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Gender Differences in Psychology Content Area Mastery Nationwide by Graduating Seniors

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Data derived from the Area Concentration Achievement Test in Psychology show men and women graduating with baccalaureate degrees in psychology do not score equally well in all content areas. Men earned higher scores in abnormal, animal learning and motivation, experimental design, history and systems, statistics, and overall.

In 1950, women earned fewer than half of the baccalaureate and a quarter of the doctoral psychology degrees. By 1984, women earned over 67% of the baccalaureate degrees and 50% of the doctorates (Howard, Pion, Gottfredson, Flattau, Oskamp, Pfafflin, Bray, & Burnstein, 1986). Keyes and Hogberg (1990) suggest that this increasing feminization of psychology is partially due to male flight from the field.

There are gender differences in the specialty areas men and women pursue. Howard et al., (1986) group these into "health service provider areas" (clinical, school and other applied areas) and "traditional academic/research areas" (physiological, social, psychometrics, etc.). They add that the total number of doctorates awarded in "provider" areas have increased while declining in academic/research areas. Wilson and Reschly (1995) found that while faculty in psychology remain primarily male, the number of female psychological practitioners is growing.

This study measures content area mastery as exhibited by performance on a national exit exam, containing individual content area subtests, in order to determine where differences in content area mastery exist among graduating psychology majors. This study also looks at changes occurring between 1990 and 1996.

Subjects

Data were obtained from 5,179 college seniors within one semester of graduating with degrees in psychology from 242 institutions nationally. Approximately 76% of the examinees were female and 24% were male. They were administered the Area Concentration Achievement Test-Psychology (ACAT-P) between 1990 and 1996 to meet graduation requirements and were asked to provide a limited amount of personal information. The sample sizes vary due to different versions of the ACAT-P administered by participating departments.

Instrument

There are two forms of the ACAT-P with a range of 12 to 20 items each in abnormal, animal learning and motivation, clinical and counseling, life-span development, experimental design, history and systems, human learning and cognition, personality, physiological, sensation and perception, social, and statistics. The number of these content areas included varies from 4 to 10 as determined by the individual department. Standard scores are calculated for each content area as well as for overall performance.

Results

Data from the ACAT-P indicate that men and women graduating with baccalaureate degrees in psychology do not score equally well in all content areas and that this division changes from 1990 to 1996.

Data from 1990 revealed no gender differences ($p > .05$). However, by 1996, an overall psychology score difference was found, $t(1067) = -3.82, p < .001$, with men receiving higher scores than women. In addition, men did better in the areas of statistics, $t(1030) = -4.35, p < .001$, history and systems, $t(586) = -3.78, p < .001$, experimental design, $t(1067) = -2.86, p < .01$, animal learning and motivation, $t(751) = -4.34, p < .001$, and abnormal, $t(1047) = -2.81, p < .01$. Women did not score higher than men in any areas ($p > .05$) in either of these two years.

Discussion

Approximately 75% of the subjects included in the present sample are women, yet they perform more poorly than males in many areas. This gap is increasing each year. The males graduating with psychology degrees are obviously gaining more from their education in areas applicable to their performance on the ACAT-P. Although the causes for these trends are unknown, a variety of factors may play a role.

Fouad and Carter (1992) suggest that cross-gender mentoring is less beneficial than same-gender mentoring. Since the majority of academicians are male, it is possible that females are not receiving the same quantity or quality of mentoring.

While women appear to be avoiding traditional research areas such as physiological and statistics, there is an increase in the number of women earning degrees in health service provider areas. This may reflect learning environments where traditional gender stereotypes (active vs. passive, scientific vs. care giving, rational vs. nurturing) are unintentionally encouraged.

Virtually all baccalaureate psychology programs require at least one introductory course. To ensure these first courses remain useful for the future, the text and information presented must be gender bias free to avoid the influence of stereotypes. If undergraduates are given the impression that psychology is a non-scientific helping profession, it is likely that the field will continue to be feminized (Keyes & Hogberg, 1990). This could discourage men from enrolling in psychology programs and could lead to reduced status, income and career options for people within the field.

With a growing number of women entering psychology, the data suggest the need to reexamine the ways in which traditional laboratory research areas are taught.

References

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Comparisons of Men and Women by Content Area and Year

	1990			1992			1994			1996		
	F	M	<i>t</i>	F	M	<i>t</i>	F	M	<i>t</i>	F	M	<i>t</i>
Abnormal	507	502		486	499		492	494		490	510	*
Animal Learning & Motivation	496	510		490	489		488	519	**	482	519	**
Clinical & Counseling	520	461		558	541		498	514		502	502	
Developmental	507	496		518	491		511	484	**	506	498	
Experimental Design	500	491		511	501		510	513		487	507	*
History & Systems	515	520		495	519		503	506		483	521	**
Learning & Cognition	477	498		507	499		497	514		498	496	
Personality	501	488		506	500		503	505		497	509	
Physiological	491	497		481	502		502	513		499	509	
Sensation & Perception	495	507		496	522		489	501		489	516	
Social	509	501		487	497		495	504		485	501	
Statistics	503	504		479	507	*	486	514	**	482	514	**
Overall Performance	505	500		495	503		502	514		490	517	**

Bold faced comparisons are significant at either .01(*) or .001(**)