AdvancingWomen Website

International Business and
Career Community
News, Networking & Strategy For Women

Home | Content Syndication |Business|Career | Workplace | Networking | Web Women
Hispanic Women | International Women | Women in Society| AW Leadership Journal | Money |Lifestyle

Advancing Women In Leadership

Women Faculty Pursuing Grants: Gender Differences

Patricia Boyer, Ph.D.

Irv Cockriel

BOYER & COCKRIEL, WINTER, 1999

Female faculty overall, submitted fewer proposals and had fewer proposals funded than their male counterparts.

Research, including grant writing, has become an important aspect of promotion and tenure at most institutions of higher education, including comprehensive universities and liberal art colleges (Daniel & Gallaher, 1990). As this requirement for research increases, so does the need for external funding from public and private sources. Meeting the challenges of successfully competing for shrinking research dollars requires a high level of skills in grant writing, and has proved to be challenging for some women faculty. As women faculty advance through the academy, several disparities exist between them and their male colleagues. Specifically, research has shown that when compared to male faculty, women faculty do not advance through the academy as quickly (Hall & Sander, 1986); prefer teaching instead of research (Armour, 1990); spend more time teaching than engaging in research, but some prefer to allocate more time to research like their male colleagues (Finkelstein, Seal, & Schuster, 1996). Additionally, female faculty tend to be untenured (Armour, 1990), and do not conduct research to the extent of their male counterparts (Bentley, 1990), including grant writing.

Additionally, despite some advances women have made in the academy, male faculty still outnumber women in research institutions. Research conducted by Finkelstein, et al. (1996) found that female junior faculty made up 41% of the faculty population compared with only 28% of senior female faculty nationwide; 33% of new hires at doctoral institutions are women. After controlling for gender, junior and senior female faculty are more likely to be in non-tenure track positions than their male counterparts; 46% of full-time female faculty at research institutions have been there for seven years or less (Finkelstein et al., 1996).

One cannot address the issue of gender disparities in funded grants and without discussing the effect it has on publication and eventually promotion of faculty. Finkelstein et al. (1996) asserted that males are more likely than females to be involved in research and publication. However, explanations are unclear as to why these differences exist (Bentley, 1990). Bentley (1990) speculated that the differences are related to the fact that few women are not concentrated in research institutions. While Davis & Astin (1987) contended that the differences exist in the type of publications and not quantity or quality of work.

Other research suggests that faculty members' beliefs about themselves affect their research endeavors. For example, Taylor, Locke, Lee, and Gist (1984) argued that research self-efficacy (self-perception in one's ability to successfully perform research) is related to faculty research productivity. Self-efficacy, as defined by Vasil (1992), is the perception faculty possess in their ability to successfully perform research or the belief that faculty possess certain skills and they are able to utilize them in a particular situation (Landino & Owen, 1988). Moreover, women faculty with self-competence, belief that if one possess the necessary research skills, do publish; faculty who did not have self-competence published little (Bentley & Blackburn, 1992).

The present study is an effort to understand differences in research, more specifically grant writing, among faculty members at Association of American Universities (AAU) 'Research I' institutions as classified by Carnegie. More specifically, the focus of this research concentrates on factors that motivate and hinder faculty in their pursuit of grant proposals. The question guiding this research is: "Are there any differences in the factors that motivate and hinder faculty in their pursuit of grants when gender is considered?"

METHOD

Procedure and Study Participants

A list of AAU 'Research I' faculty members were obtained from sources such as the *Peterson's Guide to Business, Education, Health & Law* and the internet. The names of the faculty were placed in alphabetical order and numbered. Then faculty were randomly selected utilizing random numbers generated from SAS. Addresses of the faculty were obtained via the internet from faculty respective institutions' homepage.

A questionnaire was mailed to 370 College of Education faculty. A sample of 248 (67%) usable surveys were completed and returned. The sample, identified through a systematic random selection of names of AAU faculty, was designed to have a confidence level of 90% with a margin of error =.05.

Questionnaire and Data Analysis

The questionnaire was developed based on instruments utilized by Monahan (1993) and Dooley (1995) as well as a review of the related literature. As shown in Tables 1 and 2, the questionnaire assessed 15 items for both motivating and hindering factors. Chi-square test of independence was utilized to answer the research question, "Are there any differences in the factors that motivate and hinder faculty in their pursuit of grants when gender is considered?"

RESULTS

Of the AAU faculty responding to the questionnaire, 141 (57.3%) were males and 105 (42.7%) were females. The study participants include, 143 (58.1%) full professors, 58 (23.6%) associate professors, and 45 (18.3%) assistant professors; 191 (77.6%) of the respondents were tenured professors and 55 (22.4%)

were untenured professors. The women faculty comprises of, 38 (36%) full professors, 35 (34%) associate professors, and 31 (30%) assistant professors. The male faculty represents, 103 (74%) full professors, 23 (16%) associate professors, and 14 (10%) assistant professors.

As shown in **Table 1**, comparison of female and male faculty revealed the following significant motivating factors for female faculty, "consideration in tenure or promotion decisions" ($c2 = 8.072$, *df*=3; p<.05); "having access to boilerplates" ($c2 = 13.862$, *df*=3; p<.01); and "building my professional reputation as a capable researcher" ($c2 = 13.862$, *df*=3; p<.01).

Significant differences by gender were also found in the following barriers to grant writing. The barriers were, "inadequate support available to submit a proposal in a timely manner" ($c2 = 11.137$, *df*=3; p<.01); "lack of training in grant seeking and grant writing" ($c2 = 9.926$, *df*=3; p<.05); "too time consuming" ($c2 = 8.912$, *df*=3; p<.05) were all found to be significant when compared to the gender of faculty (**Table 2**).

Regarding submitting proposals for funding, the results show virtually no differences between female (10%) and male (8%) faculty who did not submit proposal for funding. When one to three research proposals were submitted for funding, female faculty (47%) submitted proposal at a higher percentage than male faculty (37%), while male faculty (54%) tend to submit four or more research proposals at higher percentage than female faculty (42%) (**Table 3**). In this study, female faculty (23%) have a higher percentage of proposals that were not funded than male faculty (16%). When one to three proposals were funded, female faculty (59%) have a slightly higher percentage than male faculty (56%). When four or more proposals were funded, male faculty (27%) have a slightly higher percentage than female faculty (18%) (**Table 4**). Tables 3 and 4 are based on proposals submitted or funded from the previous five years.

DISCUSSION

This research indicates that there is a significant gender difference in factors that motivate and hinder faculty in grant writing. Also, the results of this study suggest gender differences in the number of proposals submitted and funded. Female faculty reported lacking the necessary training to pursue grants. In fact, the lack of training was a main factor that influenced the decision of the female faculty not to pursue grants. In most cases, women faculty were not knowledgeable about how to initiate the process of grant writing which accounts for fewer proposals being submitted. These findings hold important implications for university administrators who are interested in assisting their women faculty in successfully competing for limited grant funds.

Therefore, once faculty members are hired, university administrators play a major role in their success when pursuing grants. If the goals of university administrators are to support and facilitate success of women faculty, more emphasis should be placed on providing adequate training and mentorship to them. This notice is supported by the work of Teague (1981) who proposed a collaborative effort between female faculty and those with knowledge of proposal writing. It is recommended that universities implement faculty development program with sessions on identifying appropriate funding sources and techniques in writing successful grants.

Previous studies have found male faculty more involved in research and publication. The findings of this study are inconsistent with results of previous research. For this study, female faculty overall, submitted fewer proposals and had fewer proposals funded than their male counterparts (**Table 3** and **Table 4**). However, there are some female faculty who submitted four or more proposals and had four or more proposals funded.

Universities judge themselves and are judged by others based on research productivity (Fulton & Trow, 1974) and the dollar amount of grants acquired (Geiger, 1986). Since universities are competitive, goals

for the faculty are to seek prestige for their particular institution and themselves. For faculty who seek opportunities to build their professional reputations as capable researchers, incentives must be individualized which will motivate them in making "a name for themselves," their universities, and contribute to their area of research interest when grants are funded. It is imperative that these motivators and barriers be taken into account if women faculty at AAU 'Research I' institutions will have an equal chance of succeeding in the academy. However, it is important to note a potential limitation to this study is the results are based on faculty in colleges of education at AAU 'Research I' institutions and thus it is unclear if the results can be generalized to faculty from other institutions.

REFERENCES

Armour, R. (1990). Racial and gender differences in faculty careers. (ERIC Document Reproduction Services No. ED323825).

Bentley, R. J. (1990). *Faculty research performance over time and its relationship to sources of grant support*. Unpublished doctoral dissertation, The University of Michigan.

Bentley, R. J. & Blackburn, R. T. (1992). Two decades of gains for female faculty? *Teachers College Record, 93* (4), 697-709.

Daniel, L. G. & Gallaher, I. (1990). Impediments to faculty involvement in grant-related activities: A case study. *Journal of the Society of Research Administrators, 16*, 5-13.

Davis, D. & Astin, H.S. (1987). Reputational standing in academe. *Journal of Higher Education 58*(3), 123-144.

Dooley, L. M. (Spring, 1995). Barriers and inducements to grant related Activity by a College of Education faculty. *Research Management Review, 7*, (2),10-24.

Finkelstein, M. J., Seal, R. K., & Schuster, J. H. (1996). *The American faculty in transition: A first look at the new academic generation*. A paper prepared for the National Center for Education Statistics NSOPF93.

Fulton, O. & Trow, M. (1974). Research activity in higher education. *Sociology of Education, 47*, 29-73.

Geiger, R. L. (1986). *To advance knowledge: The growth of American research universities, 1900-1940*. New York: Oxford University Press.

Hall, R. M. & Sander, B. R. (1986). Academic mentoring for women students and faculty: A new look at an old way to get ahead. (ERIC Document Reproduction Services No. ED240891).

Landino, R. A. & Owen, S. V. (1988). Self-efficacy in university faculty. *Journal of Vocational Behavior, 33*, 1-14.

Monahan, T. C. (1993). Barriers and inducements to grant-related activity by New Jersey state college faculty. *Journal of the Society of Research Administrators, 25* (4), 9-25.

Peterson's guide to graduate programs in business, education, health, & law (1996) 13th ed. Peterson's annual guides to graduate study: Book 6. Princeton, NJ.

Taylor, M.S., Locke, F.A., Lee, C., & Gist, M. (1984). Type A behavior and faculty research productivity: What are the mechanisms? *Organizational Behavior and Human Performance, 34*, 402-418.

Teague, G. V. (1981). How administrators can encourage successful R&D. *Educational Record, 62*, 36-39.

Vasil, L. (1992). Self-efficacy expectations and causal attributions for achievement among male and female university faculty. *Journal of Vocational Behavior, 41*, 259-269.

Dr. Patricia Boyer *is an Institutional Researcher at the University of Missouri-Columbia.*
elpapb@showme.missouri.edu

Dr. Irv Cockriel *is the Associate Dean and Director of Grants & Contracts Support Office at the University of Missouri-Columbia.*
elpaiwc@showme.missouri.edu

AWL Journal Home Page

AWL Journal Volume 2, Number 1, Winter 1999

Subscribe to AdvancingWomen Network - A free Ezine from AdvancingWomen.com

AW Home | Workplace | Biz Tools | Career Center | Business Center | Money | Networking
Lifestyle | Web Women | Educators | Leadership Journal | Hispanic Women | International Women
News | Chat | Sitemap | Search | Guestbook | Awards | Support AW | College
Investment Bookstore | Investment Newstand | Market Mavens

About Us **|** Content Syndication **|** Advertising Info **|** Privacy Policy **|**Site Map