



ADVANCE Toward an Inclusive Model of Excellence
Campus Climate Quantitative Results Summary:
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Table of Contents

<i>Summary</i>	3
<i>Method</i>	3
<i>Survey Demographics</i>	4
<i>Job Satisfaction</i>	5
<i>Climate Elements Related to ADVANCE Initiatives</i>	6
<i>Leadership Fairness</i>	8
<i>Perception of Diversity</i>	9
<i>Sense of Belonging</i>	10
<i>Climate for Recruitment, Hiring and Retention of Women</i>	10
<i>Department Climate for Various Groups</i>	13
<i>Appendix A: 2020 Climate Survey Demographic Breakdowns</i>	14

2023 ADVANCE Campus Climate Survey: Quantitative Results Summary

Summary

Between 2020 and 2023, tenure track faculty in STEMSBS disciplines at SIUE experienced a decrease in job satisfaction along with a corresponding decrease in satisfaction with almost all of the climate elements highlighted by the ADVANCE project. Across all groups there was a marked decrease in the sense that the Chancellor operates in a fair and unbiased way, and many perceived less leadership fairness. These findings mirror the qualitative responses regarding low morale, lack of campus climate strengths, and a concern regarding leadership, in particular the Chancellor.

While there was little change in how STEMSBS faculty perceive the value of having a diverse faculty, URM faculty tended to consider it somewhat more valuable, and URM female faculty reported somewhat more negative experiences related to a sense of belonging than other groups.

Perceptions of the climate for recruiting, hiring, and training women in STEMSBS appear to have decreased across the board, particularly at the SIUE level. The department level continues to be regarded more favorably. When asked to rate their department climate for various groups, there appears to have been little change for STEMSBS faculty. Though matched responses from female and URM faculty suggest some slight improvement in the climate for women of color and international women, URM females gave lower ratings for most groups than their colleagues.

Significant results from each section of the survey are briefly discussed in the following report. The accompanying Interactive Results Table allows for further detailed exploration of responses, including pre-post and between group comparisons.

Method

The 2023 SIUE Campus Climate Survey was conducted online from February 13th – March 3rd. Survey links were sent to 674 faculty members (481 tenured or tenure track; 193 non-tenure track faculty), yielding 260 substantive responses for a 39% response rate. The majority of questions matched those from the 2020 Campus Climate Survey, with the addition of a set of questions regarding experiences that contribute to a sense of belonging.

Due to technical difficulties, four questions specific to faculty position (junior faculty, mid-career and senior faculty, and deans and chairs) were not initially accessible. A correction was made during the survey window to open those questions and previous respondents were sent a follow-up survey with the appropriate question(s).

Most questions utilized a 5-point Likert-type scale. Responses were coded from one to five. Individual item means were considered alongside composite score means where applicable. The questions regarding the climate for the application, hiring and retention of women, and those relating to the climate for various groups were asked on a 3-point scale in 2023 but converted to a 5-point scale for pre-post analysis. Means were consistent with 2022 data, which was collected using a 5-point scale.

Responses were compared to the 2020 Campus Climate Survey data, as well as data from the ADVANCE questions included in the 2022 Viewfinder Campus Climate Survey. Between group comparisons were also conducted on the 2023 data. T-tests were the primary method of statistical analysis. Paired 2-tailed tests were used when comparing responses from those who completed the survey in both 2020 and 2022, unpaired 2-tailed tests were used when comparing all responses.

Survey Demographics

There were a total of 260 responses to the 2023 Faculty Climate Survey, 86 of which came from tenured or tenure track faculty in STEMSBS disciplines. The tables below provide a breakdown by sex and underrepresented minority (URM) status in STEM as defined by NSF, for all respondents, for all tenured/tenure track faculty (T/TT) and for tenured/tenure track faculty in STEMSBS.

2023 All Faculty Respondents				
	Non-URM	Unknown	URM	Total
Female	133		18	151
Male	97	1	11	109
Total	230	1	29	260

2023 All Tenured/Tenure Track Faculty			
	Non-URM	URM	Total
Female	88	16	104
Male	82	10	92
Total	170	26	196

2023 Tenured/Tenure Track STEMSBS Faculty			
	Non-URM	URM	Total
Female	31	5	36
Male	47	3	50
Total	78	8	86

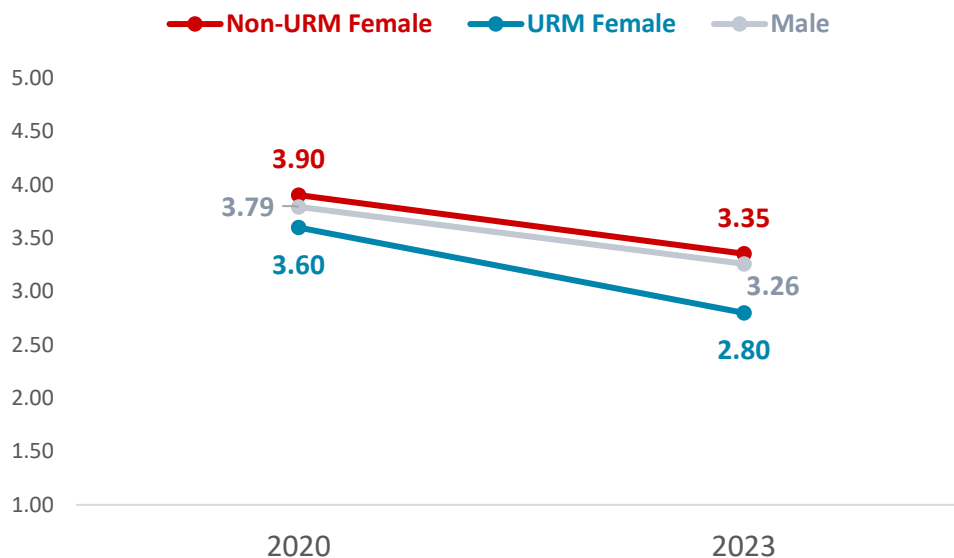
The following analysis will be focused on the responses of tenured/tenure track faculty in STEMSBS fields for both the 2023 survey and the 2020 survey, except where otherwise noted. Because only three URM male faculty in the group of interest responded to the 2023 survey, results will not be specifically discussed for that group to avoid potential identification per IRB stipulations. They will instead be included in an overall male category. It is also worth noting that the small sample size of URM female faculty in the group of interest does not allow for robust statistical testing, though their responses will be discussed.

The demographic breakdowns for the 2020 Survey data can be found in [Appendix A](#). There were 164 matched responses between the 2020 and 2023 survey, with 64 of those matches coming from the tenured/tenure track STEMSBS group.

Job Satisfaction

SIUE faculty overall, including those within STEMSBS, experienced notable decreases in job satisfaction between 2020 and 2023.

Job Satisfaction Among T/TT STEMSBS Faculty



Pre-Post Comparisons

Among T/TT faculty in STEMSBS, there was a significant decrease in reported job satisfaction overall between 2020 and 2023 (Change = -0.56; $p < 0.01$). The magnitude of the change was even greater amongst matched responses (Change = -0.72; $p < 0.01$). The change was significant for male faculty and non-URM female faculty. The decrease was largest among URM female faculty (Change = -0.80; $p < 0.258$), though it did not show statistical significance likely due to the small sample

size (n =5). It was likewise not a significant change for URM faculty in general (Change = -0.69; $p < 0.145$).

Reported job satisfaction showed decreases throughout SIUE as well, among non-STEMSBS faculty and among non-tenure track faculty. In each group, the decreases were significant for non-URM male and female faculty and present but not statistically significant for URM male and female faculty.

2023 Group Comparisons

No statistically significant differences were noted across any demographic subgroups. Non-significant differences were noted within STEMSBS, with both URM females and males overall less satisfied than non-URM females.

Climate Elements Related to ADVANCE Initiatives

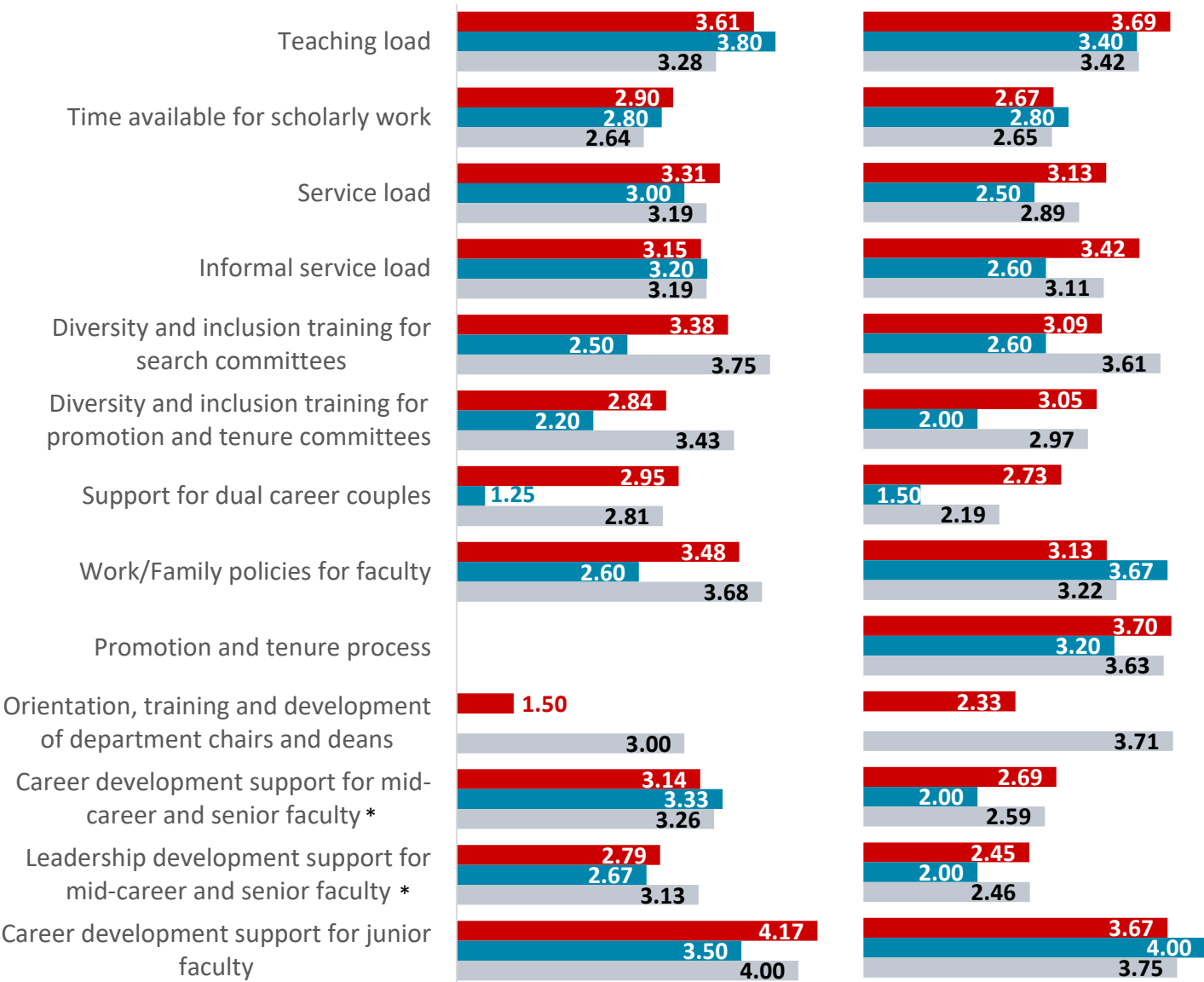
Satisfaction among T/TT STEMSBS faculty with the climate elements of interest to the ADVANCE initiative also primarily decreased along with job satisfaction, particularly in regard to career and leadership development for mid-career and senior faculty. Dean and chair satisfaction with their training and development did increase moderately.

2020 Responses

2023 Responses

■ Non-URM Female ■ URM Female ■ Male

■ Non-URM Female ■ URM Female ■ Male



Pre-Post Comparisons

Overall, T/TT faculty in STEMSBS were somewhat less satisfied with most climate elements in 2023 than in 2020. This aligns with the significant decrease in reported job satisfaction overall between the two years.

For the matched group, there were not significant differences regarding individual elements. Looking at all T/TT STEMSBS responses, elements that showed a statistically significant decrease in satisfaction were career development and leadership development for mid-career and senior faculty. Satisfaction with teaching

load and chairs and deans being satisfied with their orientation, training, and development showed increases that didn't reach the threshold of statistical significance.

When looking specifically at female T/TT faculty in STEMSBS, none of the changes were significant. There were non-significant increases in satisfaction regarding informal service load and diversity and inclusion training for promotion and tenure committees among non-URM female faculty. Male STEMSBS faculty had a significant decrease in satisfaction regarding support for dual career couples in addition to the career and leadership development elements.

2023 Group Comparisons

In 2023, there were no statistically significant differences between male and female T/TT faculty in STEMSBS regarding these climate elements. URM faculty were significantly less satisfied than their non-URM counterparts with diversity and inclusion training for search committees and P&T committees, and P&T process itself.

Among faculty in all disciplines, females were significantly less satisfied than males with the promotion and tenure process, and female chairs and deans were significantly less satisfied with their training and development.

Leadership Fairness

The perceptions of campus leaders operating in a fair and unbiased way has deteriorated among STEMSBS faculty, with a large and significant decrease regarding the Chancellor across the board. URM faculty in STEMSBS have a more positive perception of the Provost than their non-URM counterparts.

2020 v 2023 T/TT STEMSBS Faculty Responses

Item	2020 Mean	2020 n	2023 Mean	2023 n	Difference	p-Value	Cohen's d	Effect Size
My department chair operates in a fair and unbiased way	4.42	117	4.47	83	0.05	0.618	0.07	Negligible
My dean operates in a fair and unbiased way	4.01	102	3.68	73	-0.32*	0.026	0.35	Small
The Provost operates in a fair and unbiased way.	4.09	90	3.75	55	-0.34*	0.025	0.40	Small
The Chancellor operates in a fair and unbiased way.	4.04	76	2.44	43	-1.60**	<0.001	1.66	Very Large

Pre-Post Comparisons

Overall in STEMSBS, there were significant decreases in the extent to which faculty agree that their dean, the Provost, and the Chancellor operate in a fair and unbiased way. This was found across matched responses and all responses. Across all groups, the magnitude of decrease in the perception of the Chancellor operating in a fair and unbiased way was large with a very large effect size.

In STEMSBS, among female faculty the decrease regarding both their dean and the Chancellor were significant, with the decrease for the Chancellor being notably large (Change = -1.93; $p < 0.001$). Among male faculty, only the decrease for the Chancellor was significant.

Among all tenured/tenure track faculty, non-URM males, non-URM females, and URM females all showed significant decreases regarding the Chancellor.

2023 Group Comparisons

In STEMSBS, URM faculty agreed significantly more that the Provost operates in a fair and unbiased way than their non-URM counterparts.

Perception of Diversity

There were few changes in the perception of STEMSBS faculty regarding the positive effects of a diverse faculty, though many groups had slight decreases. URM faculty saw some increases and tended to have a more positive perception of diversity than non-URM faculty.

Pre-Post Comparisons

There was a small but significant decrease in agreement among STEMSBS faculty that a diverse faculty positively affects a sense of belonging for diverse faculty and students. This was not significant within the matched responses, but was significant among non-URM faculty when unmatched responses were included.

No other statistically significant differences were found regarding agreement that a diverse faculty positively affects teaching, research, service, or the involvement of diverse students. Within STEMSBS, URM faculty were the only group that had increases in agreement regarding effects on teaching, research, and service.

2023 Group Comparisons

No statistically significant differences were noted amongst subgroups in STEMSBS. STEMSBS female faculty tended to agree more that diversity positively affects the quality of research, teaching, and service, and URM females tended to agree more than non-URM females that diversity positively affects all areas listed. Among all T/TT faculty, females agreed significantly more that a diverse faculty positively affects the quality of teaching, research, and service.

Sense of Belonging

This set of questions was developed over the course of the ADVANCE initiative to understand faculty experiences of belonging. There is no baseline 2020 data. The Sense of Belonging scale included the following items:

- I am treated with respect.
- I feel like I "fit" in my department.
- I encounter unwritten rules.
- I feel excluded from informal networks.
- I can access mentors.
- I can ask and receive professional assistance.

Within STEMSBS and SIUE overall, URM female faculty reported poorer experiences than their male and non-URM female colleagues except in regard to receiving assistance.

2023 Group Comparisons

In STEMSBS, URM female faculty agreed significantly more that they encounter unwritten rules than their male colleagues overall (Difference = -1.04; $p = 0.05$). While there were no other statistically significant differences among STEMSBS subgroups, URM female faculty reported more negative experiences than non-URM females on all items except being able to ask and receive professional assistance. Differences regarding feeling like they "fit," encountering unwritten rules, feeling excluded from informal networks and access to mentors all had large differences.

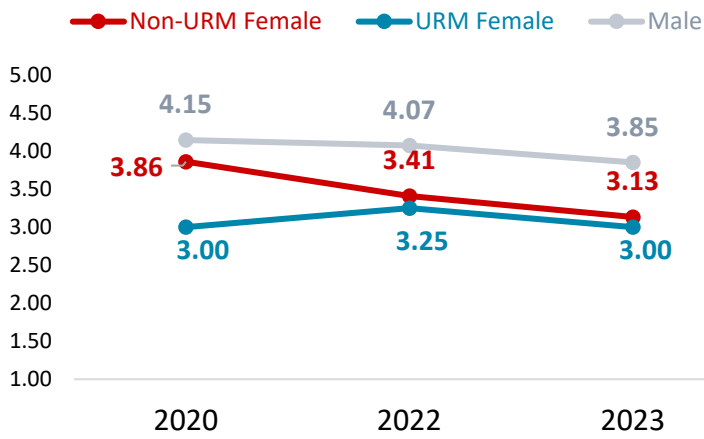
Among all T/TT faculty, URM females reported a significantly greater sense of encountering unwritten rules than non-URM females. They also had significantly more negative experiences than non-URM males in terms of feeling like they "fit," feeling excluded from informal networks, accessing mentors, and encountering unwritten rules.

Climate for Recruitment, Hiring and Retention of Women

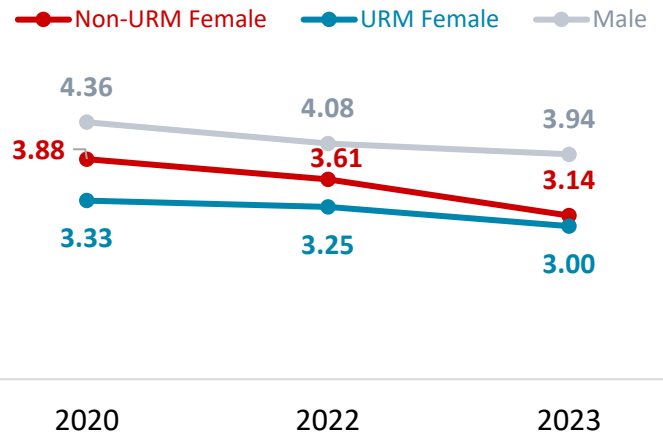
The charts below offer an overview of the mean responses from 2020, 2022, and 2023 of T/TT faculty in STEMSBS by demographic group to questions regarding the extent to which an encouraging climate had been created for women to apply, be hired, and be retained. Each question was asked at the level of SIUE, the respondent's school/college, and the respondent's department.

Perceptions of the climate for recruiting, hiring, and retaining women in STEMSBS appear to have decreased across the board, particularly at the SIUE level. The department level continues to be regarded more favorably.

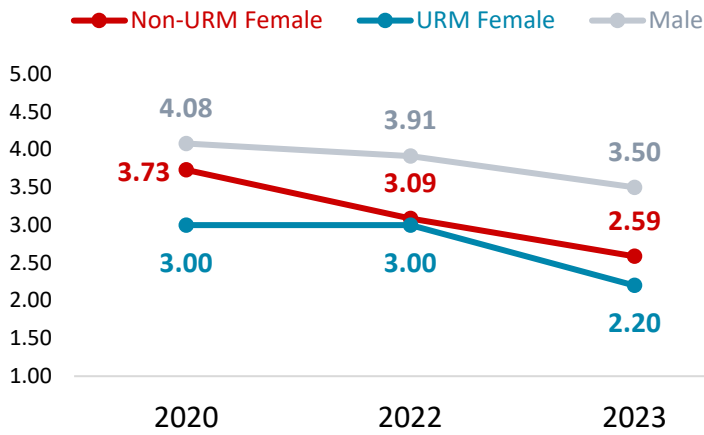
SIUE - Apply



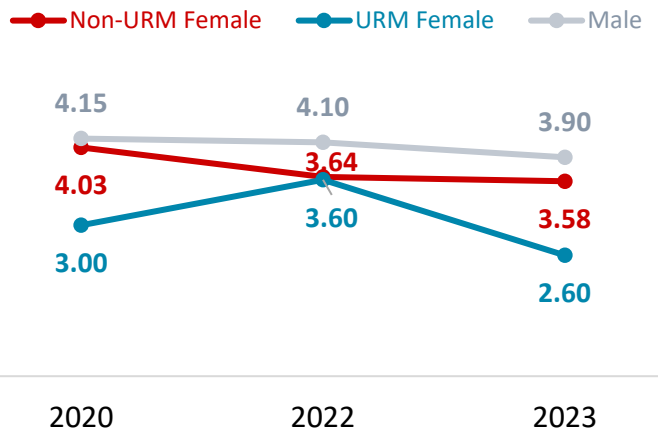
SIUE- Hire



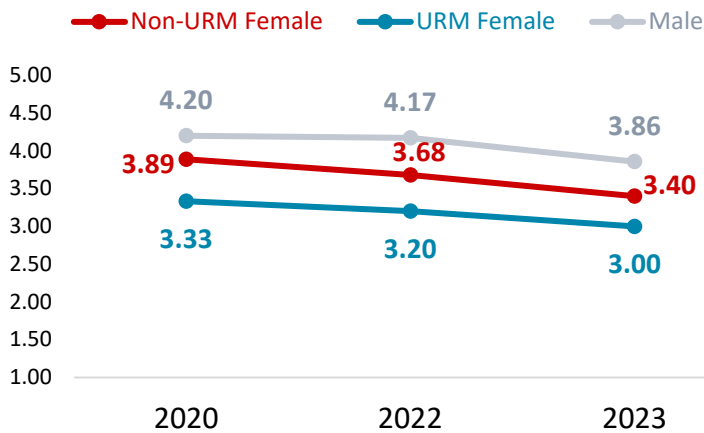
SIUE- Retain



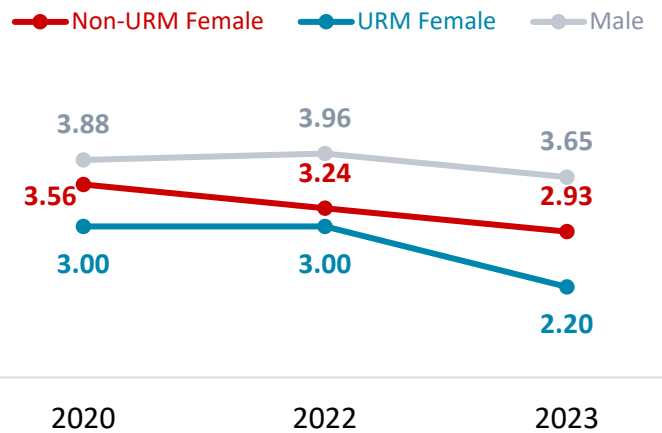
School - Apply

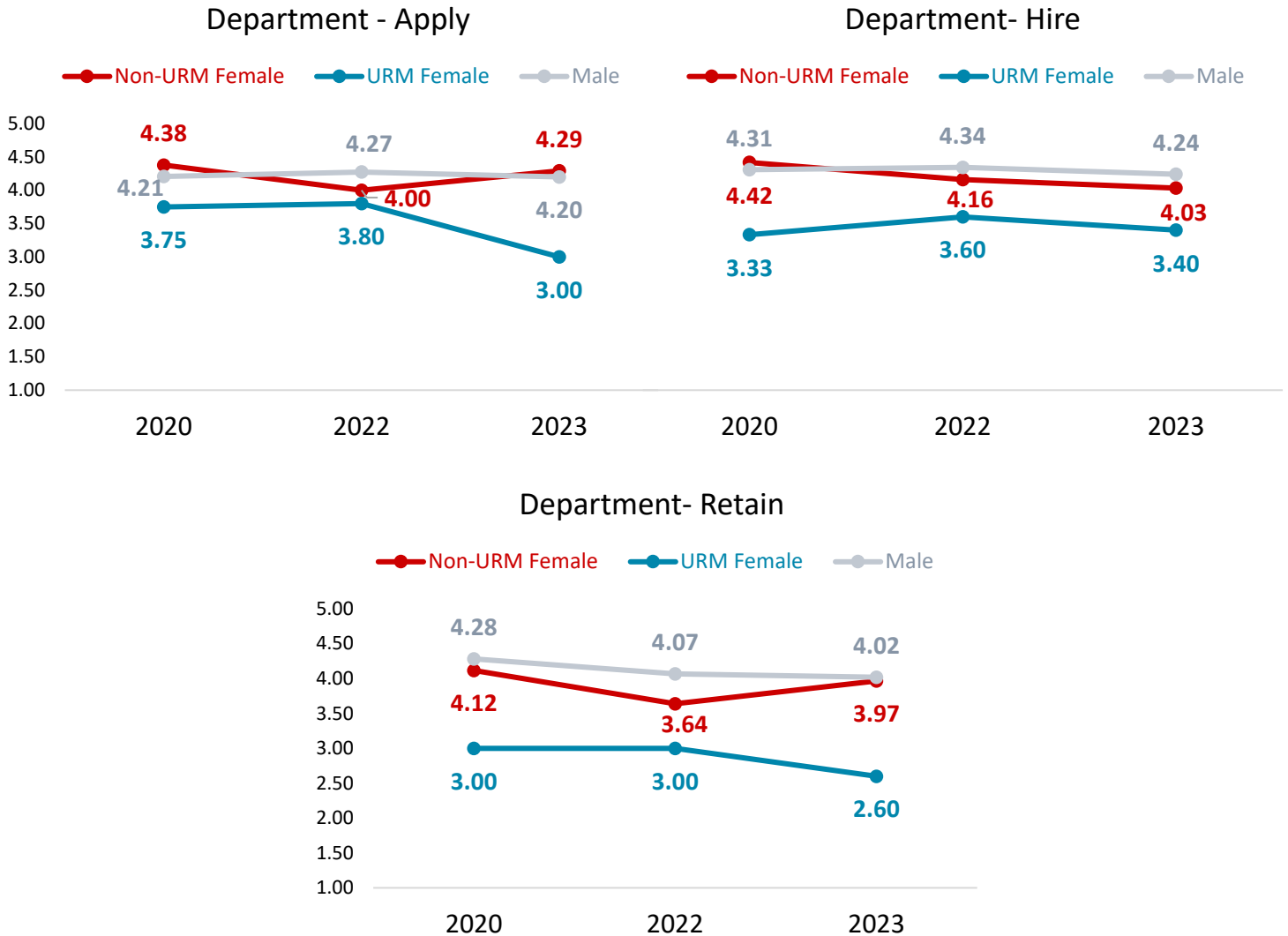


School- Hire



School- Retain





Pre-Post Comparisons

Between 2020 and 2023, the perceptions that a favorable climate had been created for women to apply, be hired, and be retained, decreased at every level among T/TT STEMSBS faculty, with significant decreases at the SIUE and school levels. The largest and most significant decreases were at the SIUE level. None of the decreases were significant among the matched responses, and there were no significant differences between 2022 and 2023.

Among male STEMSBS faculty only hiring and retention at the SIUE level had significant decreases. Among females in STEMSBS, significant decreases were seen across all three elements at the SIUE level and for retention at the school level. Non-URM faculty saw significant decreases across all three elements at the SIUE level as well as hiring at the school level. URM faculty only saw a significant and large decrease regarding retention at the SIUE level.

2023 Group Comparisons

Among T/TT STEMSBS faculty, male faculty rated SIUE overall as significantly better at creating a climate encouraging women to apply, be hired, and be retained, than their female counterparts. They also rated their schools as having a significantly better climate for retention than female faculty did. URM faculty gave SIUE overall a significantly poorer rating regarding the climate for retaining women than their non-URM colleagues.

Within STEMSBS, URM females rated the school level climate for both application and retention significantly lower than male faculty. Among all T/TT faculty, URM females rated their department significantly lower than non-URM females in terms of creating a climate that encourages women to apply.

Department Climate for Various Groups

Faculty members were asked to rate their overall department climate, as well as the climate for: all faculty, white women, women of color, and international women faculty. There were no significant changes across years, though slight decreases for the most part. Matched responses from female and URM faculty suggest some slight improvement in the climate for women of color and international women, though URM females gave lower ratings than other groups for most.

Pre-Post Comparisons

When STEMSBS faculty were asked about how they perceive their department climate for various groups, there were no significant differences between 2020 and 2023.

URM faculty tended to see a more negative shift than non-URM faculty, with small to moderate negative changes for all groups of women and all faculty. However, among matched responses, URM faculty reported a positive change in their department climate for women of color and international women faculty. This was also seen for matched female faculty overall.

Male faculty tended to think their department climate was not as good for any of the groups of women named but slightly better for all faculty. Meanwhile, non-URM females reported little change for the groups of women but a slight negative shift for all faculty.

2023 Group Comparisons

While there were no significant differences between groups in STEMSBS, URM female faculty gave notably worse ratings for the climate for women of color and international women but slightly better ratings to the climate for white women than both male faculty and non-URM women.

Among all T/TT faculty, URM females gave lower ratings than non-URM females, and significantly lower ratings for their department climate overall and the climate for international women than male faculty. They also gave significantly lower ratings than URM males to the climate for international women.

Appendix A: 2020 Climate Survey Demographic Breakdowns

2020 All Faculty Respondents			
	Non-URM	URM	Total
Female	154	20	174
Male	128	19	147
Total	282	39	321

2020 All Tenured/Tenure Track Faculty Respondents			
	Non-URM	URM	Total
Female	122	16	138
Male	113	17	130
Total	235	33	268

2020 Tenured/Tenure Track STEM SBS Faculty Respondents			
	Non-URM	URM	Total
Female	42	5	47
Male	67	6	73
Total	109	11	120