

Gender Inequalities in Orthopaedics: A Systematic Review of Disparities in Leadership, Funding, and Authorship

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INTRODUCTION: Although recent efforts have sought to increase the representation of women within orthopaedic surgery, there remains a lack of gender parity. Identifying specific gender disparities in the career paths of orthopaedic surgeons may assist in increasing the visibility of current women orthopaedic surgeons to serve as role models for women interested in pursuing orthopaedics. In this systematic review, we asked: 1) What are the trends in authorship among women orthopaedic surgeons? 2) What is the impact of gender on h-index in orthopaedic surgery? 3) What is the proportion of orthopaedic women faculty and has this improved over time?

METHODS: Following the Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines, the PubMed, MEDLINE, and Google Scholar electronic databases were searched to identify all studies that evaluated gender disparities in authorship, academic leadership and H-index. Study quality was assessed using the Joanna Briggs Institute (JBI) tool for cross-sectional studies. The mean \pm standard deviation (SD) JBI score was 7.02 ± 0.65 .

RESULTS: Our initial search yielded 962 publications, which were then screened for the appropriate studies that aligned with the purpose of our review (**Figure 1**). Forty-one studies were included in final analysis which evaluated 255,469 orthopaedic surgeons and 139,240 journal articles. Although the proportion of women authors continues to be significantly lower than that of men, many orthopaedic subspecialty specific journals have observed an increasing trend in women first authorship (**Figures 2 and 3**). Similarly, the proportion of women faculty members across all ranks in orthopaedics remains substantially low.

DISCUSSION AND CONCLUSION: These findings serve to encourage institutions to actively try to address the barriers women face, through promotion requirements transparency, self-learning modules addressing gender biases, and increase women exposure to orthopaedics through initiatives such as the Perry Initiative's Medical Student Outreach Program.

Figure 1. This PRISMA flow diagram demonstrates the search strategy and inclusion criteria.

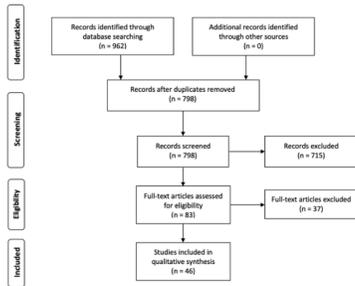


Figure 2. Trends in the proportion of females as first author in orthopaedic publications.

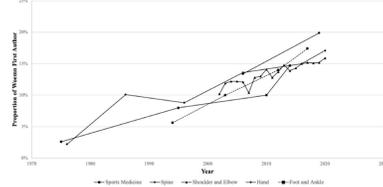


Figure 3. Trends in the overall proportion of women authors orthopaedic publications.

