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**Results from the 2019 Study of Faculty Worklife at the University of Memphis**

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**Summary**



The *Study of Faculty Worklife at the University of Memphis* was undertaken to support the development of a proposal to the NSF's ADVANCE program on Organizational Change for Gender Equity in STEM Academic Professions. The program provides grants to enhance the systemic factors that support equity and inclusion and to mitigate the systemic factors that create inequities in the academic profession and workplaces. Systemic (or organizational) inequities may exist in areas such as policy and practice as well as in organizational culture and climate.

The NSF ADVANCE program grant development team – Dr. Esra Ozdenerol, Dr. Abby L Parrill-Baker, Dr. Stephanie Ivey, Dr. Firouzeh Sabri, Dr. Amanda Rockinson-Szapkiw, Dr. Craig Stewart and Dr. Jacob Allen – analyzed the survey results to identify domains in need of transformation at the University of Memphis and seeks to propose systemic approaches to increase the participation and advancement of women in academic STEM careers. The survey results help us learn about ***UofM faculty's experiences in hiring, retention, climate, harassment, workload, productivity, mentoring, promotion, satisfaction and the institutional barriers to the goal of cultivating a diverse faculty that includes and supports women and members of underrepresented groups.***

The survey instrument was designed by the University of Memphis's NSF ADVANCE program grant development team in Fall, 2019. The survey was constructed based on ADVANCE climate surveys from UW-Madison and University of Michigan and was modified based on the feedback from the PIs on the grant. The survey was designed and distributed using Qualtrics software and remained open for 5 days (October 25 - October 30, 2019). An invitation email containing a survey link was distributed to all faculty ( $N=930$ ) via their university email accounts on October 25, 2019. All surveys were completed voluntarily to protect respondents' privacy and ensure confidentiality. A total of 233 responses were received, representing 25.05 % response rate. 155 respondents finished the survey, representing 66.52% completion rate.

The 2019 survey contained nine major sections: Hiring, Departmental Climate, Mentoring, Sexual Harassment, Hostile & Intimidating Behavior, Workload, Awareness and Perception of New Initiatives and Programs at the University of Memphis, Promotion, and Satisfaction with University of Memphis. Faculty survey responses were compared for primary field affiliation (i.e., Science and Engineering) and gender.

### **Differential Response by Demographic Characteristics**

Response rates did vary across different groups. Across different field affiliations, Social Sciences faculty had the highest response at 31.31%, followed by Science and Engineering 25.25% and Art/Humanities at 26.26%. Other fields had the lowest at 17.17%. Respondents specified Business, Architecture, Health Sciences (Health Studies, Public Health, Nursing, Health and Fitness), Education, Libraries, Sports and Leisure Management as Other field. Across different ranks, Associate Professors had the highest response rate at 33.33%, followed by Assistant Professors at 25.37%, and Full Professors at 23.38%. Other faculty (Instructor/Lecturer, Adjunct Faculty, PostDoctoral Associate, etc.) had the lowest at 17.91%. Respondents characterized their faculty appointment as tenure/tenure-track (70.50%),

research (3.50%), clinical (7%) and other (19%). When asked current title, the breakdown of faculty titles was 25% Assistant Professor, Associate Professors 29.33%, Professors 24%, Clinical Assistant Professors 1.33%, Clinical Associate Professors 4.00%, Clinical Instructors 0.67% and Other 14.0%.

Women were more likely than men to respond to the survey (59.18% for women versus 40.82 for men). 78% of women were Assistant professors, 49% Associate professors, 36% Full professors and 63.6% other. 19.5 % of men were Assistant professors, 45.1% Associate professors, 57.9 % Full professors and 31.8% Other.

Response rate by race as follows: White faculty 86%, Asian/Asian American 3.3%, Black or African American 4%, Hispanic/Latino 2%, Middle Eastern/North African 0.67%, other 4%. Response rate by citizenship as follows: U.S. Citizen 94.63%, U.S. Permanent Resident 4.03% and Non-Resident alien 1.34 %.

25.25% of the respondents were Science and Engineering faculty. The response rate for women scientists were 34.5 % comparison to 58.1% men. Assistant professors among women scientists had the highest response rate 46.7% followed by Associate (26.7%) and Full professors (26.7%). There were no respondents from Other category. Among men, Associate professors had the highest response rate (40%) followed by 36% Full professors, 12 % Assistant professors and 12% Other (Instructor/Lecturer, adjunct faculty, postdoctoral associate, etc.).

### **Hiring**

Questions in this section examined faculty members' perceptions of the University of Memphis during the hiring process, and aspects of the hiring process that may be experienced positively or negatively and dual partner hiring. Response varied between the years of 1974 and 2019 when respondents were asked the year last hired. Respondents were asked if they were hired at the University of Memphis as a faculty member after January 1, 2016. 31.31 % of the respondents (N=198) were hired after January 1, 2016. 5 % of those faculty hires was part of a partner/spousal hire.

#### Overall Survey result (Hiring):

Faculty members were generally very satisfied with their overall hiring experiences (3.67) and each of the hiring elements about which we inquired. The lowest level of satisfaction for the whole group came with their startup package (2.96), followed by department's efforts to obtain resources (3.48). Faculty were most pleased with their interactions with search committee (3.96) along with the department faculty's efforts to meet (3.87). The lowest level of satisfaction for Black or African American faculty were with their startup package (3.4,  $p < 0.04$ ), and for white faculty were with the overall hiring process (3.8,  $p < 0.02$ ). There were no significant differences among ranks.

Gender Differences among all respondents:

There were significant differences between men and women with the overall satisfaction with the hiring process and start up package (Table 1). Women (3.7) had less satisfaction with their overall hiring process than men (4.0). Contrary to men (2.6), women (3.7) were more satisfied with their start up package. There was significant difference by appointment type and gender ( $p < 0.01$ ). Female clinical faculty (2.5) had the lowest satisfaction with the startup package, followed by Research (3.0) and Tenure/Tenure- track (3.9). Male clinical faculty had the lowest satisfaction (1.7) in comparison to Tenure/Tenure- track (2.9).

Table 1. Gender Differences in Hiring

| Question   | Women's means (N=28) | Men's means (N=12) | Significance |
|--|----------------------|--------------------|--------------|
| How satisfied are you with the overall hiring process? | 3.7                  | 4.0                | $P < 0.01$   |
| How satisfied were you with your Start up package?     | 3.7                  | 2.6                | $P < 0.04$   |

Gender Differences in Science & Engineering Fields:

There were significant differences between women and men in Science and Engineering fields on satisfaction levels with the overall hiring process, the department's effort to obtain resources and start up package (Table 2). Women scientists (3.2) reported less satisfaction with the overall hiring process than men (4.3). Women scientists (3.8) were less satisfied with the department's effort to obtain resources than men (4.0). Women scientists (3.5) were more satisfied with their start up package than men (2.5).

Table 2. Gender Differences in Science & Engineering Fields:

| Questions  | Women means (N=6) | Men means (N=4) | Significance  |
|--|-------------------|-----------------|---------------|
| How satisfied are you with the overall hiring process?                           | 3.2               | 4.3             | $P < 0.00002$ |
| How satisfied were you with the department's effort to obtain resources for you? | 3.5               | 3.5             | $P < 0.03$    |
| How satisfied were you with your start up package?                               | 3.5               | 3.3             | $P < 0.02$    |

## Climate

In this section, we asked faculty to assess their interactions with colleagues and others in their departments; provide their levels of satisfaction with those interactions; assess the extent to which they participate in departmental decision-making; and gauge the overall climate, the climate for women, faculty of color, and LGBT faculty all at the departmental level.

### Overall survey result (Interaction):

When we examined faculty's interactions with others in their work environment and their participation in the decision-making process in their department, the lowest level of satisfaction was related to feeling isolated on the University of Memphis campus overall (2.69), followed by isolation in the department (2.74) and feeling excluded from an informal network in the department (2.76). Science faculty (2.4) felt more isolated ( $P < 0.04$ ) than social science (2.9) and other faculty (instructor and adjunct faculty) and arts/humanities (3.4).

### Gender Differences among all respondents (Interaction):

Women (3.8) felt less respected by students than men (4.2). Women (3.3) felt more isolated than men (2.5) in their department and women felt more isolated (3.2) than men (2.6) overall on UoM campus (see Table 3). Women felt they often do work that is not formally recognized by their department.

Table 3. Gender Differences in Climate -Interactions (Department and overall UoM campus)

| Question   | Women's means (N=57) | Men's means (N=48) | Significance |
|--|----------------------|--------------------|--------------|
| Do you feel respected by students?   | 3.8                  | 4.2                | $P < 0.04$   |
| Do you feel excluded from an informal network in your department?            | 3.2                  | 2.7                | $P < 0.03$   |
| Do you do work that is not formally recognized by your department?           | 3.2                  | 2.7                | $P < 0.03$   |
| Do you feel isolated in your department?                                     | 3.3                  | 2.5                | $P < 0.05$   |
| Do you feel isolated in UoM campus?  | 3.2                  | 2.6                | $P < 0.09$   |
| How often do you do work that is not formally recognized by your department? | 3.2                  | 2.9                | $P < 0.01$   |

### Gender Differences in Science & Engineering Fields (Interaction):

Women scientists (2.8) felt less respected by their colleagues than men (4.1). Women scientists felt more excluded (3.8) from an informal network in their department in comparison to men (2.5). Women scientists (3.4) feel isolated than men (2.0) in their

department. Women (3.7) felt the work they do is not formally recognized by their department in comparison to men (2.5)

Table 4. Gender Differences in Climate-Interactions by Science & Engineering Fields:

| Question   | Women's means<br>(N=9) | Men's means<br>(N=21) | Significance |
|--|------------------------|-----------------------|--------------|
| How often are you treated with respect by your colleagues?               | 2.8                    | 4.1                   | P<0.02       |
| How often you feel excluded from an informal network in your department? | 3.8                    | 2.5                   | P<0.03       |
| How often do you feel isolated in your department?                       | 3.4                    | 2.0                   | P<0.01       |
| How often do you do work that is not formally recognized?                | 3.7                    | 2.5                   | P<0.03       |

Overall survey result (Department Climate):

Assessing participation in the department, the lowest satisfaction was related to the reluctance to voice concerns about the behavior of departmental colleagues for fear it might affect reputation or advancement (2.86) and comfort level in raising personal and family responsibilities when scheduling departmental obligations (2.94). These followed by perception of how much harder do you have to work than some of your colleagues, in order to be perceived as a legitimate scholar? (3.02) and how valued by your colleagues is your research and scholarship? (3.14). The highest satisfaction was how well they fit in the department.

Gender Differences among all respondents (Department Climate):

In comparative analysis with men and women, women felt less comfortable raising personal and family responsibilities when scheduling departmental obligations (see Table 5). Both men and women felt less satisfaction with the effort chair and dean makes to obtain resources (3.3). Women felt they work much harder than some of their colleagues in order to be perceived as a legitimate scholar. They felt they were able to navigate unwritten rules concerning how one is to conduct oneself as a faculty member more than men.

Table 5. Gender Differences in Climate-Department

| Question   | Women's means<br>(N=83) | Men's means<br>(N=60) | Significance |
|--|-------------------------|-----------------------|--------------|
| How comfortable are you raising personal and family responsibilities when scheduling | 3.1                     | 3.8                   | P<0.04       |

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| departmental obligations?  |     |     |              |
| How satisfied are you with the effort your chair, director, dean makes to obtain resources for you?                | 3.3 | 3.3 | $p < 0.04$   |
| How much harder do you have to work than some of your colleagues in order to be perceived as a legitimate scholar? | 3.4 | 3.3 | $p < 0.0001$ |
| How well are you able to navigate unwritten rules concerning how one is to conduct oneself as a faculty member?    | 3.6 | 3.5 | $p < 0.03$   |

Gender Differences in Science & Engineering Fields (Department Climate):

Women scientists (3.2) felt less comfortable raising personal and family responsibilities when scheduling departmental obligations in comparison to men (4.0). They felt less satisfied with the effort chair, or dean makes to obtain resources. There was a slight difference in perception as a legitimate scholar. Men felt they work much harder than some of their colleagues in order to be perceived as a legitimate scholar.

Table 6. Gender Differences in Department Climate-Participation by Science & Engineering Fields:

| Question   | Women's means (N=15) | Men's means (N=25) | Significance |
|--|----------------------|--------------------|--------------|
| How satisfied are you with the effort your chair, director, dean makes to obtain resources for you?                | 2.9                  | 3.8                | $P < 0.01$   |
| How comfortable are you raising personal and family responsibilities when scheduling departmental obligations?     | 3.2                  | 4.0                | $P < 0.01$   |
| How much harder do you have to work than some of your colleagues in order to be perceived as a legitimate scholar? | 3.4                  | 3.5                | $P < 0.01$   |

Overall survey results (Department Climate-Participation)

Among all faculty, the lowest level of satisfaction for the whole group came with resource allocation, having a voice in how resources are allocated (2.75), rotation of committee assignments (3.11) and having a voice in the decision- making by chair's involving the faculty (3.13).

Gender Differences among all respondents (Department Climate-Participation):

There was a significant difference between men and women. Men felt less satisfaction in sharing views at meetings, rotation of assignments, involvement in decision making by department chair and having a voice in direction of the department.

Table 7. Gender differences among all respondents

| Question   | Women's means (N=84) | Men's means (N=59) | Significance |
|--|----------------------|--------------------|--------------|
| Do meetings allow all participants to share their views?                                   | 3.1                  | 2.8                | P<0.006      |
| Do committee assignments rotate fairly?  | 3.5                  | 3.2                | P<0.01       |
| does your department chair involve you in decision-making?                                 | 3.4                  | 3.1                | P<0.02       |
| do you have a voice in the decision- making that affects the direction of your department? | 3.5                  | 2.9                | P<0.007      |

Gender Differences in Science & Engineering Fields (Department Climate-Participation):

In comparison to women scientists (2.8), men (2.0) felt less satisfaction being allowed sharing their views at meetings. In committee assignments, men felt less satisfaction with committee assignments rotating fairly. Women scientists felt the same satisfaction in department chair's involving them in decision making.

Table 8. Gender differences in Science and Engineering

| Question   | Women's means (N=15) | Men's means (N=25) | Significance |
|--|----------------------|--------------------|--------------|
| Do meetings allow all participants to share their views?                       | 2.8                  | 2.0                | P<0.001      |
| Do committee assignments rotate fairly?  | 3.7                  | 2.9                | P<0.01       |
| does your department chair involve you in decision-making?                     | 3.2                  | 3.2                | P<0.02       |
| do you have a voice in the decision- making that affects the direction of your | 4.0                  | 2.7                | P<0.001      |



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### Overall survey results (Department Overall Climate)

Among all faculty, the lowest level of satisfaction for the whole group came with overall climate (3.48). Climate for women and climate for faculty of color were same (3.68) and the highest satisfaction was climate for LGBT faculty (3.88). 43.48 % respondents felt over all climate is very negative to 26.22 % believed it is very positive. 6.52% respondents felt climate for LGBT faculty is very negative to very positive (23.17 %). 26.09 % respondents responded climate for faculty of color is very negative in comparison to 25% responded it is very positive. 30.69 % respondents responded climate for women is mediocre, 27.81 % respondents felt it is positive for women.

### Gender Differences among all respondents (Overall Department Climate):

Women (3.0) felt less satisfaction with the overall climate than men (3.6). Women felt less satisfaction with the climate for women (2.8) than men (3.7). Women felt less satisfaction with the climate for faculty of color (3.1) than men (3.6). 27.9% women felt overall climate is positive in comparison to 33.3% men. 11.6 % of Women felt climate for women is negative in comparison to 10% men. 11.6% women felt climate for faculty of color is negative in comparison to 5% men.

Table 9. Gender differences among all respondents (Overall Department Climate):

| Question   | Women's means<br>(N=54) | Men's means<br>(N=43) | Significance |
|--|-------------------------|-----------------------|--------------|
| In my department, the overall climate is ...         | 3.0                     | 3.6                   | P<0.03       |
| In my department, climate for women is...            | 2.8                     | 3.7                   | P<0.0002     |
| In my department, climate for faculty of color is... | 3.1                     | 3.6                   | P<0.01       |

### Gender Differences in Science & Engineering Fields (Department Climate):

Women scientists (3.1) felt less satisfaction with the overall climate than men (4.0). Women felt less satisfaction with the climate for women (2.9) than men (4.0). 20% of Women scientists felt climate overall is negative and 13.3% very negative in comparison to 0.0% men. 33.3% women scientist felt overall climate is positive in comparison to 44% men. 13.3% of Women scientists felt climate for women is negative and 6.7% very negative in comparison to 0.0% men. 33.3% women scientist felt climate for women is positive in comparison to 36% men and very positive 20% to 52% men.

Table 10. Gender Differences in Science & Engineering Fields (Department Climate):

| Question                                     | Women's means<br>(N=15) | Men's means<br>(N=25) | Significance |
|--|-------------------------|-----------------------|--------------|
| In my department, the overall climate is ... | 3.1                     | 4.0                   | P<0.03       |
| In my department, climate for women          | 2.9                     | 4.0                   | P<0.02       |

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Overall survey results (Atmosphere for women in the department/unit)

Faculty members were generally satisfied with the atmosphere for women and each of the elements about which we inquired. The highest level of disagreement concerning the atmosphere for women in the department were with equal access for both men and women to lab resources (3.79) and environment promoting adequate collegial opportunities for women (3.60) and in meetings, people pay just as much attention when women speak as when men do (3.50).

Gender Differences among all respondents (Atmosphere for women in the department)

There were differences between men and women in terms of level of agreement of atmosphere for women. Women tend to disagree more than men when asked about the atmosphere in the department for women. For example, Women felt less agreement with the environment promoting adequate collegiate opportunities for women (2.3) than men (2.8). Women (2.5) agreed less on equal access for both men and women to lab/research space than men (3.1). Table 11 lists gender differences.

Table 11. Gender Differences among all respondents (Atmosphere for women in the department)

| Question  | Women's means (N=85) | Men's means (N=60) | Significance |
|---|----------------------|--------------------|--------------|
| Men receive preferential treatment in the areas of recruitment and promotion    | 2.9                  | 3.4                | P<0.01       |
| The environment promotes adequate collegial opportunities for women             | 2.3                  | 2.8                | P<0.00002    |
| Men are more likely than women to receive helpful career advice from colleagues | 2.7                  | 3.5                | P<0.0002     |
| In meetings, people pay just as much attention when women speak as when men do  | 2.6                  | 2.7                | P<0.0003     |
| There is equal access for both men and women for lab/research space             | 2.5                  | 3.1                | P<0.01       |
| Sexist remarks are heard in the classroom                                       | 2.9                  | 3.5                | P<0.02       |
| Sex discrimination is a big problem in my department.                           | 3.0                  | 3.9                | P<0.0001     |
| Women are appropriately represented in senior positions                         | 2.8                  | 2.3                | P<0.07       |

Gender Differences in Science and Engineering (Atmosphere for women in the department)

Table 12. Gender differences in Science & Engineering

| Question  | Women's means<br>(N=15) | Men's means<br>(N=25) | Significance |
|---|-------------------------|-----------------------|--------------|
| Men receive preferential treatment in the areas of recruitment and promotion    | 2.7                     | 3.2                   | P<0.00003    |
| The environment promotes adequate collegial opportunities for women             | 2.2                     | 3.0                   | P<0.0005     |
| Men are more likely than women to receive helpful career advice from colleagues | 2.5                     | 3.2                   | P<0.00001    |
| In meetings, people pay just as much attention when women speak as when men do  | 2.3                     | 2.8                   | P<0.01       |
| There is equal access for both men and women for lab/research space             | 2.3                     | 3.2                   | P<0.01       |
| Sex discrimination is a big problem in my department.                           | 2.9                     | 4.1                   | P<0.005      |

Gender Differences among all respondents (Atmosphere for faculty of color in the department)

Women tend to disagree more than men when they were asked about the atmosphere for faculty of color.

Table 13. Gender Differences among all respondents (Atmosphere for faculty of color)

| Question   | Women's means<br>(N=82) | Men's means<br>(N=58) | Significance |
|--|-------------------------|-----------------------|--------------|
| Racial remarks are heard in the classroom  | 3.0                     | 3.8                   | P<0.005      |
| There is equal access for racial and ethnic groups to lab/research space                 | 2.7                     | 3.0                   | P<0.02       |
| The environment promotes adequate collegial opportunities for people of color.           | 2.7                     | 2.7                   | P<0.001      |
| White faculty received preferential treatment in the areas of recruitment and promotion. | 3.1                     | 3.7                   | P<0.01       |
| White faculty are more likely than   | 2.8                     | 3.6                   | P<0.001      |

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| faculty members of color to receive helpful career advice from colleagues                         |     |     |         |
| There is equal access for both men and women for lab/research space                               | 2.7 | 3.0 | P<0.02  |
| In meetings, people pay just as much attention when people of color speak as when white people do | 2.4 | 2.8 | P<0.001 |
| Racial/ethnic discrimination is a big problem in my department.                                   | 3.0 | 3.8 | P<0.03  |
| Faculty members of color are appropriately represented in senior positions                        | 3.2 | 2.5 | P<0.004 |

Women scientists tend to disagree more than men when asked about atmosphere for faculty of color in the department.

Table 14. Gender Differences in Science and Engineering\_(Atmosphere for faculty of color)

| Question   | Women's means (N=6) | Men's means (N=4) | Significance |
|--|---------------------|-------------------|--------------|
| There is equal access for racial and ethnic groups to lab/research space                                     | 2.7                 | 3.1               | P<0.02       |
| The environment promotes adequate collegial opportunities for people of color.                               | 2.6                 | 2.8               | P<0.03       |
| White faculty received preferential treatment in the areas of recruitment and promotion.                     | 3.3                 | 3.8               | P<0.01       |
| White faculty are more likely than faculty members of color to receive helpful career advice from colleagues | 3.5                 | 3.3               | P<0.0002     |
| Racial/ethnic discrimination is a big problem in my department.  | 3.0                 | 4.0               | P<0.04       |
| Faculty members of color are appropriately represented in senior positions                                   | 3.7                 | 2.2               | P<0.01       |

### Harassment: Sexual Harassment and Hostile & Intimidating Behavior

We asked faculty how often they experienced sexual harassment on the UoM campus in the last three years. 10.95 % experienced 1-2 times. Table 15 shows these percentages.

Table 15. All respondents experiencing sexual harassment on the UoM campus

|                   |         |
|-------------------|---------|
| Incidence         | N=137   |
| 1-2 times         | 10.95 % |
| 3-5 times         | 1.46 %  |
| More than 5 times | 0.73 %  |
| Never             | 86.8%   |

Table 16 shows the measure of incidence of sexual harassment in the past three years by gender—11.6 % of women reported personally experiencing sexual harassment 1 -2 times than 5.0 % men.

Table 16. Gender Differences experiencing sexual harassment

|                   |               |             |
|-------------------|---------------|-------------|
| Incidence         | Women<br>N=69 | Men<br>N=55 |
| 1-2 times         | 11.6%         | 5.0%        |
| 3-5 times         | 1.4 %         | 2.3%        |
| More than 5 times | 0.0%          | 1.7%        |
| Never             | 66.3%         | 85%         |

Table 17. Gender differences experiencing sexual harassment in Science and Engineering

|           |               |             |
|-----------|---------------|-------------|
| Incidence | Women<br>N=15 | Men<br>N=22 |
| 1-2 times | 13.3%         | 4.0%        |

We asked all respondents their experiences with sexual harassment. The effectiveness of the process for resolving complaints about sexual harassment at the University of Memphis was significant ( $p < 0.001$ ). Faculty are not very familiar with harassment policies and effectiveness of the policies. Women (3.1) had the lowest level of satisfaction than men (4.1).

Table 18. Gender differences in experiences with sexual harassment

| Category             | Question   | Women's<br>means<br>(N=29) | Men's<br>means<br>(N=23) | Significance    |
|----------------------|--|----------------------------|--------------------------|-----------------|
| Sexual<br>Harassment | How effective is the process for<br>resolving complaints about | 3.1                        | 4.1                      | ( $p < 0.001$ ) |

|  |                             |  |  |  |
|--|-----------------------------|--|--|--|
|  | sexual harassment at U of M |  |  |  |
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Women scientists had the lowest level of satisfaction than men in terms of how effective the process is for resolving complaints about sexual harassment at the University of Memphis.

Table 19. Gender differences in experiences with sexual harassment in Sciences

| Category          | Question   | Women's means<br>(N=14) | Men's means<br>(N=19) | Significance    |
|-------------------|--|-------------------------|-----------------------|-----------------|
| Sexual Harassment | How effective is the process for resolving complaints about sexual harassment at U of Memphis? | 2.6                     | 4.3                   | ( $p < 0.004$ ) |

### Hostile and intimidating behavior

The measure of incidence of hostile and intimidating behavior is rather surprising—55.07 % of all respondents report personally experiencing 1-2 times H&I behavior and 44.93% witnessing H&I behavior 1-2 times in the past three years.

Table 20. All respondents experiencing H&I behavior

|                   | N=159  |
|-------------------|--------|
| 1-2 times         | 55.07% |
| 3-5 times         | 48.84% |
| More than 5 times | 44.44% |
| Never             | 50%    |
|                   |        |

Table 21. All respondents witnessing H&I behavior

|                   | N=158  |
|-------------------|--------|
| 1-2 times         | 44.93% |
| 3-5 times         | 51.16% |
| More than 5 times | 55.56% |
| Never             | 50.00% |

### Gender Differences in experiencing H & I behavior

27.9% of women faculty report personally experiencing H&I behavior 1-2 times in the past three years. There was a significant relationship between women (2.7) and men (3.2) in experiencing H&I behavior ( $p < 0.007$ ).

Table 22. Gender differences personally experiencing H&I behavior

| Incidence         | Women<br>N=84 | Men<br>N=60 |
|-------------------|---------------|-------------|
| 1-2 times         | 27.9%         | 18.3%       |
| 3-5 times         | 14%           | 11.7%       |
| More than 5 times | 17.4%         | 3.3%        |
| Never             | 38.4%         | 66.7%       |

### Gender Differences in witnessing H & I behavior

There were no significant differences between men and women on witnessing H&I behavior. Below table reflects the percentages of H&I behavior. Men faculty witnessed H&I behavior more than women at 23.3 % (see Table 21).

Table 23. All respondents witnessing H&I behavior

| Incidence         | Women<br>N=84 | Men<br>N=60 |
|-------------------|---------------|-------------|
| 1-2 times         | 16.3%         | 23.3%       |
| 3-5 times         | 18.6%         | 8.3%        |
| More than 5 times | 18.6%         | 13.3%       |
| Never             | 44.2%         | 55%         |

Women had higher perception (3.3) in contrast to men who think H&I is less common on campus (2.9). In effectiveness of resolving these complaints in H&I behavior, women had less satisfaction (2.9) than men (3.5).

Table 24. Gender differences in experiencing hostile and intimidating behavior

| Question                                  | Women's means<br>(N=36) | Men's means<br>(N=21) | Significance   |
|---|-------------------------|-----------------------|----------------|
| how common is hostile behavior on campus? | 3.3                     | 2.9                   | ( $p < 0.04$ ) |

|   |     |     |          |
|---|-----|-----|----------|
| How effective is the process for resolving complaints about H&I Behavior at U of Memphis? | 2.9 | 3.5 | (p<0.03) |
|---|-----|-----|----------|

There were no significant relationship between men and women in Science & Engineering witnessing hostile and intimidating behavior.

Table 25. Gender differences in experiencing hostile and intimidating behavior in Science & Engineering

| Experience        | Women<br>N=15 | Men<br>N=25 |
|-------------------|---------------|-------------|
| 1-2 times         | 33.3%         | 20.0%       |
| 3-5 times         | 13.3%         | 12%         |
| More than 5 times | 20%           | 0.0%        |
| Never             | 33.3%         | 68%         |

Table 26. Gender differences in witnessing hostile and intimidating behavior in Science and Engineering

| Witness           | Women<br>N=15 | Men<br>N=25 |
|-------------------|---------------|-------------|
| 1-2 times         | 13.3%         | 24%         |
| 3-5 times         | 0.0%          | 12%         |
| More than 5 times | 26.7%         | 4%          |
| Never             | 60%           | 60%         |

Women scientists (1.8) had lesser perception in contrast to men who think H&I is more common on campus (3.6).

Table 27. Gender Differences in Science and Engineering

| Category     | Question                                  | Women's<br>means<br>(N=7) | Men's<br>means<br>(N=7) | Significance |
|--------------|---|---------------------------|-------------------------|--------------|
| H&I Behavior | how common is hostile behavior on campus? | 1.8                       | 3.6                     | P<0.03       |



### Workload and Productivity

Faculty workload and productivity items were asked in our survey. Women scientists (51 hours per week) reported more hours worked in, than men (48 hours per week), but this difference was not significant. In terms of distribution of job duties among science and engineering faculty, “teaching” ( $p < 0.03$ ) and “scholarship” ( $p < 0.0004$ ) were significant. Women spent more time on scholarship (29) than men (23.6). Men spent more time on teaching (32.7) than women (29.8). They both spent less time on paid consulting (less than 0.2). Women spent less time on meeting students (10.9) than men (12.1) but they spent slightly more time on administrative work (13) than men (11.9).

Table 28.

| Category | Question    | Women's means (N=46) | Men's means (N=43) | Significance     |
|----------|-------------|----------------------|--------------------|------------------|
| Workload | Teaching    | 29.8                 | 32.7               | $p < 0.03$       |
|          | Scholarship | 29                   | 23.6               | ( $p < 0.0004$ ) |

The reasonableness of current workload was significant ( $p < 0.007$ ). Women reported 41.3% “too heavy” and 39.1% “just right” in comparison to 30.2% “too heavy” and 60.5% “just right” among men faculty.

Peer reviewed papers ( $p < 0.007$ ) and other scholarly/creative work ( $p < 0.0004$ ) were significant. On average, Women (3.2) submitted slightly more peer-reviewed papers than men (2.8) and other scholarly work (1.1) in comparison to men (0.1).

Table 29. Gender Differences in Workload

| Question  | Women's means (N=46) | Men's means (N=43) | Significance |
|---|----------------------|--------------------|--------------|
| How would you rate reasonableness of your overall workload? | 3.2                  | 2.8                | $p < 0.007$  |
| Papers for publication in peer-reviewed journals?           |                      |                    |              |
| Other scholarly/creative work                               | 1.1                  | 0.1                | $p < 0.0004$ |

### Awareness of implemented programs

28.3 % women in comparison to 44.2 % men were not familiar with the extension of the tenure promotion clock. 39.1 % women believed extension of the tenure promotion clock is “very valuable” in comparison to 11.6 % men. Women (13 %) were less familiar with the parental leave policy than men (16.3%). 73.9 % women believed that it is a “very valuable” program in comparison to 34.9 % men. 32.6% Women believed promotion workshops are very valuable comparison to 4.7 % men. 17.4% Women were not familiar with the tenure promotion workshops comparison to 14 % men.

### Participation to implemented programs

Table 30.

| Category                             | Question                      | Women's means (N=41) | Men's means (N=38)  |
|--------------------------------------|-------------------------------|----------------------|---------------------|
| Awareness of implementation programs | Extension to Tenure/promotion | 6.5% yes<br>84.8% no | 0 % yes<br>90.7% no |
|                                      | Paid parental leave           | 0% yes<br>91.3% no   | 4.7% yes<br>86% no  |
|                                      | Tenure Promotion workshops    | 50% yes<br>39.1 no   | 48.8 yes<br>39.5 no |

### Promotion Experiences

We asked questions about promotion process. We asked faculty's experience as they move to next promotion level. There were no significant differences between men and women among all respondents. How mixed are the messages they get from colleague regarding the requirements for promotion? was significant ( $p < 0.003$ ) among scientists. Women scientists had less satisfaction (3.4) in comparison to men (3.8) in this category. This shows a difference how well women scientists understand the criteria for promotion, and mentoring is not helpful. The helpfulness of Mentoring received from inside the department was significant ( $p < 0.03$ ). Women scientists had high satisfaction (4.0) in comparison to men (3.3) in the department but this was only significant with overall stat test of percentages but not averages. There were no significant differences in mentoring they receive outside of the department. The mentoring

they are receiving (both from inside their department and from outside) was not significant or helpful for promotion. In comparison to scientists' analysis, all respondents had the lowest satisfaction on mentoring outside the department (2.31), followed by mentoring inside the department (2.54) and confidence in promotion decisions (2.69), and support in advancement to promotion (2.79) and overall promotion process (2.79). These are the reflection of overall averages but there is no significance.

Table 31. Gender Differences in Science and Engineering

| Question   | Women's means (N=10) | Men's means (N=15) | Significance |
|--|----------------------|--------------------|--------------|
| How helpful mentoring...in the department  | 4.0                  | 3.3                | P<0.03       |
| How mixed are the messages you get from colleagues regarding the requirements for promotion? | 1.9                  | 3.0                | P<0.03       |

When we did comparisons by rank, we found lowest satisfaction with the overall promotion process among Assistant professors (3.5) in comparison to Associate (4.3). When we did comparisons among scientists, how well do you understand the criteria for promotion process? Associate professors (3.5) had the lower satisfaction than Assistant Professors (4.1).

Table 32. Differences by Rank among all respondents

| Question  | Assistant (N=33) | Associate (N=43) | Significance |
|---|------------------|------------------|--------------|
| How satisfied are you with the promotion process overall? | 3.5              | 4.3              | P<0.008      |

Table 33. Differences by Rank in Science and Engineering

| Question   | Assistant (N=11) | Associate (N=13) | Significance |
|--|------------------|------------------|--------------|
| How well do you understand the criteria for promotion? | 4.0              | 3.3              | P<0.04       |

When we further analyzed gender differences by rank, Assistant professor women scientists (3.5) had the lowest satisfaction with the mentoring they receive in the department in comparison to men (4.6) and there was a significant difference among ranks. When we asked

ow confident you feel ..., Associate professor women scientists reported the lowest confidence in comparison to men and Assistant Professor women scientists.

Table 34. Gender Differences by Rank in Science and Engineering

| Question                  | Assistant W/M (N=27/5) | Associate W/M (N=21/21) | Significance |
|---------------------------|------------------------|-------------------------|--------------|
| Mentoring inside the dept | 3.5/4.6                | 3.8/3.5                 | P<0.0012     |
| How confident are you     | 3.5/4.6                | 3.0/3.6                 | P<0.01       |

When we further analyzed the race differences in the promotion process among women respondents. Black women had the lowest satisfaction in the overall process. ( $p < 0.007$ ). Black women had the lowest satisfaction

There was a significant relationship among black (3.5) and white (3.6) women. When asked How well do you understand the criteria for promotion?, black women had the lowest satisfaction (2.5) in comparison to white women (3.3). Black women (3.8) had lower satisfaction in terms of the mentoring they receive in the department in comparison to white women (3.5)

Table 35. Gender Differences by Rank (All respondents)

| Question   | White (N=51) | Black (N=4) | Significance |
|--|--------------|-------------|--------------|
| Mentoring inside the dept                              | 3.5          | 3.8         | P<0.01       |
| How well do you understand the criteria for promotion? | 3.3          | 2.5         | P<0.03       |

### Satisfaction

In this section we asked faculty members about their satisfaction with being a faculty member and their career progression at the University of Memphis; with the resources that support their research and scholarship, teaching, clinical work, and ,teaching, clinical work, and extension and outreach; and with their salaries. In open-ended items, we asked them to share what factors both contribute to and detract from their satisfaction at the University of Memphis. We also asked them about the likelihood that they would leave University of Memphis in the next three years and asked about the extent to which they had considered a number of reasons for leaving the institution.

When asked to evaluate UoM resources, respondents were generally pleased with the support for teaching (3.41) followed by support for research and scholarship (3.17), extension and outreach activities( 3.13) and the lowest level of satisfaction came with the support for clinical work (3.05).

Both men and women scientists had same (statistical averages) satisfaction level (3.1) with salaries. There were no significant differences.

There were no significant differences when asked “How satisfied are you being a faculty member at the UofMemphis?”. When asked how satisfied they were with their career progression at the University of Memphis, Women (3.9) were more satisfied than men (3.8). There was a significant relationship in the overall stat test of percentages.

Table 36. Gender Differences in Science and Engineering

| Question   | Women's means<br>(N=15) | Men's means<br>(N=25) | Significance |
|--|-------------------------|-----------------------|--------------|
| How satisfied are you with your career progression at the University of Memphis? | 3.9                     | 3.8                   | p<0.04       |

When respondents were asked if considered leaving the university, how important their reasons were. There were significant differences. Improving prospects for tenure or enhance career in other ways, reduce stress, retire, racial and ethnic disparities in health care and educational outcomes in Memphis were important reasons.

Table 37. Reasons to leave the University of Memphis (All respondents)

| Question   | Women's means<br>(N=85) | Men's means<br>(N=58) | Significance |
|--|-------------------------|-----------------------|--------------|
| To improve prospects for tenure or enhance career in other ways. | 1.9                     | 1.4                   | p<0.00008    |
| To find more supportive environment                              | 2.0                     | 1.8                   | p<0.07       |
| To reduce stress   | 2.0                     | 1.5                   | p<0.00006    |
| To retire  | 1.3                     | 1.5                   | p<0.04       |
| Disparities in healthcare in Memphis                             | 1.6                     | 1.3                   | p<0.02       |
| To meet cultural and/or identity needs                           | 1.5                     | 1.2                   | p<0.009      |

When asked in the past 12 months, not including for retirement, have you seriously considered leaving the university. There were significant differences between women and men in Sciences and Engineering. 60% women scientists considered leaving in comparison to 20 % men.

Table 38. Consideration of leaving the university in Science and Engineering

| Question   | Women's means (N=15)    | Men's means (N=25)      | Significance    |
|--|-------------------------|-------------------------|-----------------|
| In the past 12 months, If considered to leave ,... | 40 % no<br>60% yes      | 80 % no<br>20 % yes     | p<0.01          |
| In the past 12 months, have you been contacted     | 53.3 % no<br>46.7 % yes | 72.0 % no<br>28.0 % yes | Not significant |

When respondents in Science and Engineering were asked, "Think about the reasons you stayed at the University of Memphis. In your decision to stay at the University of Memphis, how important was...", there were no significant differences. Time for research or artistic activity (0.04) and prospects of future salary (0.01) were significant in overall statistical test of percentages, but not averages.

When respondents were asked, what extent you considered the following as reasons to leave UofM, career enhancement, improving the prospects for tenure, finding more supportive work environment and reduce stress were significant.

Table 39. Reasons to leave UofM in Science and Engineering

| Question  | Women's means (N=11) | Men's means (N=16) | Significance |
|---|----------------------|--------------------|--------------|
| To improve your prospects for tenure or enhance your career in other ways | 2.2                  | 1.3                | p<0.01       |
| Find more supportive work environment                                     | 2.1                  | 1.6                | P<0.03       |
| Reduce stress   | 1.9                  | 1.6                | P<0.003      |

Permanent resident foreign-born status constitutes 6.7% of the women scientists who reported in this survey. 8% of men scientists are non-resident alien status.

Table 40. U.S. Residency among scientists

|                         | Women's means<br>(N=15) | Men's means<br>(N=24) |  |
|-------------------------|-------------------------|-----------------------|--|
| Non-resident alien      | 0.00%                   | 8.0%                  |  |
| U.S. citizen            | 93.3%                   | 88%                   |  |
| U.S. permanent resident | 6.7%                    | 0.0%                  |  |

The racial makeup of women scientists who reported to the survey as follows:

Table 41. Race percentages among women scientists

|                                  |       |       |      |
|----------------------------------|-------|-------|------|
| Asian American/Asian             | 3.4%  | 0.0%  | 8.0% |
| Hispanic/Latino                  | 2.1%  | 0.0%  | 4.0% |
| Black or African American        | 4.1%  | 13.3% | 0.0% |
| White                            | 87.6% | 80%   | 88%  |
| Other                            | 2.8%  | 6.7%  | 0.0% |
| American Indian/Alaskan          | 0.0%  | 0.0%  | 0.0% |
| Native Hawaiian/Pacific islander | 0.0%  | 0.0%  | 0.0% |
| Middle Eastern/North African     | 0.7%  | 0.0%  | 0.0% |

The religion of women scientists who reported the survey as follows:

Table 42. Percentages of religious affiliation in Science and Engineering respondents

|                               | Women scientists<br>means<br>(N=15) | Men Science<br>(N=25) |
|-------------------------------|-------------------------------------|-----------------------|
| Agnostic                      | 13.3 %                              | 12.0%                 |
| Atheist                       | 13.3 %                              | 24%                   |
| Baptist                       | 6.7%                                | 8%                    |
| Catholic                      | 6.7%                                | 4%                    |
| Christian: non-denominational | 6.7%                                | 0.0%                  |
| Church of Christ              | 6.7%                                | 0.0%                  |
| Hindu                         | 0.00%                               | 4.0%                  |
| Episcopalian                  | 13.3 %                              | 0.0%                  |
| Methodist                     | 20%                                 | 12%                   |
| Jewish (non-orthodox)         | 0                                   | 8%                    |
| Muslim                        | 6.7%                                | 0.0%                  |