

# Gender, Rank, and Service: Unpacking Inequities Among Math Faculty at Research Universities

Sarah Otterbeck  
Clemson University

Matthew Voigt  
Michigan State University

*Keywords:* Service Responsibilities, Gender Identity, Math Faculty

Research consistently demonstrates that cisgender women faculty shoulder a greater service burden than cisgender men (CM), revealing a gender-based disparity in service performance and expectations (Guarino & Borden, 2017; Misra et al., 2021; O’Meara et al., 2017; Pyke, 2011). To address this issue, we aim to explore how tenure-stream faculty within mathematics departments at research-intensive institutions describe gender inequities through self-reports of time spent on service. We focused on mathematics departments and research-intensive institutions because of the absence of studies in this area and the significant underrepresentation of gender marginalized individuals (i.e., cisgender women and genderqueer (CWGQ)) (Blair et al., 2014).

Data for this analysis comes from the distribution of the Faculty Service Survey, developed and distributed via Qualtrics in the Spring 2024. We used convenience sampling through emails to reach tenure-stream math faculty at research-intensive institutions (high or very high) as defined by the Carnegie classification. Out of 218 responses, 75 participants met the eligibility criteria. We examined numeric responses on the time spent per month on various service activities. We measured these activities by a monthly timescale to capture a comprehensive view of faculty responsibilities and account for any service occurring on a once-a-month obligation. We analyzed the average hours on each type of service by academic rank (Assistant, Associate, Full), gender (CWGQ and CM), and the intersection of gender and ranks.

Preliminary findings indicate significant gender disparities in the performance of service responsibilities among tenure-stream math faculty. CWGQ faculty reported higher averages for service aligning with “feminized” service, i.e., “relational-oriented” service, (Hanasono et al., 2019) whereas CM faculty reported higher averages for service aligning with “masculinized” service, i.e., “goal-oriented” service (Hanasono et al., 2019).

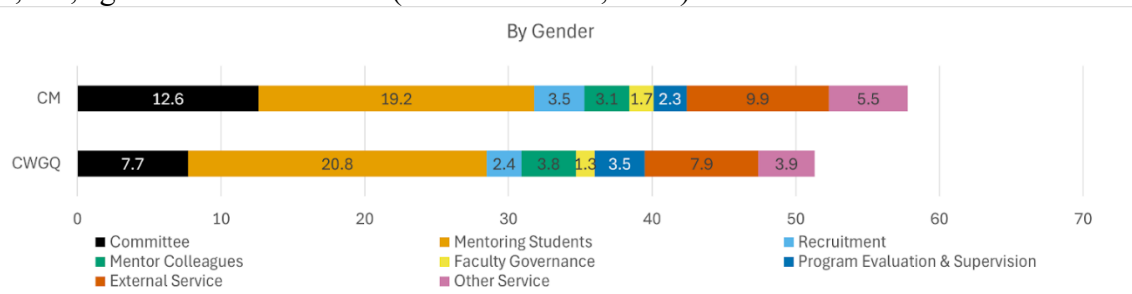


Figure 1. Stacked bar chart of monthly service hours by gender.

The data additionally revealed that Full Professors generally perform the most service hours, except in mentoring students and external service, where Associate Professors lead. Assistant Professors reported the least service overall, with notable exceptions in mentoring roles. These findings highlight the need for further analysis to understand these inequities and develop policies for more equitable distribution of service responsibilities.

## References

- Blair, R., Kirkman, E. E., Maxwell, J. W. (2013). Statistical Abstract of Undergraduate Programs in the Mathematical Sciences in the United States. American Mathematical Society.
- Guarino, C. M., & Borden, V. M. H. (2017). Faculty Service Loads and Gender: Are Women Taking Care of the Academic Family? *Research in Higher Education*, 58(6), 672–694. <https://doi.org/10.1007/s11162-017-9454-2>
- Hanasono, L. K., Broido, E. M., Yacobucci, M. M., Root, K. V., Peña, S., & O’Neil, D. A. (2019). Secret service: Revealing gender biases in the visibility and value of faculty service. *Journal of Diversity in Higher Education*, 12(1), 85–98. <https://doi.org/10.1037/dhe0000081>
- Misra, J., Kuvaeva, A., O’Meara, K., Culpepper, D. K., & Jaeger, A. (2021). Gendered and Racialized Perceptions of Faculty Workloads. *Gender and Society*, 35(3), 358–394. <https://doi.org/10.1177/08912432211001387>
- O’Meara, K. A., Kuvaeva, A., & Nyunt, G. (2017). Constrained Choices: A View of Campus Service Inequality From Annual Faculty Reports. *Journal of Higher Education*, 88(5), 672–700. <https://doi.org/10.1080/00221546.2016.1257312>
- Pyke, K. (2011). Service and gender inequity among faculty. *PS - Political Science and Politics*, 44(1), 85–87. <https://doi.org/10.1017/S1049096510001927>