

Unveiling Gender Disparities: The Evolving Landscape of Female Representation at Orthopaedic Trauma Association Annual Meetings

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INTRODUCTION:

A substantial gender disparity exists in the field of orthopaedics, where fewer than 15% of residents and only 6% of practicing surgeons identify as female. These statistics trail behind those of all other surgical specialties. However, it is noteworthy that the acceptance rates for men and women applying to orthopaedics are comparable. This fact emphasizes that the primary cause of this imbalance lies in the lack of attraction to the specialty, which is speculated to be a consequence of limited exposure to female mentors and professionals within the field. In particular, the field of orthopaedic traumatology remains one of the less pursued specialties, with consistently fewer than 10% of fellowship applicants each year being female. Recognizing the crucial role of female role models in influencing career choices, this study aims to investigate the changes in representation and the roles of women at Orthopaedic Trauma Association (OTA) annual meetings in the past ten years.

METHODS:

To capture trends from the 2012-2022 timespan, final conference programs from the 2012, 2017, and 2022 OTA annual meetings were obtained. Two reviewers recorded names of speakers, speaker roles (moderators vs. panelists), and session names from the programs and determined speaker sex, and type of session (technical vs. non-technical). The first 16% of data collection was performed by both reviewers and interrater reliability was determined using Cohen's Kappa. After establishing interrater reliability, the two reviewers split the remainder of data charting. Speakers chosen in a blinded fashion such as for paper and poster presenters were excluded from analysis. Descriptive statistics for speaker sex, role, and session type are reported for individual years as well as combined across the years. Odds ratios were calculated for sex versus speaker role and sex versus session type for individual years. The Cochran-Mantel-Haenszel method was used to calculate combined odds ratios across the years.

RESULTS:

There were 654 speaking sessions analyzed over the three different years of OTA annual meetings (Table 1). Overall Cohen kappa for sex, role, and session type was 0.973 indicating almost perfect agreement between the two raters. On average, 9.5% of the speakers were female with an increasing trend over the years. There was a significantly greater proportion of female speakers in 2022 compared to 2012 (13.8% vs. 5.8%, $P=0.028$). Female speakers held a higher percentage of non-technical sessions than their male colleagues across all three years. When combined across years, female speakers were statistically more likely to hold nontechnical speaking roles than males (OR 1.99; [95% CI, 1.07 - 3.07], $P=0.031$) (Figure 1). There was no difference in the likelihood of females holding moderator versus panelist roles compared to males.

DISCUSSION AND CONCLUSION:

While there is an increasing trend in the number of female speakers at OTA meetings, this study highlights that females are more likely to hold non-technical speaking roles compared to their male counterparts. This suggests a potential bias in assigning speaking opportunities, where women may be more commonly selected for sessions focused on non-technical aspects of orthopaedics. However, no significant difference was found between men and women in holding moderator versus panelist roles. Overall, this study serves as a valuable contribution to understanding the changes in female representation and roles within the OTA meetings, shedding light on areas that require attention and improvement to achieve greater gender equity and representation in the field of orthopaedics.

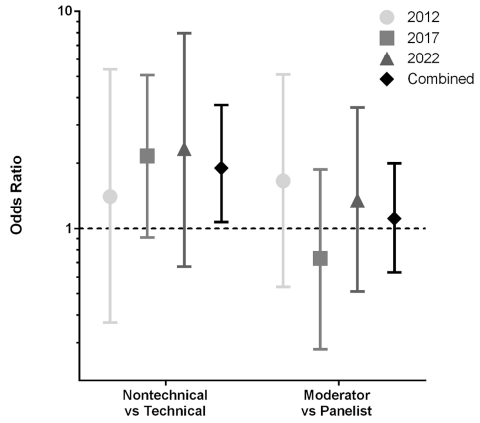


Figure 1. Graphical representation of odds ratios of females holding nontechnical versus technical speaker sessions and moderator versus panelist roles compared to males. Data presented on a log scale for individual years and all years combined. Error bars represent 95% confidence intervals.

Table 1. Total Number and Percentage of Male and Female Speakers at OTA Annual Meetings Categorized by Session and Role Type.

		Female, n (%)	Male, n (%)	Total (n) (%)
2012	Non tech	3 (23.1%)	37(17.5%)	40 (17.9%)
	Tech	10 (76.9%)	174 (82.5%)	184 (82.1%)
	Total	13 (5.8%)	211 (94.2%)	224
	Moderator	6 (46.2%)	72 (34.1%)	82 (36.6%)
	Panelist	7 (53.8%)	139 (65.9%)	146 (65.2%)
2017	Non tech	9 (33.3%)	46 (18.9%)	55 (20.3%)
	Tech	18 (66.7%)	198 (81.1%)	216 (79.7%)
	Total	27 (10.0%)	244 (0.0%)	271
	Moderator	6 (22.2%)	69 (28.3%)	75 (27.7%)
	Panelist	21 (77.8%)	175 (71.7%)	196 (72.3%)
2022	Non tech	4 (18.2%)	12 (8.8%)	16 (10.1%)
	Tech	18 (81.8%)	125 (91.2%)	143 (89.9%)
	Total	22 (13.8%)	137 (86.2%)	159
	Moderator	7 (31.8%)	35 (25.5%)	42 (26.4%)
	Panelist	15 (68.2%)	102 (74.5%)	117 (73.6%)
Combined	Non tech	16 (25.8%)	95 (16.0%)	111 (17.0%)
	Tech	46 (74.2%)	497 (84.0%)	543 (83.0%)
	Total	62 (9.5%)	592 (90.5%)	654
	Moderator	19 (30.6%)	176 (29.7%)	145 (22.2%)
	Panelist	43 (69.4%)	416 (70.3%)	459 (77.8%)
	Total	62 (9.5%)	592 (90.5%)	654