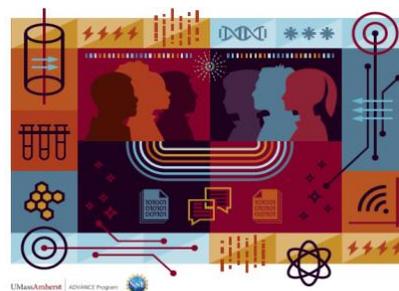


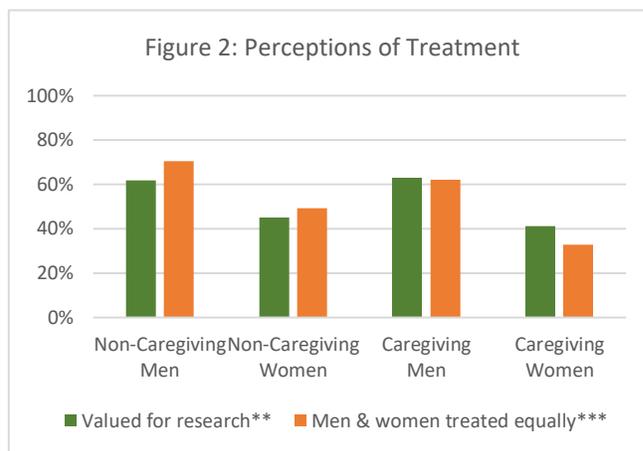
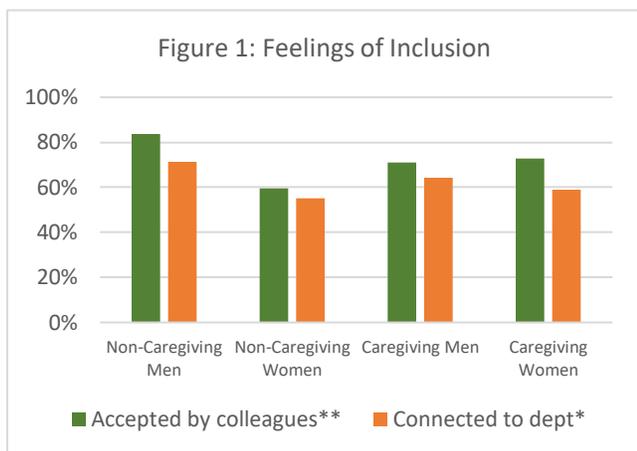
STEM Faculty Experiences by Gender & Caregiving

The UMass ADVANCE program is working to ensure greater equity among faculty through the power of collaboration. In this research brief, we describe some of the key findings from our initial survey, conducted in 2018-19. We will conduct the same survey in 2022-23 to measure the impact of our interventions.

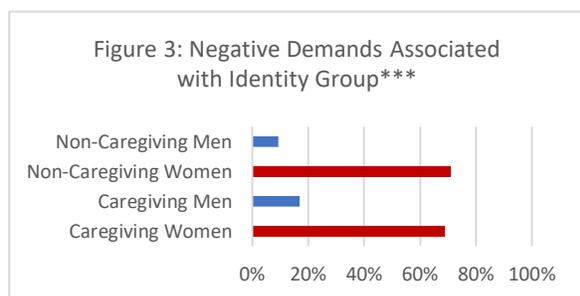
In this research brief, we focus on patterns among STEM faculty by **caregiving status and gender**. We explore whether and how caregiving and gender affect how STEM faculty experience inclusion, shared decision-making, and research collaboration. UMass ADVANCE interventions aim to develop systemic and sustainable approaches to address diverse faculty experiences, including the experiences of STEM faculty who are primary caregivers of children and adults at home, to support their inclusion and retention. As the findings in this brief indicate, **interventions must specifically support women STEM faculty who are caregivers**.



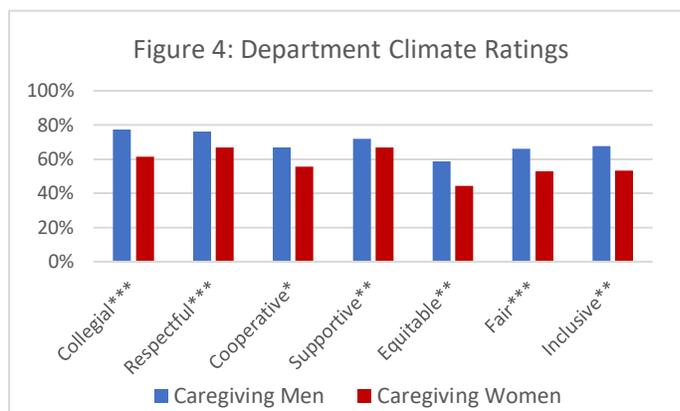
43% of survey respondents identified as primary caregivers of either children or adults. In this brief, faculty are grouped by non-caregiving men (n=105), non-caregiving women (n=79), caregiving men (n=93), and caregiving women (n=88). In the figures below, statistical significance is indicated as *p<.10, **p<.05, and *** p<.001.



Feelings of inclusion among STEM faculty are shaped by caregiving status and gender. As Figure 1 shows, **caregiving men feel less accepted by their colleagues and less connected to their departments than non-caregiving men**. Non-caregiving women's feelings of acceptance and connection are comparable to caregiving women, but non-caregiving women feel the least accepted by colleagues and connected, with just over half of non-caregiving women feeling connected.

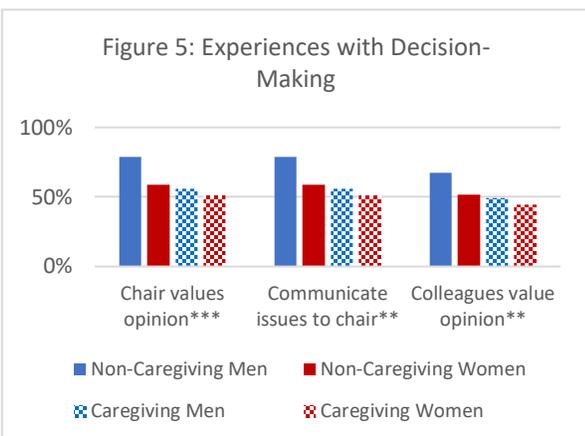


Caregiving women feel the least valued for their research, as shown in Figure 2. They feel much less valued for their research than caregiving men (41.3% compared to 63%), which suggests that caregiving shapes perceptions of faculty as researchers in gendered ways. More so, **caregiving women are the least likely to believe that men and women are treated equally in their department of any group**. Both caregiving women and men are more likely than their non-caregiving counterparts



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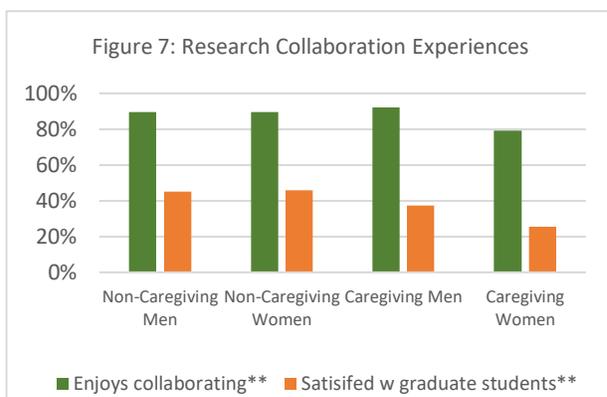
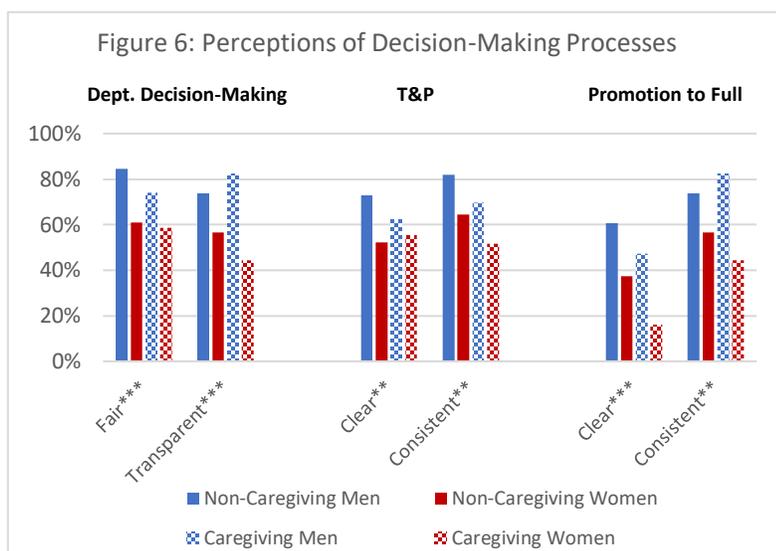
to feel that demands associated with an identity group have negatively impacted their career, as shown in Figure 3, suggesting that caregiving influences men's careers as well as women. However, women are much more likely to report negative demands than men. Finally, just comparing caregiving men and women, Figure 4 shows that **caregiving women rate their departments lower than caregiving men on most climate measures. Caregiving women report that their departments are less collegial, respectful, cooperative supportive, equitable, fair, and inclusive than caregiving men.**



transparent. Similarly, for personnel decisions, **caregiving women are least likely to report that tenure & promotion or that promotion to full procedures are clear and consistent.** Promotion to full is the least transparent for caregiving tenured women: only 16% find the process clear, and 44.4% believe the criteria are consistently applied. **Caregiving men find departmental and personnel decisions to be less transparent than non-caregiving men,** except they believe promotion to full criteria are consistently applied. These findings suggest that caregiving STEM faculty, but especially caregiving women, feel excluded from key decision-making processes in their departments.

Departmental decision-making is also shaped by gender and caregiving status for STEM faculty. As Figure 5 shows, **non-caregiving men feel the most valued** by department chairs and colleagues, and they most frequently communicate issues to their chair. **Caregiving STEM faculty feel that their opinions are the least valued in decision-making, and fewer than half of caregiving men and women feel valued by colleagues.**

As Figure 6 shows, **caregiving women are the least likely to feel that departmental decision-making is fair or**



On average, men STEM faculty report enjoying collaboration regardless of caregiving status, as shown in Figure 7. However, **caregiving women report enjoying collaboration slightly less** than other groups. All groups are dissatisfied with collaboration opportunities like access to graduates, but caregiving women are the least satisfied. **Only 25% of caregiving women are satisfied with access to graduate students,** suggesting that they may have unique barriers to research collaboration.