



Diversity, Equity, and Inclusion Initiatives and Faculty Roles in Orthopaedic Sports Medicine Fellowships are Associated with Increased Female Representation Among Faculty and Fellows

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Introduction

- Female representation within orthopaedic surgery is significantly lower than in other surgical specialties, with females accounting for only 18.1% of residents & fellows and 7.4% of practicing orthopaedic surgeons in 2021-2022.¹⁻³ In contrast, female representation among all medical specialties and subspecialties is much greater, with females accounting for 47.3% of residents & fellows in 2021.³
- Over the past several years, orthopaedic surgery residency programs have made intentional efforts to improve gender and racial diversity.
- The purpose of this study was to identify the prevalence of Diversity, Equity, and Inclusion (DEI) statements and DEI faculty roles in orthopaedic sports medicine fellowships and report any association with female representation among sports medicine fellows and faculty.
- The secondary aim of the study was to identify other potential trends in prevalence of DEI advocacy and fellow/faculty gender proportions, disparities in these variables among different geographic regions and program types.

Methods

- The Arthroscopy Association of North America (AANA) & American Orthopaedic Society for Sports Medicine (AOSSM) Fellowship Databases and program-specific websites were used as the primary sources of data, data was collected in June 2023.
- For 87 Accreditation Council for Graduate Medical Education (ACGME) accredited eligible sports medicine fellowship programs, data regarding the presence of DEI statements and faculty positions, program geographic location, program type, and sports medicine faculty and fellows' full names were extracted in June 2023.
- Programs were included in the analysis if they had full data for the categories of interest and pronoun use of fellows and faculty was identifiable.
- Internet searches were conducted for each physician. Gender was classified by pronouns used in biographical webpages: individuals using "she/her" pronouns were recorded as "female", those using "he/him" pronouns as "male", and those using "they/them" or other non-binary pronouns as "non-binary". Geographic regions were categorized using US Census Bureau definitions
- Descriptive statistical analysis was performed. Two-tailed t-tests were conducted to assess how the presence of DEI statements or faculty impacted female representation. Significant findings were determined at a p-value <0.05.

Results

- 87 programs met inclusion criteria and were included in the study.
- 74.7% (65/87) published DEI statements and 64.4% (56/87) listed DEI faculty roles
- Programs with DEI statements had a significantly greater proportion of female sports medicine faculty than those without (80/578, 13.8% \pm 15.3% vs. 10/166, 6.0% \pm 4.0%, p=0.017), and these programs also had more female sports medicine fellows (25/147, 17% \pm 25.5% vs. 3/71, 4.2% \pm 8.5%, p=0.056)
- All university programs (32/32) included DEI statements and roles, most university-affiliated community-based programs included DEI statements (24/31, 77.4%) and roles (19/31, 61.3%), and few community programs included statements (9/24, 37.5%) or roles (5/24, 20.8%).
- Most Northeast programs included DEI statements (20/22, 90.9%) and roles (16/22, 72.7%), while only 11/19 (57.9%) Western programs included DEI statements and 8/19 (42.1%) included DEI roles

Table 1: Diversity, Equity, and Inclusion (DEI) Statements, DEI Roles & Gender Diversity within Orthopaedic Surgery Sports Medicine Fellowships

	DEI Statement		DEI Role	
	YES	NO	YES	NO
Total Faculty	578	166	465	279
Female Faculty	80	10	65	25
% Female Faculty	13.8% \pm 15.3%	6.0% \pm 4.0%	14.0% \pm 15.3%	9.0% \pm 8.5%
Total Fellows	147	71	123	95
Female Fellows	25	3	23	5
% Female Fellows	17.0% \pm 25.5%	4.2% \pm 8.5%	18.7% \pm 25.5%	5.3% \pm 12.8%

Table 2: Geographic Region & Gender Diversity

	Midwest	Northeast	South	West
Total Faculty	182	221	181	160
Female Faculty	23	30	12	25
% Female Faculty	12.6% \pm 15.3%	13.6% \pm 10.9%	6.6% \pm 9.3%	15.6% \pm 9.3%
Total Fellows	47	51	64	56
Female Fellows	5	9	8	6
% Female Fellows	10.6% \pm 12.8%	17.7% \pm 12.8%	12.5% \pm 25.5%	10.7% \pm 12.8%

Limitations

- The determination of gender was based on pronouns used in online physician biographies, which may have introduced bias, as we cannot confirm if these biographies were written and/or approved by the surgeons themselves or if they were generated by their employers. It is possible that some biographies include pronouns that are incongruent with the surgeons' gender identity.
- This study reflects a single point in time (data collection in June 2023), including fellows for the 2022-2023 academic year), and thus doesn't account for year-to-year fluctuation in proportions of female fellows/faculty.
- Several programs either lacked a functional website or relevant information on current fellows at the time of data collection. The fellowship program websites may not have been up to date or included all relevant DEI information and/or statements within their departments at the time of data collection.
- Correlations in this study can not be mistaken as causation. Other unmeasured factors like institutional policies, resources, and location may also play a role in influencing diversity and rankings.
- While this project focused on the impact on gender diversity, it did not account for other forms of diversity such as racial, ethnic, socioeconomic background, sexual orientation, and disability status.

Conclusion

- Most orthopaedic surgery sports medicine fellowship programs include DEI statements and DEI-related faculty positions, although these roles generally exist outside the department of orthopaedic surgery.
- Programs with DEI statements and/or DEI faculty roles are correlated with higher female representation among sports medicine faculty and fellows.
- Programs without DEI initiatives should develop public-facing DEI statements and create DEI roles within the orthopaedic department. These initiatives can shape program culture, signal inclusivity, and provide mentorship opportunities.

References

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