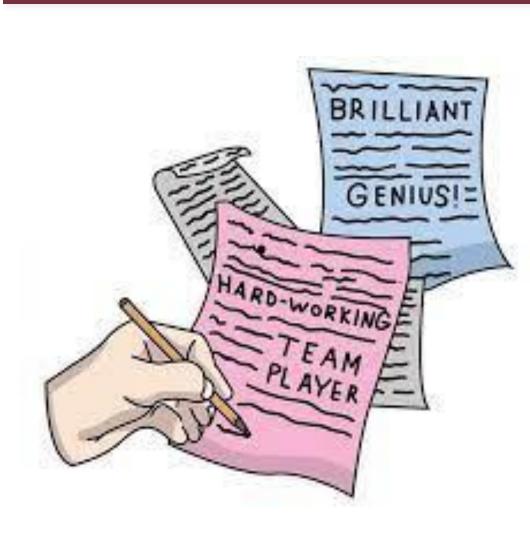# Gender Bias in Academic Letters of Recommendation

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Introduction

In recent years, collegiate institutions have favored the use of holistic admissions review processes at the undergraduate and postgraduate levels. As a result, letters of recommendation (LORs) have become increasingly vital components of students' applications. These institutional changes are reflective of current social movements (such as #MeToo) which aim to dismantle gender-based discrimination across professional spheres. Some studies suggest that systemic biases can influence the content of LORs by reinforcing traditional gender norms and expectations (Akos & Kretchmar, 2016; Khan et al., 2021; University of Arizona Commision on the Status of Women, 2016). This investigation has sought to evaluate the systemic effects of gender bias on the quality and integrity of LORs across academic disciplines at Florida State University. This research focused specifically on LORs received by the Program for Instructional Excellence (PIE) as part of their annual Outstanding Teaching Assistant Awards (OTAA) for graduate students. Ultimately, this investigation hoped to establish more equitable recommendation guidelines by identifying rhetorical and qualitative disparities between LORs for male and female applicants.

Methodology

- In this study, a sample of 54 letters of recommendation (LORs) were analyzed from the 2020-2021 OTAA application cycle.
- 32 of the LORs were written on behalf of female applicants, and 22 were written on behalf of male applicants.

- Parent categories were used to organize and score the descriptive and qualitative content of each letter.
- A review of current gender bias research was conducted to identify the following parent categories:

- Relational adjectives
- Confidence
- Intelligence
- Reliability
- Star quality
- Voluntary work
- Grindstone adjectives
- Superlatives
- Numeral adjectives

- Microsoft Excel was used to divide the LORs by gender and to calculate the relative frequencies of each parent category.
- Frequency values were then compared in order to identify disparities in LORs written for male and female applicants.
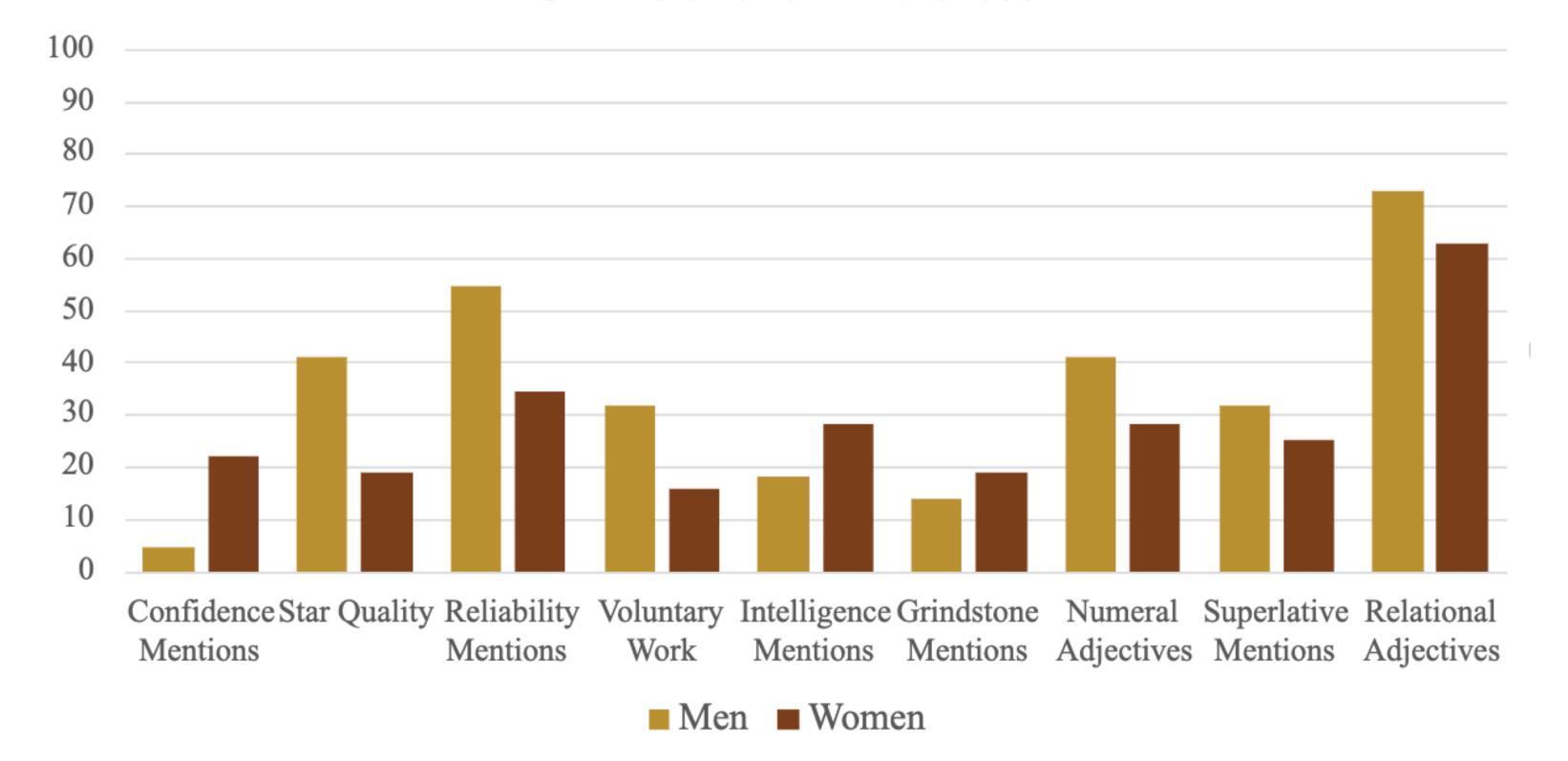
Results

Our preliminary results are summarized in the following frequency tables for male applicants (left) and female applicants (right). The subsequent bar graph compares the relative frequency of certain characteristics in LORs for men (gold) and women (garnet).

Male Characteristics	Percentage (n=22)
PhD student	95%
Master's student	5%
Formal titles/surnames	14%
Personality mentioned	45%
Research mentioned	18%
Relational adjectives	73%
Confidence	5%
Subject mastery	45%
Pedagogical skill	77%
Intelligence	18%
Reliability	55%
Irrelevancies	32%
Motivation/Passion	41%
Humor	10%
Star quality	41%
Voluntary work	32%
Student evaluations	55%
Doubt raisers	27%
Grindstone adjectives	14%
Superlatives	32%
Numeral adjectives	41%

Female Characteristics	Percentage (n=32)
PhD student	81%
Master's student	19%
Formal titles/surnames	13%
Personality mentioned	41%
Research mentioned	19%
Relational adjectives	63%
Confidence	22%
Subject mastery	47%
Pedagogical skill	69%
Intelligence	28%
Reliability	34%
Irrelevancies	25%
Motivation/Passion	44%
Humor	6%
Star quality	19%
Voluntary work	16%
Student evaluations	53%
Doubt raisers	28%
Grindstone adjectives	19%
Superlatives	25%
Numeral adjectives	28%

Characteristic Differences

■ Men ■ Women

(Additional frequency tables, data sets, and analyses)

Discussion and Conclusion

Preliminary research found qualitative differences between LORs for male and female candidates. Male candidates were 21% more likely to be described as "reliable" than were female candidates. Letters written on behalf of male candidates were also 7% more likely to contain "superlative" adjectives and acknowledgements. Such descriptions amplify male applicants' professional abilities, thus potentially placing male students in positions of greater respect and authority than females.

Despite these biases, research also uncovered a greater number of male applicants described using traditionally "feminine" terminology: 73% of male applicants were described as "relational" or "caring" by their recommenders, compared to 63% of female applicants. These findings indicate that certain terms have started to lose their historically gendered connotations.

Female candidates were four times more likely than males to be described as "confident." These disparities emblematize 'confidence culture,' which encourages women to be self-responsible individuals who must construct their own confidence and ambition in a fundamentally patriarchal society (Gil & Orgad, 2017). "Confidence" has become a mitigating characteristic for female professionals who hope to enter traditionally sexist and male-dominated sectors. Our research suggests that recommenders might use confident descriptors in LORs as corrective measures, i.e., to allay the effects of systemic misogyny on female applicants. Given the lack of confident descriptors applied to male recommendees, our research suggests that "confidence" may still be perceived as an intrinsically masculine characteristic.

Ultimately, our research findings could be used to create a standardized educational resource (such as an infographic or training workshop) that faculty members can use to prevent gender bias in their LORs. Further research is still necessary to make LORs more equitable for students of marginalized identities and backgrounds. Given the persistence of intersectional oppression, future studies of LORs need to investigate the effects of other identity-based factors, such as race, ethnicity, class, and sexual orientation. Future researchers should consider surveying recommenders and applicants to distinguish between instances of "implicit" and "explicit" bias. We recommend researchers investigate larger sample sizes of LORs to increase the diversity of data sets and accuracy of their analyses.

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