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Female "flight" to postgraduate education

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While previous studies indicated an increase in female Psychology baccalaureates, this did not correspond with an increase in postgraduate studies. This study of exit exams across four disciplines suggested that more women do plan to continue education, at least at the Masters' level.

Although in 1990, Keyes and Hogberg reported a "male flight" from the area of undergraduate psychology, more men than women completed their doctoral degrees. This "flight" may not, however, be reflected in postgraduate studies. Studies suggest that more women end their studies at the undergraduate level, while the men continue (Brooks & Betz, 1990).

In one study of counseling psychologists in academia, women were disproportionately found at lower ranks (Fouad & Carter, 1992). Self-reports of career histories showed few "straight and linear progressions" for women in the psychological professions, their academic histories instead reflecting funding and mentoring struggles not typical for similar male histories (Sonnert & Helton, 1995).

A small but increasing number of studies in the literature are now examining the professional development of current practicing psychologists from baccalaureate degrees onward (Fouad & Carter, 1992). However, even these studies may not represent those individuals who, despite their graduate degrees, were likelier to take a job not involving psychology (Keyes & Hogberg, 1990). For a more complete view, observations would need to be made of the students in their progression from undergraduate to professional.

One method of observing these changes would be the use of the outcome data which most colleges now collect from graduating seniors in the form of surveys and exit exams which contain demographic information such as age and plans for future education. An examination of these student measures at the undergraduate level might provide a more balanced look at the gender distribution (Graham & Cockriel, 1989) and would allow a comparison of the gender distribution in psychology with that in other fields. This would help determine if a gender imbalance in education exists only in psychology, or in other fields as well. Such an observation should include the stereotyped male sciences, and female verbal areas of skill (Feingold, 1993).

One student outcome assessment that looks at a number of different disciplines is the Area Concentration Achievement Test (ACAT). A demographic section including student gender and future educational plans is completed before the actual test is taken. The 1990 to 1996 testing data have been made available for this study.

Sample

From 1990 to 1996, 11,206 graduating seniors (8181 women and 3025 men) typically within their last term from 242 institutions completed demographic surveys included in the ACAT test used by their major. Fields of study considered in this report include; psychology, social work, political science, art, literature in English, biology, agriculture, history, and criminal justice.

Instrument

The Area Concentration Achievement Test (ACAT) is a college-level outcomes assessment instrument within the major, constructed of examination items gathered from the faculty of participating departments. It is a national project in use by 242 colleges and universities. The ACAT is distributed, constructed, and scored by the Project for Area Concentration Achievement Testing.

Results

The 11,206 student demographic responses were subjected to a crosstabs analysis using SPSS. Independence of the variables was determined by the Pearson chi square.

Overall, a higher percentage of women planned to attend graduate school ($p<.001$). Upon examination of the different fields of study, women reported more often that they planned to attend graduate school in the fields of psychology ($p<.01$) criminal justice ($p<.001$). Only in literature in English ($p<.05$) and biology ($p<.05$) did more men plan to continue their education. No other differences were observed.

Significant differences were also found in overall as well as within-major grade point averages. Women were more likely to report higher GPAs in the major in psychology ($p<.001$) and agriculture ($p<.02$). No differences were obtained from a cross-tabulation of gender and discipline by transfer status, (self-reported change of institutions before graduation).

Discussion

In keeping with their uniformly equal or higher modal GPAs, in their major and overall, significantly more women did plan to attend graduate school after finishing their baccalaureate. The only significant areas of gender inequality were the fields of psychology, criminal justice, and history -- with more women planning to continue; while in Literature in English and Biology, more men planned to pursue further education.

These findings support the suggestion that the percentage of women seeking higher education, at least at the graduate level, is increasing. Yet will this equality stretch into the postgraduate, doctoral level, and from there to career progression? According to Sonnert and Holton's 1995 study, even those women with the skills and education are underutilized in the scientific labor force. Until the equality translates from education to employment, the "flight" is still not complete.

References

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Graduate School Plans by Gender and Discipline

1990-1996	Women		Men		Signif.
Psychology	2,868	(75%)	838	(70%)	$p<.01$
Criminal Justice	64	(56%)	68	(34%)	$p<.001$
Literature in English	201	(66%)	76	(78%)	$p<.05$
Biology	275	(59%)	207	(67%)	$p<.05$
Social Work	2,177	(73%)	285	(73%)	
Political Science	163	(64%)	278	(65%)	
Art	63	(64%)	36	(63%)	
Agriculture	17	(30%)	46	(22%)	
History	47	(67%)	72	(55%)	
Overall	5,875	(72%)	1,906	(63%)	$p<.001$

Probabilities indicate significant Pearson Chi-Square values for the cross-tabulation of self-reported graduate school plans by gender for each discipline

Comparison of GPAs in Major and Overall by Gender and Discipline

1990-1996	Modal GPA in Major			Modal GPA Overall		
	Men	Women		Men	Women	
Psychology	3.1-3.5	3.1-3.5	$p<.001$	2.6-3.0	3.1-3.5	$p<.001$
Criminal Justice	3.1-3.5	3.1-3.5		2.6-3.0	3.1-3.5	
Literature in English	2.6-3.0	3.1-3.5		2.6-3.0	3.1-3.5	
Biology	2.6-3.0	2.6-3.0		2.6-3.0	2.6-3.0	
Social Work	3.1-3.5	3.6-4.0		2.6-3.0	2.6-3.0	$p<.01$
Political Science	3.1-3.5	3.1-3.5		2.6-3.0	3.1-3.5	
Art	3.1-3.5	3.1-3.5		3.1-3.5	3.1-3.5	
Agriculture	2.6-3.0	3.1-3.5	$p<.02$	2.6-3.0	2.6-3.0	$p<.02$
History	3.1-3.5	3.1-3.5		2.6-3.0	3.1-3.5	$p<.01$

Probabilities indicate significant Pearson Chi-Square values for the cross-tabulation of self-reported grade point average by gender for each discipline.