

**Assessing the Academic Work Environment for Science and Engineering and
Social Science Faculty at the University of Michigan in 2006: Gender, Race, and
Discipline in Department- and University-Related Climate Factors**

UM ADVANCE Program

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INTRODUCTION

This report is a companion to the report recently released by the UM ADVANCE Program, *Assessing the Academic Work Environment for Science and Engineering Faculty at the University of Michigan: 2001 and 2006*. That report assessed data from UM science and engineering faculty in 2001 and 2006 about their experiences of their work environment. This report draws on the same 2006 data for science and engineering faculty and comparable data collected from social science faculty at the same time. For detailed information about the study and data collection procedures, please refer to the initial report¹. The purpose of this report is comparison of the gender and race differences examined among science and engineering faculty to those among social science faculty. These analyses were not possible using the 2001 data, since we did not have data from male social science faculty in the sample at that time. Therefore, this report examines gender and race differences in both groups of faculty, only for 2006.

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 at the University of Michigan, the ADVANCE Evaluation Advisory Committee² 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 the 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, Nursing³, Pharmacy, and Public Health). All social science faculty in these schools were also included in the target sample.

¹ http://www.umich.edu/~advproj/ADVANCE_FacClimateSurveyRpt1_FINAL.pdf

² 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).

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

The total sample of science and engineering faculty in 2006 included 276 tenure-track faculty. Of these, 128 were female and 148 were male; in addition 207 were white and 55 were faculty of color (of whom 29 were underrepresented minorities)⁴. The comparable sample of social science faculty was 147, including 73 women and 74 men; 32 of these social science faculty were faculty of color (21 of the faculty of color were underrepresented minorities). Across the two subsamples, 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 variable assessing experience was constructed, combining 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 below cannot be explained by simple differences in age, years at UM, year of degree or rank.

Data Analysis Strategy

In this study we assessed gender differences in experiences of scientists and engineers on the tenure-track compared to gender differences among social scientists on the tenure-track; in addition, we assessed race-ethnicity by comparing faculty of color with white faculty within discipline groups. Preliminary analyses were conducted comparing Asians and Asian American faculty to underrepresented minority faculty; these 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, comparing mean scores of white and minority women and men scientists and engineers, and white and minority women and men social scientists.

Analysis of variance is a statistical procedure that apportions variation in people's scores on a variable to different factors—in this case, their membership in one of the eight faculty groups: white women, minority women, white men, and minority men for each of the two disciplines. This design allows for a three-way ANOVA (gender X race X discipline). When the ANOVA indicated an overall significant difference in one of those individual or combined factors, we pursued relevant planned comparisons between appropriate groups. This is a relatively conservative way to minimize error when conducting multiple tests.

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 instances the frequency of "presence" (e.g., report of unwanted sexual attention or discrimination) on a dichotomous variable was rare (no group percentage was higher than 10%) no planned comparisons were pursued.

⁴ 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.

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. Four comparable tables are produced for each set of analyses to allow us to show differences among the groups (i.e., comparing male faculty by race-ethnicity, female faculty by race-ethnicity, white faculty by gender, and faculty of color by gender) across the two broad disciplines. Each table reports means or frequencies by group for both disciplines and identifies significant group differences within.⁵

Scales created for the initial (2001) study to assess climate were replicated in the 2006 data⁶. Three scales assess university climate; eight assess departmental climate. One additional item—evaluation of department leader as committed to racial/ethnic diversity—was also used to assess departmental climate. Following are the scales created by category.

University Climate

- disparaging comments about women from students and faculty (2 items)
- disparaging comments about men from students and faculty (2 items)
- disparaging comments about racial-ethnic minorities from students and faculty (4 items)
- unwanted sexual attention
- experiences of gender discrimination
- experiences of racial-ethnic discrimination

Departmental Climate

- positive environment (6 items)
- gender egalitarian atmosphere (9 items)
- scholarly isolation (7 items)
- felt surveillance (4 items)
- felt tokenism (2 items)
- tolerance of diversity (4 items)
- evaluation of departmental leader as fair (3 items)
- evaluation of departmental leader as able to create a positive environment (3 items)
- evaluation of departmental leader as committed to racial-ethnic diversity (1 item)

Overview of Results

Our approach in this report is to compare gender and race differences within two discipline groups (differences between faculty in the sciences and engineering compared to faculty in the social sciences). We begin by describing the findings concerning the general university climate for these faculty. We follow with a discussion of the experiences of the department climate more directly, considering first those variables in which both race and gender issues are implicated, and then those that are more broadly based.

⁵ A more complete set of tables, including standard deviations, is available on the ADVANCE Web site.

⁶ In the initial study, we created scales of items as a data reduction strategy that minimized the likelihood of findings resulting from chance, and maximized measurement reliability (see Cronbach, 1990, for a general account of the measurement approach employed here). See report, <http://www.umich.edu/~advproj/climatereport.pdf>, for explanation of how scales were created.

We next examine the relationship between the climate ratings and individuals' overall job satisfaction for faculty in the sciences and engineering compared to the social sciences, again looking at gender and race-ethnicity differences within those disciplines.

University Climate

The survey asked several questions regarding institutional climate that faculty may experience on the UM campus: overheard disparaging comments about women and men, and about racial-ethnic minorities, gender and racial-ethnic discrimination, and unwanted and uninvited sexual attention.

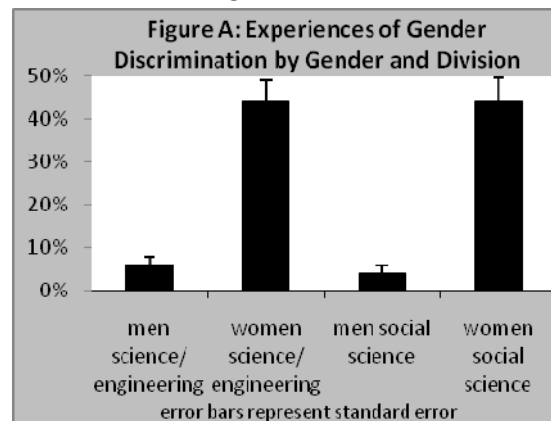
Assessments Related to Gender

Disparaging Comments about Men and Women: White women in both discipline groups reported hearing more disparaging comments about women than white men counterparts reported (see Table 1c). There were no differences comparing men and women of color in either discipline (see Table 1d).

There were no statistically significant differences in reports of hearing disparaging comments about men (see Tables 1 a-d).

Gender Discrimination: Survey respondents were asked about their experiences of gender discrimination in six specific areas (hiring, promotion, salary, space/equipment and other resources, access to administrative staff, and graduate student or resident/fellow assignments). We assessed an overall felt gender discrimination score based on experience of discrimination in any of the six areas.

Rates of felt gender discrimination for women were relatively high in both discipline groups (42% and 48% for white women and women of color respectively in the sciences and engineering, and 37% and 57% for white women and women of color in the social sciences respectively; see Tables 1c-d). All four groups of women (that is, regardless of race-ethnicity) reported higher levels of gender discrimination than their male counterparts (see Figure A).



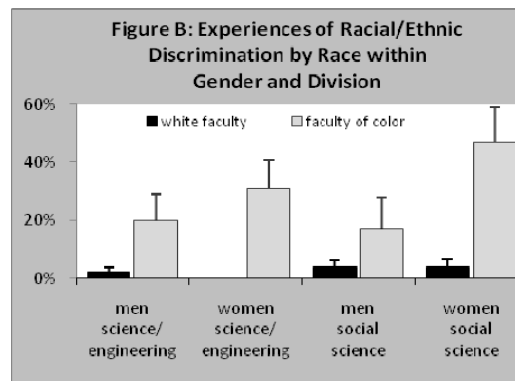
Unwanted Sexual Attention: There were no differences in reported experiences of unwanted sexual experiences between any groups. Mean levels of experiences were relatively low for all women, ranging from 4% for women of color in the sciences and engineering to 14% for white women in the social sciences (see Tables 1c-d). There were also no differences in reports of others' experiences of unwanted sexual attention.

Assessments Related to Race-Ethnicity

Disparaging Comments about Racial-Ethnic Minorities: There were no statistically significant differences in any of the group comparisons.

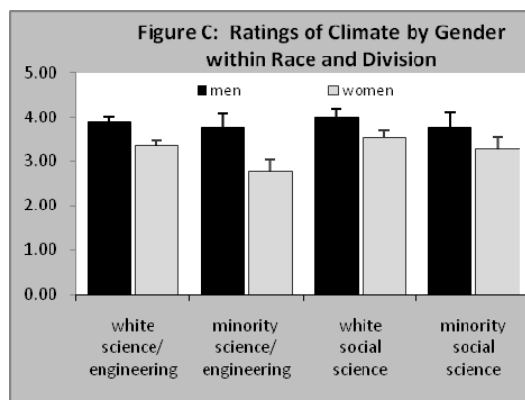
Racial-Ethnic Discrimination: As with gender discrimination, survey respondents were asked about their experiences of racial-ethnic discrimination in the same six specific areas (hiring, promotion, salary, space/equipment and other resources, access to administrative staff, and graduate student or resident/fellow assignments). Again, we examined a measure of any discrimination (assessed across the six areas).

Female faculty of color in both discipline groups reported more racial-ethnic discrimination than their white female counterparts (see Table 2b and Figure B). The same was true for male faculty of color in the sciences and engineering compared to white male faculty in the sciences and engineering (but not for similar faculty in the social sciences; see Table 2a).



Department Climate

The department climate was assessed with eight scales and one single item. Four of the scales address climate issues specifically related to gender and/or race-ethnicity: tolerant climate, gender egalitarian atmosphere, tokenism, and department chair committed to racial-ethnic diversity. The remaining scales assess the climate more generally: positive climate, scholarly isolation, felt surveillance, department chair as fair, and department chair creates positive environment. All of the individual scales were also combined to create an overall climate score (where a higher number represents a more positive rating of the climate; thus, negative scales were reverse-scored before combining with the positive scales). We first assessed the overall climate score and then looked separately at the individual scales and item by broad groupings (that is, those that specifically assessed the climate issues related to gender and/or race-ethnicity and those that assessed the climate more generally).



In the sciences and engineering, both white women and women of color reported a less positive overall climate (composite indicator) than their male counterparts (see Table 3c-d and Figure C). Women of color in the sciences and engineering also reported a less positive overall environment than white women scientists and engineers (see Table 3b).

In the social sciences, white women had lower mean scores on overall climate than their white male social science counterparts (see Table 3c).

Department Climate Assessments Related to Gender and Race-Ethnicity

The differences in the total climate scores are also reflected in similar differences for the individual climate scales more specifically related to gender and race-ethnicity, revealing both gender and race differences; however, this was generally more true for the science and engineering faculty.

In the sciences and engineering, both women of color and white women reported a less positive environment in three of the four areas assessed here (less tolerant climate, less gender egalitarian atmosphere, and more tokenism) than their male counterparts. And analysis of the fourth area (department chair committed to racial-ethnic diversity) revealed significantly lower scores for women of color than men of color.

There were fewer differences in parallel comparisons among social science faculty. Both racial-ethnic groups of women faculty reported a less gender egalitarian atmosphere in their departments than their male counterparts; and white women social scientists also reported a less tolerant climate than white men social scientists.

Looking within gender and disciplinary groups we found that both groups of women of color reported more tokenism than white women; women of color in the sciences and engineering were also less likely to report that their chairs were committed to racial-ethnic diversity than white women in the sciences and engineering. And men of color in the sciences and engineering reported more tokenism than their white male counterparts.

Assessments Related to General Department Climate

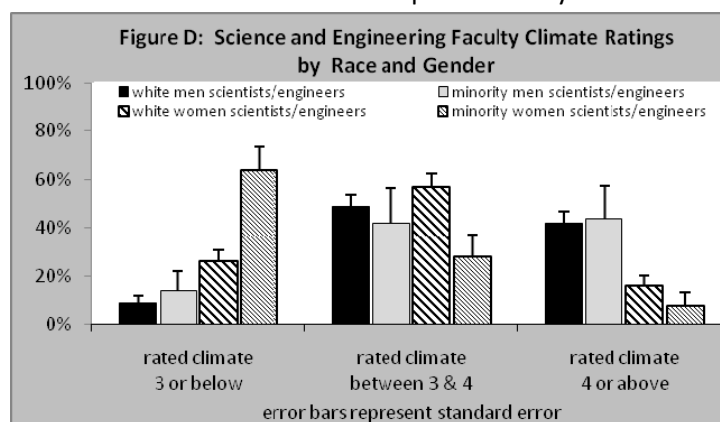
Analyses of the more general department climate scales also revealed differences in the pattern of gender differences for the two sets of disciplines. Women of color and white women science and engineering faculty reported a less favorable climate in four of the five areas assessed (positive climate, scholarly isolation, felt surveillance, and department chair as fair) than their male counterparts; minority women scientists and engineers also reported a lower mean score on the fifth variable (department chair creates positive environment) than their male counterparts.

The only gender differences among the social science faculty were among the white faculty. White women reported less positive mean scores in three of the areas (scholarly isolation, felt surveillance, and department chair as fair) than did their male counterparts.

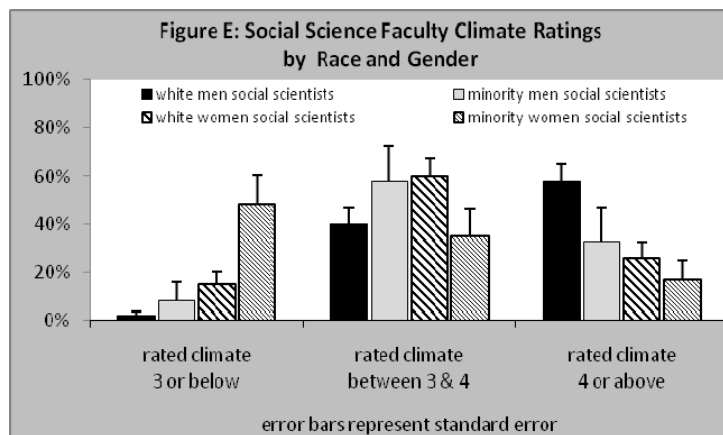
Looking within disciplinary and gender groups, we found few differences by race. White women in the sciences and engineering reported more positive mean scores on the two department chair scales (chair is fair and creates positive environment) than women of color in the same disciplines.

Do These Differences in Climate Matter?

It is fair to ask whether the differences we have found in the climate as experienced by women and faculty of color in these disciplines really “matter.” It is always difficult to address the question of the magnitude of a difference found on a survey scale as the absolute values (from 1 as low, or negative to 5 as high, or positive) do not correspond to any external standard (the way the values on a thermometer do). One way of getting at this is to look at the middle of the distributions in absolute terms. Across disciplinary and race-ethnicity differences, the median rating for women of the total climate score was closest to a 3 (3.32) on the 5 point scale while the mean rating for men was closest to a 4 (3.89).



Equally, we can examine the distribution of scores along the scale. When we examine the four gender/race-ethnicity groups separately for the two discipline groups we find a similar pattern within each discipline where far more men than women rate the climate above 4 and far more women (especially women of color) than men rate the climate below 3 (see Figures D and E). On the basis of these findings, we believe it is reasonable to conclude that the difference in felt climate (between white and minority women scientists and engineers and social scientists and their male comparison groups) is substantial. The difference between white and minority women is also worth noting. A similar assessment was carried out using two different climate scores (one created by averaging the four scales assessing climate specifically related to gender and/or race-ethnicity and one created by averaging the



five scales assessing climate more generally). These analyses suggest an even more negative climate for women and faculty of color compared to white men when assessing climate scores specifically related to gender and race-ethnicity.

Career Satisfaction

Another way to evaluate the importance of the climate differences is to examine career satisfaction. Career satisfaction was assessed with 12 items (e.g., how

satisfied I am with sense of being valued for my research, scholarship, or creativity by members of my department/unit or sense of being valued as a teacher by my students). These items were also combined to create an overall career satisfaction score. White women and women of color in the sciences and engineering reported overall lower career satisfaction than their male counterparts. There were no differences among social science faculty on this variable.

In the sciences and engineering, white women reported lower satisfaction than white men in four of the specific areas (opportunity to collaborate with other faculty, amount of social interaction with department members, level of intellectual stimulation in day-to-day contacts with faculty colleagues, and sense of contributing to disciplinary theoretical developments); see Tables 4c-d. Similarly, women of color in the same disciplines reported lower satisfaction than their male colleagues in five areas (amount of social interaction with department members, sense of being valued for teaching and research, level of intellectual stimulation in day-to-day contacts with colleagues, and balance between professional and personal life). These same women also had lower means scores on sense of being valued for teaching by colleagues than white women in the sciences and engineering (see Table 4b).

The only differences found for faculty in the social sciences was comparing white women and men; white women reported less satisfaction in two areas (level of intellectual stimulation in day-to-day contacts with colleagues and balance between professional and personal life); see Table 4c.

Overall Job Satisfaction

Overall job satisfaction was assessed with one item: how satisfied are you with your current position at UM? There were no differences in group comparisons with one exception: white men in the social sciences report higher levels of overall job satisfaction than men of color in the social sciences (see Table 5a).

We also asked respondents two questions about their intention to stay at UM or to leave: how much you would like to stay at UM for your entire career and how often do you think about leaving UM. These were combined to create a scale assessing intention to leave. Again, there were no differences comparing any groups on this variable.

Overall satisfaction and intention to leave UM were both strongly correlated in the expected directions with overall career satisfaction and overall climate for white and minority science and engineering faculty with one exception: intention to leave was not correlated with overall career satisfaction for faculty of color; although it was correlated with overall climate ratings (see Table 6).

For white social science faculty overall career satisfaction and overall climate were also correlated positively with overall career satisfaction and negatively with intention to leave. There were fewer significant correlations when assessing mean scores of faculty of color in this discipline. Specifically, overall satisfaction was not correlated with overall climate ratings for faculty of color in the social sciences; nor was it correlated with overall career satisfaction for women of color.

Hearing disparaging comments about women was correlated negatively with overall satisfaction and positively with intention to leave for women of color in the sciences and engineering and white men in the social sciences. This was also true in the case of intention to leave for white women in the sciences and engineering and women of color in the social sciences.

Experiences of gender discrimination were correlated in the expected direction with overall satisfaction and intention to leave for white women in the sciences and engineering; they were correlated positively with intention to leave for all women in the social sciences and negatively with overall satisfaction for women of color in the social sciences.

Hearing disparaging comments about racial-ethnic minorities was correlated negatively with overall satisfaction and positively with intention to leave for white men in the sciences and engineering, and was correlated positively with intention to leave for minority science and engineering men and minority social science women. In addition, racial-ethnic discrimination was negatively correlated with overall satisfaction for men of color in the sciences and engineering and positively correlated with intention to leave for white men in the social sciences.

Summary of Findings

University Climate Indicators

As we found in the first report assessing experiences of science and engineering faculty only, the overall university climate in 2006 appears worse for women than men in both science and engineering and the social sciences. White women in both discipline clusters reported hearing more disparaging comments about women than white men did; and both white women and women of color in both sets of fields reported higher rates of gender discrimination than counterpart men.

There were no gender differences in either discipline group in direct or indirect reports of experiences of unwanted sexual attention.

Faculty reports also suggest that the University climate is more positive for white faculty than faculty of color, especially in the sciences and engineering. Female faculty of color in both discipline types reported more racial-ethnic discrimination than their white female counterparts. However, only in the sciences and engineering did male faculty of color report more racial-ethnic discrimination than white male faculty.

Departmental Climate Indicators

Assessment of departmental climate indicators revealed more differences by discipline type. Specifically, women science and engineering faculty reported a less positive overall climate than men science and engineering faculty. Moreover, science and engineering women reported a less positive environment than science and engineering men in seven of the nine individual areas of the department climate, (both gender and race-ethnicity related and more general climate indicators), that were assessed; and science

and engineering women of color reported a less positive environment on all nine indicators than men of color.

Also within the sciences and engineering, women of color reported a less positive overall climate, less positive ratings on department chair (is fair, creates a positive environment and is committed to racial-ethnic diversity), and more tokenism than white women. Men of color also reported more tokenism than white men.

There were fewer gender differences in the social sciences and these were more often only found among the white faculty. White women social scientists' reports were less positive than white men social scientists for overall climate, as well as for five of the nine individual climate indicators. Both racial-ethnic groups of women reported a less gender egalitarian atmosphere than their male social science counterparts and women of color indicated more tokenism than white women.

Job Satisfaction and Career Satisfaction

Rates of overall career satisfaction were lower for women scientists and engineers compared to men scientists and engineers for both race-ethnicity groups; there were also several individual areas of satisfaction that showed lower levels of satisfaction for women than men for both race-ethnicity groups.

In contrast, the level of overall career satisfaction was not different for white and minority women in the social sciences compared to their male counterparts. And there were only two individual areas (of 12) for which women's satisfaction scores were lower than men's scores, and this was only for the white social science faculty.

Reports of job satisfaction and intention to leave UM were quite similar across groups. However, white men in the social sciences reported higher levels of job satisfaction than men of color in the social sciences.

CONCLUSIONS

There were few disciplinary differences related to **university climate** variables (disparaging comments and discrimination related to gender and racial-ethnicity and sexual harassment). Rather, differences tended to be between men and women faculty and white and minority faculty across disciplines. All women reported more gender discrimination than their male counterparts and all white female faculty indicated that they overheard more disparaging comments about women than white male faculty.

The one area where results differed by discipline was related to racial-ethnic discrimination. While female faculty of color in both disciplines reported more racial discrimination than white female faculty, only male faculty of color in the sciences and engineering reported more racial-ethnic discrimination than their white male counterparts.

There were more disciplinary differences in the pattern of group differences on the **department climate** variables. Results were similar for white women in both disciplines (they reported a less positive department climate than white men). However, faculty of color in the sciences and engineering reported a more negative climate compared to white faculty than faculty of color in the social sciences.

Assessment of **career satisfactions** revealed lower overall satisfaction for women in the sciences and engineering compared to men science and engineering faculty; the same was not true for social science faculty. Moreover, faculty of color in the sciences and engineering also reported less satisfaction

compared to the white science and engineering faculty; there were no race-ethnicity differences for social science faculty.

The overall findings from the survey indicate that the climate is relatively positive for white male faculty in both disciplinary areas, but less so for white women and faculty of color—especially faculty of color in the sciences and engineering. In reviewing the findings related to race-ethnicity, it is important to note that the sample size for faculty of color was relatively small (especially for the social science faculty), and that with the statistical power of a larger sample more differences between white faculty and faculty of color might have emerged.

It may be important to note that many of the same factors influence different groups of faculty members' job satisfaction and intention to leave. This pattern—of the same climate features benefiting different groups of faculty (groups differing in race, gender and discipline)—suggests that improvements in the climate are likely to benefit all faculty, rather than benefiting some at the expense of others.

It should be reiterated that the climate survey reports aggregate data and only represents experiences for these groups of faculty in general. Specific experiences that differ from the general pattern, for example in a particular department, cannot be revealed with these data. Moreover, these analyses are based on experiences of UM science and engineering faculty in the 10 campus schools that have sciences or engineering faculty as well as the social science faculty also in those schools. UM faculty in the humanities and in many professional schools (e.g., Business, Law, Architecture, Music), were not surveyed for this study. Thus, findings from this study cannot be generalized to the entire UM faculty.

However, the lack of clear and consistent findings of disciplinary differences for science/engineering and social science faculty in experiences of the climate, especially for white faculty, is consistent with results of the ADVANCE Program's 2004 climate study of Ph.D. students and suggests that some aspects of the race and gender climate may well be quite pervasive across disciplines. It is for this reason that the ADVANCE Program has begun to expand its initiatives beyond the science and engineering fields. Given the clear relationship between faculty ratings of the climate and career satisfaction with their overall satisfaction and intention to leave UM, it is important to redouble our efforts to improve the campus climate for all faculty.

Table 1a - Gender Related University Climate Indicators for Male Faculty by Race-Ethnicity

	scientists & engineers			social scientists		
	mean faculty of color men (n=27)	mean white faculty men (n=100)	sig	mean faculty of color men (n=12)	mean white faculty men (n=52)	sig
Disparaging comments about women	1.45	1.42		1.42	1.41	
Disparaging comments about men	1.50	1.59		1.57	1.63	
	% faculty of color men	% white faculty men	sig	% faculty of color men	% white faculty men	sig
Gender discrimination	6%	6%		8%	4%	
Unwanted sexual attention	6%	4%		8%	4%	
Individuals reporting others reported unwanted sexual attention	9%	14%		9%	18%	

Table 1b - Gender Related University Climate Indicators for Female Faculty by Race-Ethnicity

	scientists & engineers			social scientists		
	mean faculty of color women (n=24)	mean white faculty women (n=88)	sig	mean faculty of color women (n=19)	mean white faculty women (n=43)	sig
Disparaging comments about women	1.70	1.89		1.65	1.78	
Disparaging comments about men	1.38	1.65		1.52	1.78	
	% faculty of color women	% white faculty women	sig	% faculty of color women	% white faculty women	sig
Gender discrimination	48%	42%		57%	37%	
Unwanted sexual attention	4%	10%		8%	14%	
Individuals reporting others reported unwanted sexual attention	26%	24%		40%	26%	

Note: Ns vary slightly by item; Ns reported represent the maximum number of responses by group for the items in the table

*Symbol represents significant differences at the $p \leq .05$ level of significance

Table 1c - Gender Related University Climate Indicators for White Faculty by Gender

	scientists & engineers			social scientists		
	mean white faculty men (n=100)	mean white faculty women (n=88)	sig	mean white faculty men (n=52)	mean white faculty women (n=43)	sig
Disparaging comments about women	1.42	1.89	*	1.41	1.78	*
Disparaging comments about men	1.59	1.65		1.63	1.78	
	% white faculty men	% white faculty women	sig	% white faculty men	% white faculty women	sig
Gender discrimination	6%	42%	*	4%	37%	*
Unwanted sexual attention	4%	10%		4%	14%	
Individuals reporting others reported unwanted sexual attention	14%	24%		18%	26%	

Table 1d - Gender Related University Climate Indicators for Faculty of Color by Gender

	scientists & engineers			social scientists		
	mean faculty of color men (n=27)	mean faculty of color women (n=24)	sig	mean faculty of color men (n=12)	mean faculty of color women (n=19)	sig
Disparaging comments about women	1.45	1.70		1.42	1.65	
Disparaging comments about men	1.50	1.38		1.57	1.52	
	% faculty of color men	% faculty of color women	sig	% faculty of color men	% faculty of color women	sig
Gender discrimination	6%	48%	*	8%	57%	*
Unwanted sexual attention	6%	4%		8%	8%	
Individuals reporting others reported unwanted sexual attention	9%	26%		9%	40%	

Note: Ns vary slightly by item; Ns reported represent the maximum number of responses by group for the items in the table

*Symbol represents significant differences at the $p \leq .05$ level of significance

Table 2a - Race-Ethnicity Related University Climate Indicators for Male Faculty by Race-Ethnicity

	scientists & engineers			social scientists		
	mean faculty of color men (n=27)	mean white faculty men (n=98)	sig	mean faculty of color men (n=12)	mean white faculty men (n=52)	sig
Disparaging comments about racial-ethnic minorities	1.35	1.32		1.49	1.39	
	% faculty of color men	% white faculty men	sig	% faculty of color men	% white faculty men	sig
Racial-ethnic discrimination	20%	2%	*	17%	4%	

Table 2b - Race-Ethnicity Related University Climate Indicators for Female Faculty by Race-Ethnicity

	scientists & engineers			social scientists		
	mean faculty of color women (n=23)	mean white faculty women (n=89)	sig	mean faculty of color women (n=22)	mean white faculty women (n=44)	sig
Disparaging comments about racial-ethnic minorities	1.64	1.39		1.82	1.49	
	% faculty of color women	% white faculty women	sig	% faculty of color women	% white faculty women	sig
Racial-ethnic discrimination	31%	0%	*	47%	4%	*

Note: Note: Ns vary slightly by item; Ns reported represent the maximum number of responses by group for the items in the table
 *Symbol represents significant differences at the $p \leq .05$ level of significance

Table 2c - Race-Ethnicity Related University Climate Indicators for White Faculty by Gender

	scientists & engineers			social scientists		
	mean white faculty men (n=98)	mean white faculty women (n=89)	sig	mean white faculty men (n=52)	mean white faculty women (n=44)	sig
Disparaging comments about racial-ethnic minorities	1.32	1.39		1.39	1.49	
	% white faculty men	% white faculty women	sig	% white faculty men	% white faculty women	sig
Racial-ethnic discrimination	2%	0%		4%	4%	

Table 2d - Race-Ethnicity Related University Climate Indicators for Faculty of Color by Gender

	scientists & engineers			social scientists		
	mean faculty of color men (n=27)	mean faculty of color women (n=23)	sig	mean faculty of color men (n=12)	mean faculty of color women (n=22)	sig
Disparaging comments about racial-ethnic minorities	1.35	1.64		1.49	1.82	
	% faculty of color men	% faculty of color women	sig	% faculty of color men	% faculty of color women	sig
Racial-ethnic discrimination	20%	31%		17%	47%	

Note: Note: Ns vary slightly by item; Ns reported represent the maximum number of responses by group for the items in the table
 *Symbol represents significant differences at the $p \leq .05$ level of significance

Table 3a - Department Climate for Male Faculty by Race-Ethnicity

	scientists & engineers			social scientists		
	mean faculty of color men (n=28)	mean white faculty men (n=103)	sig	mean faculty of color men (n=12)	mean white faculty men (n=52)	sig
Overall climate	3.76	3.89		3.75	4.01	
Climate for diversity:						
Tolerant climate	4.03	4.09		3.93	4.17	
Gender egalitarian atmosphere	3.78	3.99		3.73	4.04	
Tokenism	2.16	1.64	*	2.36	1.72	
Department chair committed to racial-ethnic diversity	3.93	3.95		4.17	4.33	
General climate:						
Positive climate	3.58	3.78		3.81	3.67	
Scholarly isolation	2.08	1.97		2.35	1.89	
Felt surveillance	2.32	2.33		2.94	2.20	
Department chair as fair	3.61	3.69		3.83	3.98	
Department chair creates positive environment	3.45	3.50		3.93	3.78	

Table 3b - Department Climate for Female Faculty by Race-Ethnicity

	scientists & engineers			social scientists		
	mean faculty of color women (n=25)	mean white faculty women (n=91)	sig	mean faculty of color women (n=18)	mean white faculty women (n=47)	sig
Overall climate	2.78	3.36	*	3.25	3.55	
Climate for diversity:						
Tolerant climate	3.04	3.48		3.43	3.78	
Gender egalitarian atmosphere	2.87	3.08		3.01	3.17	
Tokenism	3.55	2.72	*	3.00	1.92	*
Department chair committed to racial-ethnic diversity	2.51	3.75	*	3.62	3.89	
General climate:						
Positive climate	2.90	3.36		3.19	3.25	
Scholarly isolation	2.61	2.33		2.53	2.46	
Felt surveillance	3.38	2.87		3.07	2.73	
Department chair as fair	2.57	3.34	*	3.46	3.48	
Department chair creates positive environment	2.58	3.32	*	3.12	3.40	

Note: Ns vary slightly by item; Ns reported represent the maximum number of responses by group for the items in the table

*Symbol represents significant differences at the $p \leq .05$ level of significance

Table 3c - Department Climate for White Faculty by Gender

	scientists & engineers			social scientists		
	mean	mean	sig	mean	mean	sig
	white	white		white	white	
faculty	faculty	faculty		faculty		
	men	women		men	women	
	(n=103)	(n=91)		(n=52)	(n=47)	
Overall climate	3.89	3.36	*	4.01	3.55	*
Climate for diversity:						
Tolerant climate	4.09	3.48	*	4.17	3.78	*
Gender egalitarian atmosphere	3.99	3.08	*	4.04	3.17	*
Tokenism	1.64	2.72	*	1.72	1.92	
Department chair committed to racial-ethnic diversity	3.95	3.75		4.33	3.89	
General climate:						
Positive climate	3.78	3.36	*	3.67	3.25	
Scholarly isolation	1.97	2.33	*	1.89	2.46	*
Felt surveillance	2.33	2.87	*	2.20	2.73	*
Department chair as fair	3.69	3.34	*	3.98	3.48	*
Department chair creates positive environment	3.50	3.32		3.78	3.40	

Table 3d - Department Climate for Faculty of Color by Gender

	scientists & engineers			social scientists		
	mean	mean	sig	mean	mean	sig
	faculty	faculty of		faculty	faculty of	
of color	color	of color		color		
	men	women		men	women	
	(n=28)	(n=25)		(n=12)	(n=18)	
Overall climate	3.76	2.78	*	3.75	3.25	
Climate for diversity:						
Tolerant climate	4.03	3.04	*	3.93	3.43	
Gender egalitarian atmosphere	3.78	2.87	*	3.73	3.01	*
Tokenism	2.16	3.55	*	2.36	3.00	
Department chair committed to racial-ethnic diversity	3.93	2.51	*	4.17	3.62	
General climate:						
Positive climate	3.58	2.90	*	3.81	3.19	
Scholarly isolation	2.08	2.61	*	2.35	2.53	
Felt surveillance	2.32	3.38	*	2.94	3.07	
Department chair as fair	3.61	2.57	*	3.83	3.46	
Department chair creates positive environment	3.45	2.58	*	3.93	3.12	

Note: Ns vary slightly by item; Ns reported represent the maximum number of responses by group for the items in the table

*Symbol represents significant differences at the $p \leq .05$ level of significance

Table 4a - Career Satisfaction for Male Faculty by Race-Ethnicity

	scientists & engineers			social scientists		
	mean faculty of color men (n=28)	mean white faculty men (n=103)	sig	mean faculty of color men (n=12)	mean white faculty men (n=52)	sig
Overall career satisfaction	3.85	3.88		3.76	3.99	
Opportunity to collaborate with other faculty	4.27	4.38		3.92	4.28	
Amount of social interaction with members of department/unit	3.82	3.74		3.75	3.84	
Level of funding for research or creative efforts	3.07	3.42		3.84	3.62	
Current salary in comparison with the salaries of UM colleagues	3.24	3.64		2.92	3.32	
Ability to attract students to work with me	4.00	3.76		3.90	3.93	
Sense of being valued as a teacher by students	4.28	4.18		4.15	4.40	
Sense of being valued as a mentor or advisor by students	4.36	4.46		4.58	4.51	
Sense of being valued for my teaching by members of department/unit	3.91	3.67		3.59	3.96	
Sense of being valued for research, scholarship, or creativity by members of department/unit	3.78	3.72		4.01	4.19	
Level of intellectual stimulation in day-to-day contacts with faculty colleagues	3.79	3.92		3.67	4.12	
Sense of contributing to theoretical developments in my discipline	4.16	4.20		3.75	4.21	
Balance between professional and personal life	3.50	3.48		3.03	3.52	

Table 4b - Career Satisfaction for Female Faculty by Race-Ethnicity

	scientists & engineers			social scientists		
	mean faculty of color women (n=25)	mean white faculty women (n=91)	sig	mean faculty of color women (n=18)	mean white faculty women (n=48)	sig
Overall career satisfaction	3.30	3.56		3.55	3.68	
Opportunity to collaborate with other faculty	4.02	3.94		3.68	4.02	
Amount of social interaction with members of department/unit	2.72	3.18		3.24	3.48	
Level of funding for research or creative efforts	3.44	3.34		3.08	3.59	
Current salary in comparison with the salaries of UM colleagues	2.67	3.31		2.80	2.97	
Ability to attract students to work with me	3.50	3.44		3.28	3.71	
Sense of being valued as a teacher by students	3.85	4.06		4.43	4.25	
Sense of being valued as a mentor or advisor by students	4.07	4.25		4.68	4.61	
Sense of being valued for my teaching by members of department/unit	2.82	3.54	*	3.56	3.59	
Sense of being valued for research, scholarship, or creativity by members of department/unit	2.88	3.40		3.26	3.62	
Level of intellectual stimulation in day-to-day contacts with faculty colleagues	2.97	3.52		3.20	3.27	
Sense of contributing to theoretical developments in my discipline	4.11	3.84		4.34	4.26	
Balance between professional and personal life	2.74	3.01		3.13	2.80	

Note: Ns vary slightly by item; Ns reported represent the maximum number of responses by group for the items in the table

*Symbol represents significant differences at the $p \leq .05$ level of significance

Table 4c - Career Satisfaction for White Faculty by Gender

	scientists & engineers			social scientists		
	mean	mean	sig	mean	mean	sig
	white faculty men (n=103)	white faculty women (n=91)		white faculty men (n=52)	white faculty women (n=48)	
Overall career satisfaction	3.88	3.56	*	3.99	3.68	
Opportunity to collaborate with other faculty	4.38	3.94	*	4.28	4.02	
Amount of social interaction with members of department/unit	3.74	3.18	*	3.84	3.48	
Level of funding for research or creative efforts	3.42	3.34		3.62	3.59	
Current salary in comparison with the salaries of UM colleagues	3.64	3.31		3.32	2.97	
Ability to attract students to work with me	3.76	3.44		3.93	3.71	
Sense of being valued as a teacher by students	4.18	4.06		4.40	4.25	
Sense of being valued as a mentor or advisor by students	4.46	4.25		4.51	4.61	
Sense of being valued for my teaching by members of department/unit	3.67	3.54		3.96	3.59	
Sense of being valued for research, scholarship, or creativity by members of department/unit	3.72	3.40		4.19	3.62	
Level of intellectual stimulation in day-to-day contacts with faculty colleagues	3.92	3.52	*	4.12	3.27	*
Sense of contributing to theoretical developments in my discipline	4.20	3.84	*	4.21	4.26	
Balance between professional and personal life	3.48	3.01		3.52	2.80	*

Table 4d - Career Satisfaction for Faculty of Color by Gender

	scientists & engineers			social scientists		
	mean	mean	sig	mean	mean	sig
	faculty of color men (n=28)	faculty of color women (n=25)		faculty of color men (n=12)	faculty of color women (n=18)	
Overall career satisfaction	3.85	3.30	*	3.76	3.55	
Opportunity to collaborate with other faculty	4.27	4.02		3.92	3.68	
Amount of social interaction with members of department/unit	3.82	2.72	*	3.75	3.24	
Level of funding for research or creative efforts	3.07	3.44		3.84	3.08	
Current salary in comparison with the salaries of UM colleagues	3.24	2.67		2.92	2.80	
Ability to attract students to work with me	4.00	3.50		3.90	3.28	
Sense of being valued as a teacher by students	4.28	3.85		4.15	4.43	
Sense of being valued as a mentor or advisor by students	4.36	4.07		4.58	4.68	
Sense of being valued for my teaching by members of department/unit	3.91	2.82	*	3.59	3.56	
Sense of being valued for research, scholarship, or creativity by members of department/unit	3.78	2.88	*	4.01	3.26	
Level of intellectual stimulation in day-to-day contacts with faculty colleagues	3.79	2.97	*	3.67	3.20	
Sense of contributing to theoretical developments in my discipline	4.16	4.11		3.75	4.34	
Balance between professional and personal life	3.50	2.74	*	3.03	3.13	

Note: Ns vary slightly by item; Ns reported represent the maximum number of responses by group for the items in the table

*Symbol represents significant differences at the $p \leq .05$ level of significance

Table 5a - Overall Satisfaction and Desire to Leave UM for Male Faculty by Race-Ethnicity

	scientists & engineers			social scientists		
	mean	mean	sig	mean	mean	sig
	faculty	white		faculty	white	
	of color	faculty		of color	faculty	
men	men	men		men		
	(n=28)	(n=103)		(n=12)	(n=53)	
Overall satisfaction	3.79	3.91		3.20	4.14	*
Intention to leave	2.83	2.85		2.95	2.80	

Table 5b - Overall Satisfaction and Desire to Leave UM for Female Faculty by Race-Ethnicity

	scientists & engineers			social scientists		
	mean	mean	sig	mean	mean	sig
	faculty	white		faculty	white	
	of color	faculty		of color	faculty	
women	women	women		women		
	(n=25)	(n=91)		(n=18)	(n=47)	
Overall satisfaction	3.18	3.50		3.11	3.60	
Intention to leave	3.51	3.27		3.53	3.36	

Table 5c - Overall Satisfaction and Desire to Leave UM for White Faculty by Gender

	scientists & engineers			social scientists		
	mean	mean	sig	mean	mean	sig
	white	white		white	white	
	faculty	faculty		faculty	faculty	
men	women	men		women		
	(n=103)	(n=91)		(n=53)	(n=47)	
Overall satisfaction	3.91	3.50		4.14	3.60	
Intention to leave	2.85	3.27		2.80	3.36	

Table 5d - Overall Satisfaction and Desire to Leave UM for Faculty of Color by Gender

	scientists & engineers			social scientists		
	mean	mean	sig	mean	mean	sig
	faculty	faculty		faculty	faculty	
	of color	of color		of color	of color	
men	women	men		women		
	(n=28)	(n=25)		(n=12)	(n=18)	
Overall satisfaction	3.79	3.18		3.20	3.11	
Intention to leave	2.83	3.51		2.95	3.53	

Note: Ns vary slightly by item; Ns reported represent the maximum number of responses by group for the items in the table

*Symbol represents significant differences at the $p \leq .05$ level of significance

Table 6 - Correlations of Overall Satisfaction and Wanting to Leave UM with Climate and Career Satisfaction Indicators

	overall satisfaction				intention to leave UM			
	white men	white women	men of color	women of color	white men	white women	men of color	women of color
	n=107	n=91	n=28	n=26	n=107	n=91	n=28	n=26
Science & Engineering								
Overall career satisfaction	0.69 ***	0.60 ***	0.48 **	0.76 ***	-0.48 ***	-0.43 ***	-0.29	-0.39
Overall climate	0.55 ***	0.60 ***	0.47 **	0.72 ***	-0.48 ***	-0.54 ***	-0.55 **	-0.62 ***
Disparaging comments about women	-0.07	-0.13	0.09	-0.48 *	-0.02	0.21 *	0.15	0.41 *
Disparaging comments about men	-0.12	0.01	0.01	-0.16	0.08	0.18	0.20	0.02
Disparaging comments about racial-ethnic minorities	-0.22 *	0.01	-0.12	-0.08	0.22 *	0.07	0.40 *	0.27
Unwanted sexual attention	0.08	-0.08	0.04	-0.07	0.08	0.19	0.00	0.09
Gender discrimination	-0.02	-0.23 *	0.08	-0.01	-0.04	0.22 *	-0.17	0.27
Racial-ethnic discrimination	0.04		-0.38 *	-0.11	-0.02		0.18	0.35
Social Science								
	white men	white women	men of color	women of color	white men	white women	men of color	women of color
	n=54	n=47	n=11	n=19	n=53	n=47	n=12	n=19
Overall career satisfaction	0.64 ***	0.61 ***	0.68 *	0.42	-0.57 ***	-0.43 **	-0.83 **	-0.52 *
Overall climate	0.49 ***	0.62 ***	0.36	0.36	-0.34 *	-0.48 ***	-0.58	-0.52 *
Disparaging comments about women	-0.35 **	-0.23	-0.17	-0.09	0.29 *	0.26	0.30	0.59 **
Disparaging comments about men	-0.10	-0.09	-0.48	0.06	0.24	0.08	0.38	0.39
Disparaging comments about racial-ethnic minorities	-0.24	-0.14	-0.52	-0.10	0.27	0.02	0.58	0.47 *
Unwanted sexual attention	0.07	-0.03	-0.64	0.15	0.02	0.22	0.59	-0.10
Gender discrimination	-0.25	-0.07	0.24	-0.52 *	0.25	0.34 *	0.02	0.69 ***
Racial-ethnic discrimination	-0.22	-0.02	-0.60	0.37	0.30 *	0.25	0.46	-0.04

Note: Ns vary slightly by item; Ns reported represent the maximum number of responses by group for the items in the table

*p<.05, **p<.01, ***p<.001