

# Does Gender of a Leader Make a Difference?

## Women Faculty Programs

## Metrics Matter, Issue 1, June 2011

### Introduction

Fifty percent of M.D. and Ph.D. degrees are awarded to women<sup>1-2</sup> and have been for a decade yet women remain underrepresented in leadership positions in academic medicine. Women leaders inspire women at all levels and send a signal that the campus environment is friendly to women, therefore increasing the chances that women faculty are recruited and advanced<sup>3</sup>. Furthermore, having women leaders is generally seen as an indicator of positive change in an institution and a boon to recruitment<sup>4</sup>.

In this first issue of *Metrics Matter* we asked whether there is a correlation between the gender of the department chair, a leadership position at MD Anderson Cancer Center, and faculty gender demographics. Our data suggest that there is a correlation between chair gender and gender equity but more importantly between chair gender and faculty rank and tenure.

### Methodology

Institutional faculty gender demographics were extracted by department from the internal titles book database in Faculty Academic Affairs. Departments with fewer than 5 faculty (N=2) were excluded from the analysis. All departments were ranked by the percentage of women within each department and grouped by gender-ratio ranking<sup>5</sup> as below:

Gender-ratio ranking	% of women faculty
Gender-balanced	36% to 67%
Female minority	18% to 35%
Female token*	0% to 17%

Chair gender was analyzed in relation to gender-ratio ranking. Faculty rank and tenure status were analyzed in relation to chair gender only in gender-balanced departments (N=24). All data were analyzed by binomial and chi-square statistical tests.

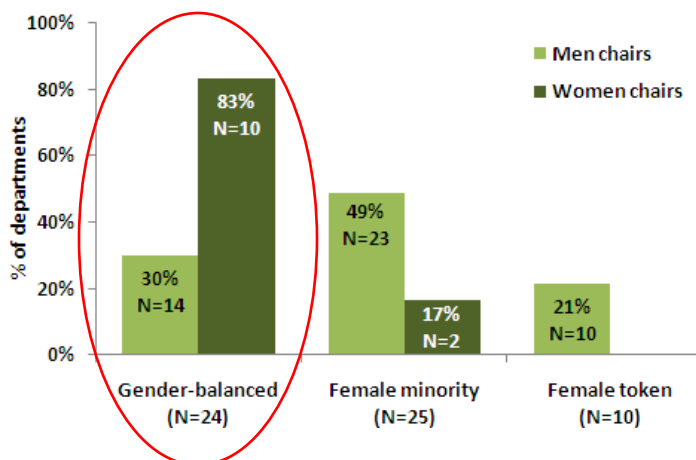
### Results

Of a total of 59 departments analyzed in this study, 12 (20%) are chaired by women and 47 (80%) are chaired by men. Of these 59 departments, 24 (41%)

were ranked as gender-balanced, 25 (42%) as female minority and 10 (17%) as female token.

*Gender-ratio rankings by women and men chairs.* Figure 1 shows that 83% (10/12) of MD Anderson departments chaired by women are gender-balanced, while this percentage is 30% (14/47) for departments chaired by men. There is a significant difference in gender-ratio ranking of departments based on chair gender (p=0.003).

Figure 1.



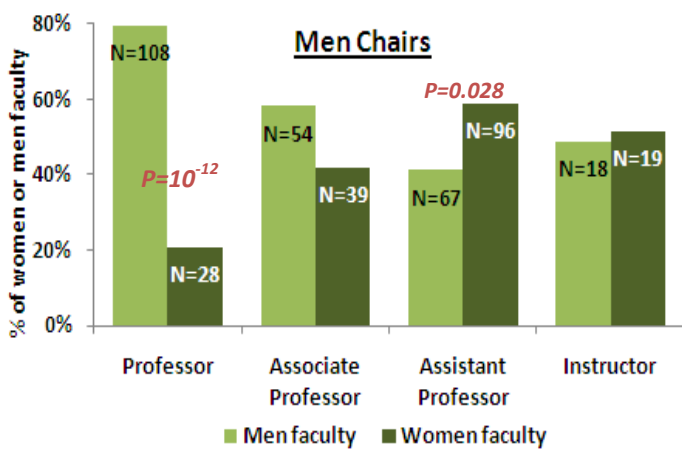
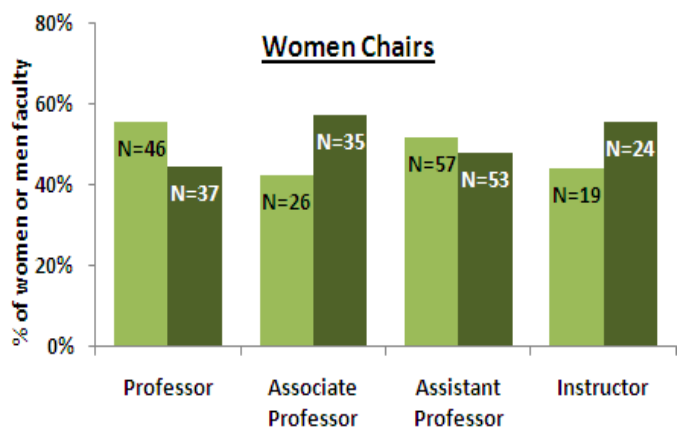
Of the 12 departments chaired by women, 2 (17%) are ranked as female minority. There are no female token departments chaired by women. Of 47 departments chaired by men, 23 (49%) were ranked as female minority and 10 (21%) as female token. *Further analysis was performed only on gender balanced departments.*

*1-Chair gender and faculty rank.* Figure 2 shows no significant differences between the percent of women and men in all ranks in departments chaired by women. In departments chaired by men, there are significantly fewer women professors, 21% (n=28) (p=10<sup>-12</sup>) and significantly more women assistant professors (59%) (n=96) (p=0.028).

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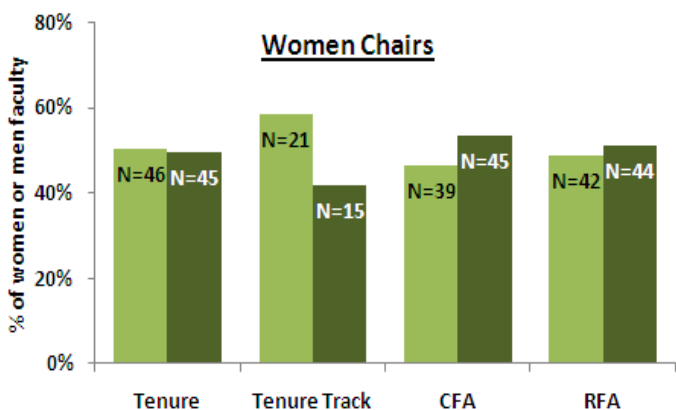
\* Kanter, Rosabeth M. (1977). *Men and Women of the Corporation*, New York: Basic Books. The word "token" was used to denote a few, and "minority" to define a presence of 15% or more.

**Figure 2.**

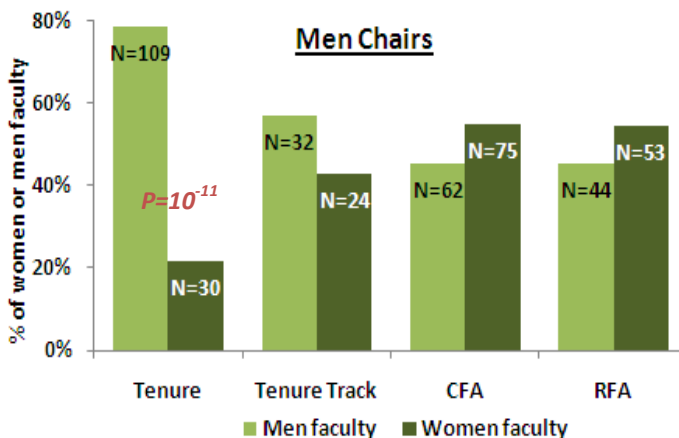


*2-Chair gender and faculty tenure status.* Figure 3 shows that women and men faculty are equally distributed across the tracks in departments chaired by women. In departments chaired by women, 49% (n=45) of tenured faculty are women and the remaining 51% (n=46) are men. In departments chaired by men, however, there are significantly fewer tenured women (22%, n=30) than tenured men (78%, n=109) ( $p=10^{-11}$ ).

**Figure 3.**



**Figure 3 (cont'd).**



## Discussion

This study shows a clear correlation between department chair gender and gender balance; significantly more gender balanced departments are chaired by women than men. Furthermore, analysis of these 24 departments revealed significant differences in gender equity in rank and tenure based on chair gender. Gender equity was found across all ranks, tracks and tenure in these departments chaired by women whereas there are significantly fewer women professors and tenured women in gender-balanced departments chaired by men.

Many factors may contribute to these results. There may simply be more women in the candidate pool in departments chaired by women, particularly in clinical departments. Unfortunately gender data are not available, but our training program data indicate that, in the last decade, 38% of our trainees were women<sup>6</sup> and they were distributed across specialties. Hopefully these numbers will translate to gender equity in rank and tenure and eventually to leadership.

Data suggest that women leaders improve gender equity in organizations, implying a causal relationship. Our study shows a clear correlation between department chair gender and gender balance of the faculty; but does not demonstrate cause-and-effect.

1 Women in Academic Medicine Statistics and Medical School Benchmarking, AAMC, 2009-2010

2 National Center for S&E Statistics S&E Degrees: 1966-2006. Doctoral Degrees: Biological Sciences, NSF

3 National Research Council of the National Academies (2006). To Recruit and Advance. The National Academies Press.

4 Isaac C, Griffin L, Carnes M. Journal of Women's Health. 2010 Mar;19(3):533-46

5 Frehill LM, Jeser-Cannavale C, Malley JE. (2007). In AJ Stewart et al. (Eds.), Transforming Science and Engineering: Advancing Academic Women. University of Michigan Press.

6 MD Anderson Trainee and Alumni Affairs, 2009