

Assessing the Academic Work Environment for Science and Engineering Faculty at the University of Michigan in 2001 and 2006: Gender and Race in Retention-Relevant Career Experiences
Executive Summary

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INTRODUCTION

This is the third in a series of reports derived from the fall 2006 study of the academic climate on the University of Michigan campus. This report draws on the same data as that for report one, that is, responses from science and engineering faculty to the 2001 and 2006 climate survey (for detailed information about the study and data collection procedures, please refer to the initial report). The purpose of this report is comparison of the gender and race differences for science and engineering faculty in career experiences generally thought to be related to faculty career satisfaction and retention at the two data collection points: Time 1 (2001) and Time 2 (2006).

Overview of Results

Our approach in this report is to examine qualities and characteristics of faculty work life, beyond the climate (which was addressed in the first two reports), that are thought to be important to faculty members' ability to be productive and have satisfying careers. These include opportunities for leadership and influence, service, allocation of resources, recognition, and family responsibilities. We consider whether or not these work conditions vary systematically by race-ethnicity and/or gender for science and engineering faculty at Time 1 and at Time 2. We follow with an assessment of how these experiences and conditions may be related to faculty members' job satisfaction.

FINDINGS

Summary of Factors that May Support Faculty Work

White men reported less family responsibility than white women (at both times) and men of color (at Time 2). Women were more likely to indicate that they have a partner employed full-time than men and white women were more likely to indicate that they have a partner employed at UM as faculty than white men at Time 1 and Time 2.

At Time 1, white men reported higher satisfaction than men of color with resources overall, as well as some individual items. However, satisfaction scores in several areas, including overall satisfaction with resources, were higher at Time 2 than at Time 1 for men of color and there were no differences between their scores and those of white men on these items at Time 2.

At Time 1, white women reported serving on more committees than white men; however, there were no gender or racial-ethnic differences in reported service or leadership activities at Time 2. White men reported chairing more committees, and were more willing to take on service tasks at Time 2 than at Time 1. Women of color reported less felt influence over faculty and educational matters than white women at Time 1 and Time 2. They also reported less felt influence than men of color over educational matters at both times, faculty matters at Time 1 and affecting the department's climate at Time 2.

Women of color were also least likely to report being nominated by their departments for teaching or research awards at Time 1 and Time 2; and, at Time 2, men of color were more likely than white men to report that their departments had failed to nominate them for an award for which they were qualified.

Relationship of these Experiences to Job Satisfaction

We were also interested in examining the relationship of the factors considered here to faculty members' job satisfaction (assessed by the item, how satisfied are you with your current position at UM). All experience variables (family responsibilities, satisfaction with resources, number of committees served on, felt influence in the four areas, and recognition) were correlated with job satisfaction separately by race and gender groups.

White men

At Time 1, felt influence in two areas (educational matters and department's climate), as well as satisfaction with resources, were positively correlated with job satisfaction; reported family responsibility was negatively correlated. At Time 2 all variables except reported family responsibility and being nominated for teaching and service awards, were correlated with job satisfaction for white men (and all but reports of failing to be nominated for an award were positively correlated).

White women

Correlations for white women at Time 1 and Time 2 were similar to results for white men at Time 2. At both times all four influence variables, as well as satisfaction with resources, were positively correlated with job satisfaction; reported failure to be nominated for an award for which they were qualified was negatively correlated with job satisfaction at both times. For white women (but not white men), committee service was unrelated to job satisfaction at either time. In addition, at Time 1 family responsibility, and at Time 2 being nominated for a research award, were positively associated with job satisfaction.

Men of color

Similar to white men, felt influence over educational matters and the department's climate were positively associated with job satisfaction at Time 1; reports of not being nominated for an award were negatively associated. In contrast, at Time 2 satisfaction with resources, reported committee service, and reports of being nominated for a service award produced significant (positive) correlations with job satisfaction.

Women of color

As we found with other faculty groups, satisfaction with resources was positively correlated with job satisfaction at Time 1 and Time 2 for women of color. Like men of color, and unlike white faculty, fewer influence variables were associated with job satisfaction for them; felt influence over resource allocations was positively correlated at Time 1 and felt influence over the department's climate was positively correlated at Time 2. In addition, reported failure to be nominated for an award was negatively associated with job satisfaction at Time 2.

It is important to note that the sample for faculty of color is smaller than that for white faculty; it is possible that a larger sample would have produced more significant correlations, as we observed for the white faculty sample.

CONCLUSIONS

For science and engineering faculty generally, overall satisfaction with resources was positively correlated with job satisfaction and a department's reported failure to nominate faculty for an award for which they were qualified was negatively correlated. In addition, experiences of felt influence were associated with job satisfaction, especially for white faculty, at Time 1 and Time 2. Reported committee

service also appeared to matter for male faculty members' job satisfaction at Time 2. In contrast, self-report of family responsibility did not appear to be an important factor (it only mattered for white faculty at Time 1, and produced opposite associations for men and women).

Both overall satisfaction with resources, felt influence in their departments and appropriate recognition, then, are key components of science and engineering faculty members' job satisfaction, and therefore, should be considered important aspects of any efforts directed at their retention. We found some improvements in these areas for science and engineering faculty comparing responses at Time 1 to Time 2. Although there were no changes for women faculty, overall satisfaction with resources increased from Time 1 to Time 2 for men of color and at Time 2 there were no differences between white men and men of color on this dimension. There were, however, no improvements in experiences of felt influence for any faculty at Time 2 compared to Time 1 and women of color often reported lower levels than white women and/or men of color of felt influence over educational and faculty matters, as well as affecting the department's climate. Moreover, rates at which women of color reported that they were nominated for research and teaching award were higher at Time 2 than at Time 1; however, they still reported a lower frequency than white women at Time 2.

It is also interesting to note that self-report of committee service was a positive factor related to job satisfaction for men but not women. We found no gender differences on number of committees that faculty indicated that they served on. However, we do not know what those committees were; it is possible that men may have more opportunity to serve on influential committees than women. Regardless, these findings suggest that it is important for all science and engineering faculty, and in particular, women of color, to have sufficient opportunities to participate in, and voice opinions about, key decisions that affect department life: academics, resource allocations, and overall climate and culture.