and demographic characteristics. Content validity of the SIQ was established using a panel of experts consisting of teacher educators, rural school administrators and teachers. A pilot study using an eight-day test-retest procedure resulted in an instrument reliability of .84.

This article is based on an analysis of responses to 5 of the 30 questions on the SIQ. One question was related to the occupational expectations of the rural student studied. This open ended question asked the students what occupation they expected to enter after they had completed their education (occupational expectation). For analysis, the question was coded in two ways. Occupations were coded using the Duncan Socioeconomic Index [7] to make the data compatible with that reported in other studies of rural students [3, 8, 20]. This index assigns values of 0 (low status) through 96 (high status) to occupations arriving at a relative estimate of the socioeconomic status of an occupation. The limitations and problems associated with the use of the Duncan Socioeconomic Index as the sole measure of occupational status have been identified by Dunne, Elliott, and Carlsen [8]. To further substantiate the expected occupations of rural students in this study, occupations were assigned into 21 occupational categories using the *Standard Occupational Classification Manual* [21]. The four multiple choice questions relating to educational expectation were developed to solicit information about college attendance, type of college in which the rural students were interested, when they planned to attend college, and the area (major) they planned to study while in college.

Data Collection

Tenth- and twelfth-grade students in the four rural schools studied who were present on the day the data were collected and who had returned parental permission forms were administered the SIQ. Of the 632 tenth- and twelfth-grade students enrolled in the four rural schools, 498 (78.8 percent) completed questionnaires. Student numbers were placed on all questionnaires before administration. These student numbers were then matched with student high school records to obtain the race and high school grade point averages of the participating students. This information was recorded on the front cover of the questionnaire.

RESULTS

A significant difference existed between the educational expectations of the young rural women in this study (Table 1) and the expectations of the young men. Of the 248 females, 71 percent planned to attend college upon graduation from high school compared to 52.3 percent of the study's 243 young men. This finding supports that of an earlier study conducted by Dunne, Elliott and Carlsen [8]. The findings were in direct opposition to those of Thomas and Falk [20], who reported that males had higher educational aspirations than did females.

There was not a significant difference between the type of advanced education planned by males and females who were undecided or planning to attend college (Table 2). A majority (50.5 percent) of the females expecting advanced education planned to attend a four year college or university compared to 40 percent of the males.

Data in Table 3 show that almost 62 percent of the females expected to begin advanced education immediately following high school, while less than 44 percent of the males had the same expectation.

Areas in which the rural high school students planned to study in college were significantly different by gender. Students tended to select sex stereotypic areas of college

TABLE 1
Educational Expectations, by Gender

	Attend College							
	Plan to Attend		Undecided		Don't Plan to Attend		Total	
Gender	n	%	n	%	n	%	n	%
Males	127	52.3	53	21.8	63	25.9	243	100.0
Females	176	71.0	42	16.9	30	12.1	248	100.0
Total both sexes	303	61.7	95	19.4	93	18.9	491	100.0

χ^2 (2, N = 491) = 20.86, p<.05

TABLE 2
Type of Advanced Education Expected, by Gender

	Type of Education							
	Four Year College or University		Junior or Technical College		Undecided		Total	
Gender	n	%	n	%	n	%	n	%
Males	72	40.0	55	30.6	53	29.4	180	100.0
Females	110	50.5	66	30.3	42	19.2	218	100.0
Total both sexes	182	45.7	121	30.4	95	23.9	398	100.0

χ^2 (2, N = 398) = 5.43, p>.05

TABLE 3
When Advanced Education is Expected to Begin, by Gender

	When Advanced Education Will Begin							
	Upon High School Graduation		After Working or Military Service		Undecided		Total	
Gender	n	%	n	%	n	%	n	%
Males	78	43.3	44	24.4	58	32.3	180	100.0
Females	135	61.9	26	11.9	57	26.2	218	100.0
Total both sexes	213	53.5	70	17.6	115	28.9	398	100.0

χ^2 (2, N = 398) = 15.81, p<.05

TABLE 4
Expected Areas of College Study by Gender

	Gender					
	Male		Female		Total Both Sexes	
Area of Study	n	%	n	%	n	%
Agriculture	17	9.4	2	0.9	19	4.8
Art/Humanities	10	5.6	18	8.3	28	7.0
Sciences	14	7.8	6	2.8	20	5.0
Mathematics	6	3.3	10	4.6	16	4.0
Social Science/ Education	14	7.8	54	24.8	68	17.2
Engineering	43	23.9	8	3.7	51	12.8
Health Sciences	8	4.4	31	14.2	39	9.8
Business	11	6.1	36	16.5	47	11.8
Law	3	1.7	5	2.3	8	2.0
Office Management	0	0.0	13	5.9	13	3.3
Electrical Technology	13	7.2	5	2.3	18	4.5
Other Areas[1]	3	1.7	13	5.9	16	4.0
Other Areas[2]	22	12.2	6	2.8	28	7.0
Undecided	16	8.9	11	5.0	27	6.8
Total	180	100.0	218	100.0	398	100.0

χ^2 (13, N = 398) = 123.61, p<.05

[1]Communications, Fashion Merchandising, Air Travel, Cosmetology and Food Service areas.
[2]Computer Science, Aviation, Accounting, Construction Technology areas.

study. Males expecting to study in agriculture, science, engineering, and electrical technologies outnumbered females. Females outnumbered males in art, social science, education, and health sciences, with mathematics and business being the only non-traditional areas of study where females outnumbered males (Table 4). This finding was consistent with Gottfredson's theoretical model for occupational expectancy.

The results of the analysis of occupational expectations were very similar to the educational expectations. The sex stereotypic selection patterns associated with areas of college study were also present in occupational expectations. There was a significant difference between the occupational expectations of males and females (Table 5). Females more often expected to be in teaching, health, nursing, clerical, and service fields while males more often expected to be in engineering, natural science, agriculture, construction, mechanics, and military occupations.

A t-test revealed that when occupational expectations were assigned values using Duncan's Socioeconomic Index, females in the study had significantly higher occupational expectations than did their male counterparts (Table 6).

The findings of this study support the contention that educational and occupational expectations of rural males and females are different. The findings also support Gottfredson's [11] theory of occupational expectancy and the contention that sex stereotypic thinking is manifested in the educational and occupational expectations of rural youth.

CONCLUSIONS

The educational and occupational expectations of rural youth are changing. Educational expectations of

TABLE 5
Occupational Expectations by Gender

Occupations	Male n	Male %	Female n	Female %	Total Both Sexes n	Total Both Sexes %
Executive, Administrative and Managerial	24	9.9	32	12.9	56	11.4
Engineers and Architects	18	7.4	4	1.6	22	4.5
Natural Scientists and Mathematicians	14	5.8	4	1.6	18	3.7
Social Scientists, Social Workers, Religious Workers, and Lawyers	3	1.2	16	6.5	19	3.9
Teachers, Librarians, and Counselors	5	2.1	36	14.5	41	8.4
Health Diagnosing and Treating Practitioners	5	2.1	10	4.0	15	3.1
Registered Nurses, Pharmacists, Therapists, and Physician Assistants	6	2.5	18	7.3	24	4.9
Writers, Artists, Entertainers, and Athletes	12	4.9	11	4.4	23	4.6
Health Technologists and Technicians	0	0.0	7	2.8	7	1.4
Other Technologists and Technicians	12	4.9	6	2.4	18	3.7
Marketing and Sales	2	0.8	8	3.2	10	2.0
Clerical	3	1.2	41	16.6	44	9.0
Service	19	7.8	26	10.5	45	9.2
Agricultural and Forestry, Fishers and Hunters	19	7.8	2	0.8	21	4.3
Construction and Extractive	25	10.3	0	0.0	25	5.1
Transportation and Materials Moving	7	2.9	3	1.2	10	2.0
Mechanics and Repairers	22	9.1	1	0.4	23	4.6
Production Worker	6	2.5	1	0.4	7	1.4
Material Handlers, Equipment Cleaners, and Laborers	4	1.6	1	0.4	5	1.0
Military Occupations	21	8.6	1	0.4	22	4.5
Homemakers[1]	0	0.0	3	1.2	3	0.6
Undecided[1]	16	6.6	17	6.9	33	6.7
Total	243	100.0	248	100.0	491	100.0

χ^2 (21, N = 491) = 188.25, p<.05

[1]Not a category in the Standard Occupational Classification Manual.

TABLE 6
Duncan's Socioeconomic Index Scores for Occupational Expectations, by Gender

Gender	Duncan SEI Score Mean	Duncan SEI Score Standard Deviation
Males	47.6	27.26
Females	60.7	20.49

t(453) = 5.80, p<.05

females are higher than those of males, with a similar pattern occurring in occupational expectations. This report tends to support the contention that young rural women are aspiring to a broader range of occupations than earlier studies had indicated.

Changes in our economy and society as a whole may, in part, be responsible for the increased educational and occupational expectations of females. The increased number of single parent families and families where both spouses must work may be a catalyst for changes in female expectations.

Some of the differences in occupational expectation may be due, in part, to the scale used to measure it. The Duncan SEI tends to favor female occupations, giving them higher scores than male occupations requiring equivalent skills. However, the further clarification of occupational expectations reported in this paper using the *Standard Occupational Classification Manual* [21] again indicated that females were making occupational choices that were sex stereotypic.

The data indicate that rural high school students are being made aware of the need for education beyond high school and of the upward social and economic mobility it brings. They did not seem to exhibit this awareness in respect to occupational expectations. The relationship between educational and occupational attainment seems to have been overlooked in the education and guidance of these students.

This investigation indicates that there are differences between the expectations of rural males and females. These differences do not explain the attainment process for rural youth, but do indicate a need for additional research and attention by those involved in teaching and guiding young people so that theoretical models of educational and occupational expectancy can be substantiated.

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