

**Assessing the Academic Work Environment for Science and Engineering and  
Social Science Faculty at the University of Michigan in 2006:  
Gender and Race in Faculty Mentoring**

**UM ADVANCE Program**

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## INTRODUCTION

This is the fifth in a series of reports derived from the fall 2006 study of the academic climate on the University of Michigan campus. The first and second reports assessed faculty experiences of their work environment<sup>1</sup>. The second and third reports addressed gender and race differences in career experiences generally thought to be related to faculty career satisfaction and retention. This report draws on the same data, that is, responses from science and engineering faculty as well as social science faculty to the 2006 climate survey. For detailed information about the full study and data collection procedures, please refer to the initial report. The purpose of this report is comparison of the gender and race differences in experiences of faculty mentoring—both mentoring received by more junior faculty members (assistant and associate professors) and mentoring provided by senior faculty (full professors).

### Sample

The target sample of tenure track faculty surveyed for this study and reported on here includes the following groups of faculty with paid appointments at the University of Michigan-Ann Arbor as of August, 2006:

- All female tenure track science and engineering faculty at or above the rank of assistant professor (N=352).
- Random subsample of male tenure track science and engineering faculty at or above the rank of assistant professor, stratified by race and rank (N=620).
- All female tenure track social science faculty at or above the rank of assistant professor (N=148).
- All male tenure track social science faculty at or above the rank of assistant professor (N=244).

Due to the small number of faculty of color in academic science and engineering, as well as the social sciences, at the University of Michigan, the ADVANCE Evaluation Advisory Committee<sup>2</sup> recommended oversampling faculty of color, both to yield numbers large enough to permit analysis by race-ethnicity, and to protect confidentiality. We therefore included nearly all faculty of color from underrepresented groups (African Americans, Latinos and Native Americans) in the target sample and a substantial random sample of Asians and Asian Americans. A total of 300 faculty of color (of whom 134 were underrepresented minorities) were surveyed.

The target sample for science and engineering faculty was drawn from the three largest schools with science and engineering faculty (Engineering, LSA, and Medicine) as well as seven smaller schools (Dentistry, Information, Kinesiology, Natural Resources and Environment, Nursing<sup>3</sup>, Pharmacy and Public Health). All social science faculty in these schools were included in the target sample. The total sample of faculty respondents in 2006 included 423 tenure track faculty. Of these, 201 were female, 222 were

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<sup>1</sup> All reports are available on the ADVANCE Program Web site: <http://sitemaker.umich.edu/advance/faculty-climate>.

<sup>2</sup> Members of the Evaluation Advisory Committee are Deborah Carter (Education), Mark Chesler (Sociology), Mary Corcoran (Political Science, Public Policy, Social Work, Women's Studies), Paul Courant (University Librarian and Dean of Libraries, Public Policy, Economics), Ann Lin (Public Policy, Political Science), Richard Gonzalez (Psychology), Janet Lawrence (Higher Education), Valerie Lee (Education), and Yu Xie (Sociology).

<sup>3</sup> The demographic makeup of the Nursing school is quite different from the other schools. However, because preliminary analyses excluding Nursing school respondents were comparable to analyses in which they were included, we decided to keep respondents from all schools in the analysis sample.

male, 322 were white, and 87 were faculty of color<sup>4</sup>. Most (206) of the faculty were at the rank of full professor; 119 were at the associate professor level, and 121 were assistant professors.

Male faculty were older and had been at UM longer than female faculty; they also received their highest degree longer ago, and were less likely to have been hired within the past 10 years. Similarly, men were more likely to be full professors than women faculty. We found similar differences when comparing the white tenure track faculty with tenure track faculty of color. White faculty were older than the faculty of color; they had also been at UM longer and had received their degrees earlier. Faculty of color were also more likely to have been hired in the last 10 years. White faculty were more likely to be at the rank of full professor. Given these differences, a composite variable assessing experience was constructed as a mean of age, years at UM, year of degree, and rank. This measure of experience was used as a control in all analyses and means that any statistical finding reported here cannot be explained by simple differences in age, years at UM, year of degree or rank.

### **Data Analysis Strategy**

Because analyses for this report were limited to faculty at only some ranks (faculty at the assistant and associate professor levels for experiences of mentoring received and full professors for experiences of mentoring provided), all analyses were completed combining faculty from both science and engineering and social sciences disciplinary areas to ensure sufficient sample sizes to assess gender and race-ethnicity differences (comparing faculty of color with white faculty)<sup>5</sup>. Preliminary analyses were conducted comparing Asians and Asian American faculty to underrepresented minority faculty that revealed few significant differences. Given this, and the small total number of faculty of color in the sample, we combined Asian and Asian American faculty with underrepresented minority faculty in these analyses.

Analyses were completed using analyses of variance (ANOVAs) on scales and items from the survey to assess differences by gender and race-ethnicity. When assessing frequency data (numbers of people, rather than scores), we used logistic regression, which is appropriate when the dependent variable is dichotomous but there are continuous control variables. In the results discussed below, any references to significant differences or group differences refer exclusively to differences found to be statistically significant ( $p \leq .05$ —that is, differences or effects that would have occurred by chance if there really was no difference or effect at or less than 5 percent of the time, which is a generally accepted standard of statistical significance in social science research). Data tables follow the report.

### **Overview of Results**

Our approach in this report is to examine experiences of received mentoring from all faculty colleagues for more junior faculty (those at the assistant and associate levels) as well as experiences of providing mentoring for full professors. We consider whether or not these experiences vary systematically by race-ethnicity and/or gender. This is followed with an assessment of how these experiences of mentoring may be related to faculty members' reports of their work environment as well as their overall job satisfaction and intentions to leave the university.

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<sup>4</sup> Four groups were treated as minority or “faculty of color”: Asians and Asian Americans, African Americans, Native Americans and Latinos. Preliminary analyses were conducted comparing Asians and Asian American faculty to underrepresented minority faculty that revealed few significant differences. Given this, and the small total number of faculty of color in the sample, we decided to combine Asian and Asian American faculty with underrepresented minority faculty in these analyses.

<sup>5</sup> In previous reports of 2006 data all analyses were completed separately within the two broad disciplinary areas.

## FINDINGS

### **Experiences of Received Mentoring (Assistant and Associate Professors)**

A series of questions assessed faculty members' experiences of received mentoring, including how many mentors and how much mentoring they received in different areas from faculty colleagues at all ranks in and outside the University. Analyses of these experiences were limited to all mentoring received by faculty at the assistant and associate professor levels as they are the primary beneficiaries of mentoring.

*Having a mentor.* All faculty were asked if there is anyone they currently regard as a mentor; a mentor was defined as someone who gives advice and counsel on career issues and/or sponsors or advocates for the faculty member (and could be a colleague at any rank in and outside the University). Two thirds (65%) of assistant and associate professors reported that they did have a mentor (see Table 1); the remaining 35% indicated they had no one who served as a mentor (31% of these faculty were at the assistant professor level). Percentages of faculty at the assistant and associate ranks who reported having a mentor were similar for all male (63%) and all female (70%) faculty and for all faculty of color (66%) and all white faculty (65%). Based on responses to another question that asked about kinds of mentoring received from faculty within their units, we assessed what percentage of faculty reported any mentoring from a colleague within their units. About half of the faculty indicated receiving some mentoring support from someone within their department (see Table 1). This percentage did not differ significantly by demographic groups.

*Kinds of Mentoring Received.* We also examined the specific kinds of mentoring support assistant and associate professors reported receiving from UM mentors in eight different areas (serving as a role model, networking, advice about advancement, getting published, department politics, obtaining resources, advocating for me, and balancing work and family). Most faculty at the assistant and associate ranks (about three quarters) reported that mentors served as role models, provided advice about advancement and advocated for them (see Table 2). Half to two-thirds of these faculty indicated that they received advice about networking, department politics, and obtaining resources from their mentors. Fewer reported that they receive help about getting published (44%) and balancing work and family (32%). We found only two statistically significant differences in rates of mentoring by area when comparing faculty by gender and race-ethnicity. All women reported receiving more advice about getting published than all men; this difference was mostly accounted for by differences between men and women faculty of color. And all white faculty were more likely to report that their mentors advocated for them than all faculty of color; this difference was mostly explained by the difference between white women and women of color.

Faculty were also asked how many people (both in and outside the University) provided support and advice in the same eight areas. Most assistant and associate professors (85%) indicated that they had two or more mentors providing support in at least one of the eight areas (see Table 3). Far fewer (14%) reported they had only one mentor providing any kind of support in these areas, and the remaining had no mentoring in any of these areas. These percentages were similar for men and women faculty as well as majority and minority faculty.

*Amount of Mentoring Received.* Finally faculty were queried about how much mentoring (none, some, a lot, and too much) they received in each of the same eight areas listed above. About half of the faculty at the assistant and associate ranks reported "a lot" of mentoring support in only two areas: mentors who served as role models and who advocated for them (see Table 4a). Fewer (between one-quarter to one-third) indicated they got "a lot" of mentoring in five other areas: promoting their careers through

networking; advising about preparing for advancement; advising about getting work published; advising about department politics; and advising about obtaining necessary resources. In contrast, about one quarter reported no mentoring in three of those same areas: promoting careers through networking; advising about getting published and obtaining necessary resources. And over one-half of the associate and assistant professor faculty reported no mentoring advice on how to balance work and family. Only one person indicated receiving “too much” mentoring and this was only in some areas.

We assessed these responses separately for all male and all female faculty as well as all white faculty and all faculty of color (see Tables 4a-e). Comparison of mean scores revealed a significant gender difference in experiences of mentoring about department politics with women faculty reporting less mentoring in this area than men faculty. Further analyses revealed that this difference was principally accounted for in the differences between men and women faculty of color. In addition, women of color reported receiving significantly less mentoring in this area than white men and women.

*Summary of Received Mentoring.* Most faculty reported having a mentor, but one-third of assistant and associate professors indicated that they had no one who served as a mentor for them. Fewer, about half, reported that they had a mentor within their own departments. Many, but not all, received advice about advancement and indicated that their mentors served as role models and advocated for them. Far fewer received advice about getting published, department politics, obtaining resources, balancing work and family life or networking. Moreover, these faculty members felt they received a lot of mentoring support in only two areas: mentors who served as role models and who advocated for them.

### **Relationship between Mentoring Received and Experiences of the Work Environment (Assistant and Associate Professors)**

*Having a mentor in or outside UM.* For all assistant and associate professors we examined the relationship between having a mentor with specific outcome measures assessing the work environment. These measures included feeling excluded from important committees, four measures of felt influence in their departments (over the curriculum, faculty matters, resources and department climate), three measures of department climate (positive environment, felt surveillance, and scholarly isolation), overall job satisfaction and intention to leave UM<sup>6</sup>. For these faculty members, having a mentor was related to more positive experiences of their department climates (more positive environment, less felt surveillance and scholarly isolation), more felt influence over the department climate, and less felt exclusion from important committees (see Table 5a). These relationships held for all men and all faculty of color. And in the case of all white faculty, all relationships, with the exception of felt surveillance, held. However, for all women faculty, of those four variables, only scholarly isolation was associated (negatively) with having a mentor. In addition, for all women faculty, having a mentor was positively associated with overall job satisfaction, and for faculty of color it was negatively associated with intention to leave.

Given these different findings for all women faculty, we assessed the same relationships separately for white women and women of color and found that the lack of significant correlations held only for women of color (see Table 5b). In the case of white women, several of the work environment factors were associated with having a mentor including, felt influence over faculty matters, resources and department climate (positive), positive environment (positive), felt exclusion from important committees (negative), scholarly isolation (negative), and overall job satisfaction (positive). Results were

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<sup>6</sup> Please see the first report for a detailed explanation of these variables  
<http://sitemaker.umich.edu/advance/faculty-climate>.

similar for men of color for whom all but influence over faculty matters and resources, as well as overall job satisfaction, were significantly correlated, in the expected direction, with having a mentor within their departments. In contrast, for women of color, only one variable was significantly correlated with having a mentor, felt influence over the curriculum, and this relationship was negative. Results for white men were similar to those for all men.

*Having a Mentor in Same Department.* We also examined the relationships between faculty members' experience of their work environment and having a mentor within their own departments. As with the first set of analyses, climate factors were generally associated, in the expected direction, with having a mentor in the same department for all assistant and associate professors (see Table 6a). The same five factors that were significant for having a mentor anywhere were also significant for having a mentor within the department. In addition, having a department mentor was also significantly associated, in the expected directions, with influence over faculty matters, overall job satisfaction, and intention to leave.

Separate comparisons by race and gender revealed that having a mentor within the department appeared to be most important for women faculty. For them, all variables, except felt influence over curricular matters, were significantly correlated, in the expected directions, with having a mentor within the department. This was not true for all men, all white faculty, or all faculty of color; we found fewer significant relationships for these groups. In the case of male and white faculty, felt influence over the department climate, positive environment and scholarly isolation were correlated in the expected directions with having a department mentor. In addition, for all white faculty, felt influence over faculty matters was positively correlated and felt exclusion and felt surveillance were negatively correlated; for all men, intention to leave was also negatively correlated. In the case of all faculty of color, only positive environment (positively) and felt exclusion and intention to leave (negatively) were correlated with having a department mentor.

Again, because of the different pattern of findings for all women, compared especially to all men and all faculty of color, correlations were also run on the four separate race-gender groups (white men, white women, men of color and women of color). Results from these analyses revealed that the findings above for all women were explained primarily by white women: similar to the analyses assessing relationship with a mentor in or outside UM, all factors, except influence over curriculum and resources and intention to leave UM, were significantly correlated with having a mentoring within their departments, in the expected directions, for this group of faculty (see Table 6b). In contrast, no factors were associated with having a mentor within the department for women of color. Results for white men were similar to those for all men, and results for men of color were similar to those of all faculty of color.

*Summary of Relationship Between Received Mentoring and Work Environment.* These findings confirm the importance of a mentor for assistant and associate professors, especially for white women and men of color. Having a mentor, either within or outside the University, was associated with less scholarly isolation and felt surveillance for all faculty, and less felt exclusion, more felt influence over the department climate and more positive ratings of the department environment. However, analyses within the four race-gender groups revealed that having a mentor was primary beneficial, in terms of a more positive work environment, to white women and male faculty of color and of no benefit to women of color.

The same analyses examining having a mentor within the department revealed again the importance of such a mentor for white women, but not women of color. Having a mentor within the department also appeared to be of some benefit to men of color and white men, but less crucial for men of color than having a mentor either in or outside the University. It is interesting to note that having a mentor and having a mentor within the department were negatively associated with intention to leave only in the case of men of color.

### **Experiences of Providing Mentoring (Full Professors)**

Similar to questions about mentoring received, we asked faculty about the experiences of providing mentoring. As before, faculty were asked about their mentoring activities, in terms of mentoring provided to others, both in and outside the University, using the same eight areas described above. Analyses of these experiences were limited to faculty at the full professor rank as they were most likely to be the ones providing formal and informal mentoring to their more junior colleagues.

*Number of Mentees.* Full professors reported a wide range of number of mentees both in and outside the University. Approximately one quarter of the respondents fell into each of four categories: 1-2 mentees; 3-4 mentees; 5-9 mentees; and 10 or more mentees (see Table 7). These percentages did not differ significantly when we compared all men to all women and all white faculty to all faculty of color.

*Areas of Mentoring.* We also examined the range of areas of mentoring provided by the senior faculty, assessing the percentage who provided mentoring to colleagues in and outside the University in each of the eight areas described above (e.g., serving as a role model, advising about advancement and getting published, advocating for advisees, etc). More than half of the respondents (59%) reported that they provided mentoring in all or almost all areas listed (7 or 8); another third indicated that they provided mentoring in 5 or 6 areas. The remaining mentored in fewer areas (see Table 8). There were no statistically significant differences in number of areas in which faculty provided mentoring by gender or by race-ethnicity.

A similar analysis was conducted looking at the same mentoring of UM colleagues by senior faculty. In this case, senior faculty reported a lower level of mentoring activity. Nearly a quarter (23%) provided no mentoring in any of the eight areas listed and fewer than half provided mentoring to UM faculty in all or almost all of the eight areas (see Table 9). As in the previous analyses, there were no differences by gender or race-ethnicity in number of areas in which mentoring was provided by senior faculty.

We also looked at the extent to which senior faculty mentored within their departments in each of the eight mentoring areas. For all full professors, at least half provided mentoring in each area with the exception of advice about balancing work and family; only 44% of the faculty provided mentoring to their department colleagues on this topic (see Table 10). In contrast, 72% of the full professors mentored junior faculty in their departments in what they needed to do to advance their careers. There were few gender or race/ethnicity differences in these percentages: women and faculty of color were more likely to report serving as role models than men and white faculty; white faculty were more likely to advise about department politics than faculty of color; and women were more likely than men to advocate for their mentees.

### **Relationship between Providing Mentoring and Experiences of the Work Environment (Full Professors)**

Similar to analyses with assistant and associate professors, we examined the relationships between providing mentoring for full professors and their experiences of their work environment. We first



correlated the work environment factors with number of mentees reported by the faculty. Many factors were significantly correlated: number of mentees was positively correlated with felt influence in all four areas except influence over department climate, felt exclusion from important committees, and felt surveillance (see Table 11). These results were identical, or nearly identical, for all white and all male faculty. No work environment factors were correlated with number of mentees for all women faculty. For all faculty of color only scholarly isolation was correlated (negatively); however in many instances the correlation coefficients were similar to those of the white and male faculty samples. The sample size for the faculty color is quite small and it is possible that, with a larger sample, many of the correlations would have been statistically significant.

As a second measure of mentoring workload, we correlated the same work environment factors with number of areas of mentoring (from the list of eight provided in the survey) that senior faculty reported providing to UM colleagues. Five factors were correlated with number of areas of mentoring: felt influence over the curriculum, faculty matters and the department climate, overall job satisfaction (all positively) and scholarly isolation (negatively); see Table 12. These results were identical to those for all white faculty and similar to those for all male faculty. None of the work environment factors were significantly correlated with number of areas of mentoring provided for all faculty of color or all women faculty.

*Summary of Findings on Mentoring Provided.* These findings reveal that senior faculty engage in a good deal of mentoring activity, some with colleagues outside UM. They also suggest that mentoring by senior faculty may provide some benefits to them, although perhaps not as much as receiving mentoring provides their junior colleagues. The number of mentees and the number of areas of mentoring within UM were both positively associated with experiences of felt influence in the department. Moreover, for all senior faculty, and especially all men and all white faculty, the number of areas of provided mentoring was negatively associated with scholarly isolation. Scholarly isolation was also negatively associated with number of mentees for all faculty of color. These findings may point to a benefit from mentoring for senior faculty; alternatively it may be that those senior faculty members who are most integrated into, and who experience the most influence within, their departments are also more likely to engage in mentoring of their colleagues.

It is important to note, however, that for senior faculty, especially white faculty, the number of mentees was also positively correlated with feeling excluded from important committees; this may indicate that the workload associated with mentoring precludes faculty from engaging in other service-related activities. Number of mentees was also positively associated with felt surveillance, particularly in the case of all white faculty and all men, suggesting that mentoring of junior faculty also brings with it an element of scrutiny from department colleagues.

Finally, mentoring activities were not significantly associated with work environment factors for all faculty of color and all women as they were for all white faculty and all men. Number of mentees and areas of mentoring did not differ by race-ethnicity or gender, so other factors are required to explain these differences. Perhaps because women and faculty of color generally experience less felt influence in their departments (see report four), they do not receive the same benefits in these areas through their mentoring that all white faculty and all men may receive. It is also possible that for faculty whose work environment is generally less positive, as we found was the case for women and faculty of color (see reports one through four), the mentoring experience is importantly different from those faculty members whose work situation is more positive.

### **Conclusions**

Generally, receiving mentoring from faculty colleagues appears to be beneficial for science and engineering and social science faculty at the assistant and associate levels. However, one-third of the faculty at these ranks reported that they did not have a mentor. Having a mentor, either within or outside their departments, was associated with less scholarly isolation, less felt surveillance, less felt exclusion, more felt influence over the department climate and more positive ratings of the department environment for all assistant and associate professors. The findings hold especially for white women and men of color, and, to a lesser extent, white men. In contrast, there appears to be no benefit to receiving mentoring for women of color.

Senior faculty (those at the full professor rank) in the sciences and engineering and social sciences engage in a good deal of faculty mentoring and may benefit from that activity through more felt influence and less scholarly isolation. However, the benefits of faculty mentoring do not accrue to faculty of color and women faculty, perhaps because their experiences of the work environment are different.

**Table 1: Percent of Assistant and Associate Professors With Mentors**

	All		White Faculty		Faculty of Color		Male Faculty		Female Faculty	
	N	%	N	%	N	%	N	%	N	%
mentor	141	65%	97	65%	44	66%	60	63%	81	70%
mentor same unit	119	53%	84	53%	35	54%	54	52%	65	55%

**Table 2 : Percent of Assistant and Associate Professors with Mentors who Received Mentoring at UM in Each Area by Demographic Group**

	Role Model	Network- ing	Advance- ment	Getting Published	Dept. Politics	Obtaining Resources	Advocates for me	Balancing Work/ Family
	%	%	%	%	%	%	%	%
all faculty	72%	56%	77%	50%	65%	57%	74%	32%
male faculty	68%	55%	74%	44% <sup>a</sup>	64%	58%	73%	28%
female faculty	79%	59%	82%	61% <sup>a</sup>	66%	55%	76%	39%
faculty of color	63%	51%	70%	39%	63%	45%	68% <sup>b</sup>	25%
white faculty	75%	59%	80%	55%	65%	62%	76% <sup>b</sup>	34%

**Table 3: Number of Mentors Providing Mentoring in at Least One of Eight Areas to Assistant and Associate Professors**

N of Mentors	All Faculty		White Faculty		Faculty of Color		Male Faculty		Women Faculty	
	N	%	N	%	N	%	N	%	N	%
0	2	1%	0	0%	2	4%	1	1%	1	1%
1	16	14%	10	13%	6	15%	9	16%	7	9%
2+	114	85%	82	87%	32	81%	48	83%	66	90%
Total	132	100%	92	100%	40	100%	58	100%	74	100%

<sup>a, b</sup> Matching symbols denotes statistically significant differences as the  $p \leq .05$  level.

**Table 4a: Amount of Mentoring by Area of Advice for All Assistant and Associate Professors**

	Role Model	Network- ing	Advance- ment	Getting Published	Dept. Politics	Obtaining Resources	Advocates for me	Work/ Family
	%	%	%	%	%	%	%	%
None	10%	22%	14%	30%	19%	21%	16%	55%
Some	35%	47%	45%	46%	55%	54%	33%	30%
A lot	54%	31%	41%	24%	26%	25%	51%	14%
Too much	1%	1%	0%	0%	0%	0%	0%	0%

**Table 4b: Amount of Mentoring by Area of Advice for Male Assistant/Associate Professors**

	Role Model	Network- ing	Advance- ment	Getting Published	Dept. Politics	Obtaining Resources	Advocates for me	Work/ Family
	%	%	%	%	%	%	%	%
None	9%	20%	14%	33%	11%	18%	13%	57%
Some	34%	52%	53%	46%	63%	57%	32%	29%
A lot	57%	28%	33%	21%	26%	25%	55%	14%
Too much	0%	0%	0%	0%	0%	0%	0%	0%

**Table 4c: Amount of Mentoring by Area of Advice for Female Assistant/Associate Professors**

	Role Model	Network- ing	Advance- ment	Getting Published	Dept. Politics	Obtaining Resources	Advocates for me	Work/ Family
	%	%	%	%	%	%	%	%
None	12%	25%	14%	24%	32%	25%	21%	52%
Some	38%	37%	30%	48%	42%	49%	34%	31%
A lot	48%	36%	56%	29%	26%	26%	43%	15%
Too much	2%	2%	0%	0%	1%	0%	2%	2%

**Table 4d: Amount of Mentoring by Area of Advice for White Assistant/Associate Professors**

	Role Model	Network- ing	Advance- ment	Getting Published	Dept. Politics	Obtaining Resources	Advocates for me	Work/ Family
	%	%	%	%	%	%	%	%
None	10%	23%	16%	28%	18%	20%	14%	57%
Some	36%	47%	42%	49%	55%	57%	33%	27%
A lot	54%	30%	42%	22%	27%	23%	51%	15%
Too much	1%	1%	0%	0%	0%	0%	1%	1%

**Table 4e: Amount of Mentoring by Area of Advice for Assistant/Associate Professors of Color**

	Role Model	Network- ing	Advance- ment	Getting Published	Dept. Politics	Obtaining Resources	Advocates for me	Work/ Family
	%	%	%	%	%	%	%	%
None	10%	18%	10%	33%	22%	23%	18%	51%
Some	34%	47%	51%	40%	55%	46%	30%	37%
A lot	56%	34%	39%	27%	23%	31%	52%	11%
Too much	0%	0%	0%	0%	1%	0%	0%	0%

**Table 5a: Correlations between Department Factors and Job Satisfaction with Having a Mentor for Assistant and Associate Professors**

	All n=216	Men n=98	Women n=118	Faculty of Color n=65	White Faculty n=151
Felt exclusion from important committees	-0.27 ***	-0.32 **	-0.18	-0.45 ***	-0.20 *
Influence over curriculum	0.07	0.14	-0.04	0.12	0.06
Influence over faculty matters	0.07	0.07	0.10	0.04	0.09
Influence over resources	0.08	0.06	0.18	0.21	0.04
Influence over department climate	0.24 ***	0.32 **	0.16	0.36 **	0.22 **
Positive environment scale	0.34 ***	0.47 ***	0.15	0.52 ***	0.27 ***
Felt surveillance scale	-0.15 *	-0.22 *	-0.05	-0.34 **	-0.07
Scholarly isolation scale	-0.25 ***	-0.32 **	-0.19 *	-0.26 *	-0.24 **
Satisfaction with UM position	0.04	-0.03	0.20 *	0.07	0.03
Intention to leave UM	-0.10	-0.11	-0.12	-0.41 ***	0.03

**Table 5b: Correlations between Department Factors and Job Satisfaction with Having a Mentor for Assistant and Associate Professors Four Race-Gender Groups**

	White Men n=68	White Women n=81	Men of Color n=30	Women of Color n=35
Felt exclusion from important committees	-0.18	-0.26 *	-0.66 ***	0.02
Influence over curriculum	0.05	0.12	0.41 *	-0.42 **
Influence over faculty matters	0.03	0.22 *	0.21	-0.28
Influence over resources	-0.01	0.22 *	0.30	0.08
Influence over department climate	0.25 *	0.22 *	0.56 **	-0.05
Positive environment scale	0.35 **	0.25 **	0.76 ***	0.03
Felt surveillance scale	-0.07	-0.12	-0.58 **	0.08
Scholarly isolation scale	-0.28 *	-0.26 *	-0.41 *	-0.02
Satisfaction with UM position	-0.07	0.26 *	0.10	0.07
Intention to leave UM	0.06	-0.08	-0.50 **	-0.25

\*p≤.05  
 \*\*p≤.01  
 \*\*\*p≤.01

**Table 6a: Correlations between Department Factors and Job Satisfaction with Having a Mentor within the Department for Assistant & Associate Professors**

	All n=216	Men n=98	Women n=118	Faculty of Color n=65	White Faculty n=151
Felt exclusion from important committees	-0.25 ***	-0.19	-0.40 ***	-0.28 *	-0.24 **
Influence over curriculum	0.11	0.13	0.11	0.04	0.14
Influence over faculty matters	0.18 **	0.12	0.29 **	0.03	0.22 **
Influence over resources	0.10	0.07	0.22 *	0.23	0.05
Influence over department climate	0.28 ***	0.29 **	0.33 ***	0.17	0.32 ***
Positive environment scale	0.34 ***	0.39 ***	0.33 ***	0.38 **	0.33 ***
Felt surveillance scale	-0.19 **	-0.19	-0.22 *	-0.24	-0.17 *
Scholarly isolation scale	-0.26 ***	-0.27 **	-0.29 **	-0.17	-0.31 ***
Satisfaction with UM position	0.13 *	0.06	0.30 ***	0.07	0.15
Intention to leave UM	-0.20 **	-0.21 *	-0.22 *	-0.38 **	-0.12

**Table 6b: Correlations between Department Factors and Job Satisfaction with Having a Mentor within the Department for Assistant & Associate Professors Four Race-Gender Groups**

	White Men n=68	White Women n=81	Men of Color n=30	Women of Color n=35
Felt exclusion from important committees	-0.16	-0.43 ***	-0.28	-0.29
Influence over curriculum	0.18	0.08	-0.02	0.11
Influence over faculty matters	0.18	0.31 **	-0.05	0.19
Influence over resources	0.01	0.19	0.22	0.25
Influence over department climate	0.36 **	0.35 **	0.16	0.19
Positive environment scale	0.35 **	0.38 **	0.47 **	0.15
Felt surveillance scale	-0.15	-0.27 *	-0.31	-0.04
Scholarly isolation scale	-0.28 *	-0.44 ***	-0.25	0.03
Satisfaction with UM position	0.07	0.37 ***	0.03	0.08
Intention to leave UM	-0.11	-0.21	-0.45 **	-0.19

\*p≤.05

\*\*p≤.01

\*\*\*p≤.001

**Table 7: Number of Mentees for Full Professors**

	all faculty		white faculty		faculty of color		male faculty		female faculty	
	N	%	N	%	N	%	N	%	N	%
none	1	1%	1	1%	0	0%	1	1%	0	0%
1-2	27	28%	22	22%	5	38%	22	32%	5	12%
3-4	28	24%	25	26%	3	23%	14	21%	14	33%
5-9	33	29%	30	31%	3	23%	19	28%	14	33%
10+	22	18%	20	20%	2	15%	12	18%	10	23%
total	111	100%	98	100%	13	100%	68	100%	43	100%

**Table 8: Number of Areas in Which Full Professor Mentor In and Outside UM**

	all faculty		white faculty		faculty of color		male faculty		female faculty	
	N	%	N	%	N	%	N	%	N	%
1-2	5	3%	5	4%	0	0%	4	5%	1	2%
3-4	12	8%	9	7%	3	16%	9	11%	3	5%
5-6	41	29%	32	26%	9	47%	26	32%	15	25%
7-8	85	59%	78	63%	7	37%	43	52%	42	69%
Total	143	100%	124	100%	19	100%	82	100%	61	100%

**Table 9: Number of Areas Full Professors Provide Mentoring Within UM**

	all faculty		white faculty		faculty of color		male faculty		female faculty	
	N	%	N	%	N	%	N	%	N	%
0	35	23%	32	25%	3	10%	28	26%	7	9%
1-2	5	4%	5	3%	0	0%	4	3%	1	1%
3-4	13	8%	10	8%	3	12%	10	9%	3	6%
5-6	41	23%	33	21%	8	41%	24	23%	17	26%
7-8	80	42%	73	43%	7	37%	42	39%	38	58%
Total	174	100%	153	100%	21	100%	108	100%	66	100%

**Table 10: Percent of Full Professors Who Provide Mentoring in Home Department in Each Area by Demographic Group**

	Role Model	Network- ing	Advance- ment	Getting Published	Dept. Politics	Obtaining Resources	Advocates for me	Work/ Family
	%	%	%	%	%	%	%	%
all faculty	65%	57%	72%	65%	65%	56%	66%	44%
male faculty	61% <sup>a</sup>	55%	69%	62%	62%	53%	62% <sup>d</sup>	40%
female faculty	82% <sup>a</sup>	66%	85%	76%	77%	72%	83% <sup>d</sup>	61%
faculty of color	91% <sup>b</sup>	70%	76%	83%	50% <sup>c</sup>	78%	83%	46%
white faculty	62% <sup>o</sup>	56%	71%	62%	67% <sup>c</sup>	54%	63%	44%

<sup>a,b,c,d</sup> Matching symbols denotes statistically significant differences as the  $p \leq .05$  level.

**Table 11: Correlations between Department Factors and Job Satisfaction with Number of Mentees for Full Professors**

	All n=111	Men n=67	Women n=43	Faculty of Color n=13	White Faculty n=97
Felt exclusion from important committees	0.20 *	0.22	0.11	-0.22	0.23 *
Influence over curriculum	0.31 ***	0.35 **	0.05	0.33	0.32 ***
Influence over faculty matters	0.31 ***	0.36 ***	-0.01	0.34	0.31 **
Influence over resources	0.36 ***	0.39 ***	-0.06	0.37	0.37 ***
Influence over department climate	0.15	0.22	-0.11	0.46	0.14
Positive environment scale	0.12	0.17	-0.19	0.47	0.10
Felt surveillance scale	0.28 **	0.34 **	0.02	0.10	0.28 **
Scholarly isolation scale	-0.16	-0.19	-0.03	-0.58 *	-0.14
Satisfaction with UM position	0.10	0.13	-0.19	-0.09	0.10
Intention to leave UM	0.10	0.16	0.25	-0.12	0.17

**Table 12: Correlations between Department Factors and Job Satisfaction with Number of Areas of UM Mentoring for Full Professors**

	All n=173	Men n=107	Women n=66	Faculty of Color n=21	White Faculty n=152
Felt exclusion from important committees	-0.01	0.03	-0.21	-0.11	-0.01
Influence over curriculum	0.25 ***	0.31 **	-0.10	-0.02	0.28 ***
Influence over faculty matters	0.22 **	0.26 **	0.00	0.14	0.24 **
Influence over resources	0.10	0.11	-0.02	-0.06	0.12
Influence over department climate	0.24 **	0.28 **	0.10	0.15	0.26 **
Positive environment scale	0.13	0.23 *	-0.09	0.21	0.14
Felt surveillance scale	-0.09	-0.17	0.11	-0.05	-0.09
Scholarly isolation scale	-0.26 ***	-0.34 ***	-0.05	-0.35	-0.26 ***
Satisfaction with UM position	0.15 *	0.18	0.03	0.16	0.16 *
Intention to leave UM	0.00	-0.03	0.11	0.27	-0.02

\*p≤.05

\*\*p≤.01

\*\*\*p≤.001