

Appendix 2 title: Summary of the Papers Discussing the Female Representation in Orthopedic Surgery Domain.

1st author and the published year	Title	Study type	Challenges summary
1. Rodarte, 2023 (33)	Other side of conflict: examining the challenges of female orthopedic surgeons in the workplace	Survey Study	<ul style="list-style-type: none"> - Bias - Mentorship - Difficulties in networking - Work-life balance - Conflicts - Microaggression/ harassment . - Leadership - Mental health impacts
2. Ponzio , 2022 67 *	Discrepancies in Work-Family Integration Between Female and Male Orthopaedic Surgeons	Survey	<ul style="list-style-type: none"> - Mental health impact - Mentorship
3. Bowe, 2021 (9)	Evidence of specialty- specific gender disparities in resident recruitment and selection	observational	Representation
4. Heest, 2012 (25)	The Uneven Distribution of Women in Orthopaedic Surgery Resident Training Programs in the United States	Survey	<ul style="list-style-type: none"> - Career advancement opportunities. - Mentorship - Leadership. - Unequal pay - Mental health impacts - Bias - Work-Life Balance. - Career Advancement opportunities. - Microaggression/ Harassment. - Mentorship

5. Yue, 2020	Academic Gender Disparity in Orthopedic Surgery in Canadian Universities.	Cross-sectional study	<ul style="list-style-type: none"> - Microaggression/ Harassment - Leadership - Unequal pay - Work-Life Balance - Mentorship
6. Yin, 2023 (28)	Has the Increase of Women in Surgical Training Programs Led to a Concomitant Increase in Female Leadership Positions? A 10-Year Analysis	Retrospective analysis	<ul style="list-style-type: none"> -Leadership - Bias - Mentorship - Career advancement opportunities. - Unequal pay -Fertility/ parenthood issues
7. M. Gerull, 2020 (34)	Are Women Proportionately Represented as Speakers at Orthopaedic Surgery Annual Meetings? A Cross-Sectional Analysis.	Cross-Sectional Analysis	<ul style="list-style-type: none"> - Academic/ research opportunities -Leadership roles
8. Ann E. Van Heest, 2016 (10)	A 5-Year Update on the Uneven Distribution of Women in Orthopaedic Surgery Residency Training Programs in the United States.	Quantitative	<ul style="list-style-type: none"> - Career advancement opportunities - Representation - Academic/ research opportunities
9. Hoof, 2020 (26)	Gender-related Differences in Research Productivity, Position, and Advancement Among Academic Orthopaedic Faculty Within the United States.	Cross-sectional study	<ul style="list-style-type: none"> - Leadership Roles - Academic/ Research opportunities - Career advancement opportunities - Mentorship
10. Sutherland, 2021 (27)	Gender, Race, Age, Allopathic Degree, Board Score, and Research Experience	Retrospective Cohort Analysis	<ul style="list-style-type: none"> - Mentorship - Bias.

	Among Applicants Matching to General and Orthopedic Surgery Residencies, 2015-2019		<ul style="list-style-type: none"> - Representation. - Work-Life Balance.
11. AlSamhori, 2023 57	Factors influencing gender preference towards surgeons among Jordanian adults: an investigation of healthcare bias.	Survey	<ul style="list-style-type: none"> - Representation. - Biases.
12. Elkadi- 2022 (28)	Trends in Medical Training and Leadership at Academic Orthopedic Programs.	Cross-sectional	<ul style="list-style-type: none"> - Leadership roles. - Mentorship - Bias.
13. Tosi, 1998 (19)	Ensuring the success of women in academic orthopedics	Delphi Panel & Survey	<ul style="list-style-type: none"> - Mentorship - Bias. - Mental health impacts. - Unequal pay. - Work-life balance. - Recruitment effort.

14. Laurie A. Hiemstra, 2022 3	Experiences of Canadian Female Orthopaedic Surgeons in the Workplace: Defining the Barriers to Gender Equity.	Survey	-Mental health impacts - Career advancement opportunities - Mentorship -Microaggression/ Harassment
15. Haruno 2023 (46)	Racial and Sex Disparities in Resident Attrition in Orthopaedic Surgery.	Retrospective study	- Mentorship - Mental health impact -Microaggression/ harassment
16. Julian, 2023 (11)	A 5-Year Update and Comparison of Factors Related to the Sex Diversity of Orthopaedic Residency Programs in the United States	Cross-sectional	- Representation. - Academic/ research opportunities.. -Fertility/ parenthood issues.
17. Ramos, 2022 (30)	Representation of Women on Editorial Boards of Medline-Indexed Spine, Neurosurgery, and Orthopedic Journals.	Cross-sectional	- Academic/ research opportunities. - Leadership roles. - microaggression/ harassment.
18. Kalpit N. Shah, 2020 (36)	Orthopaedic Surgery Faculty: An Evaluation of Gender and Racial Diversity Compared with Other Specialties.	Retrospective	- Academic/ research opportunities. -Representation - Career advancement opportunities
19. Errani, 2021	Women and men in orthopaedics	literature review	- Work life balance - Mentorship

20. Meadows, 2022	Racial, Ethnic, and Gender Diversity in Academic Orthopaedic Surgery Leadership	Comparative analysis	- Leadership
21. Xu, 2023 (14)	The Importance of Perceived Barriers to Women Entering and Advancing in Orthopaedic Surgery in the US and Beyond	Survey-based study	- Representation. - Mentorship. - Career advancement. - Leadership. - Fertility/parenthood issues
22. Haffner, 2021	What is the Trend in Representation of Women and Under- represented Minorities in Orthopaedic Surgery Residency?	Retrospective survey study	-Representation
23. Daniels, 2018	Gender Disparities Within US Army Orthopedic Surgery: A Preliminary Report	Observational study	- Representation - Bias - Mentorship
24. Peterman, 2022 (16)	Gender Representation in Orthopaedic Surgery: A Geospatial Analysis From 2015 to 2022	Geospatial Analysis	- Representation - Mentorship
25. Okike, 2019 (15)	Orthopaedic Faculty and Resident Sex Diversity Are Associated with the Orthopaedic Residency Application Rate of Female Medical Students	An observational study	-Representation
26. Ortega, 2021 (17)	Diversity in orthopaedic trauma: where we are and where we need to be	A survey-based research	- Career advancement - Leadership

			<ul style="list-style-type: none"> - Academic/research opportunities - Representation - Work-life balance - Mentorship
27. Wang, 2023 (18)	Trends in Race and Sex Representation Among Entering Orthopaedic Surgery Residents: A Continued Call for Active Diversification Efforts	A retrospective study that analyzes trends over a 20-year period.	<ul style="list-style-type: none"> - Representation - Recruitment efforts
28. Day, 2019	BREAKING BARRIERS: A BRIEF OVERVIEW OF DIVERSITY IN ORTHOPEDIC SURGERY	This is a review article that synthesizes existing literature on diversity in orthopedic surgery.	Representation
29. Gebhardt, 2007	Improving Diversity in Orthopaedic Residency Programs	Observational study	<ul style="list-style-type: none"> - Representation - Mentorship
30. Heest, 2021 (38)	A 15-Year Report on the Uneven Distribution of Women in Orthopaedic Surgery Residency Training Programs in the United States	Descriptive statistics analysis of residency training programs.	<ul style="list-style-type: none"> - Academic/research opportunities - Leadership - Mentorship

31.Ojo, 2023	A 25-Year Analysis of Diversity, Equity, and Inclusion Research in Orthopaedics Shows Majority Female Authorship and Increasing Gender Parity Research	scoping review that analyzes trends in diversity, equity, and inclusion (DEI) research within the field of orthopaedic surgery over a 25-year period	Representation
32.Albright, 2022	Orthopaedic Society Leadership Diversity and Academic Participation	this research is a mixed-methods study, utilizing both surveys and publicly available data	- Academic/research opportunities - Leadership
33.Hiemstra, 2019 3	Dissecting disparity: improvements towards gender parity in leadership and on the podium within the Canadian Orthopaedic Association	Descriptive study	- Bias - Mentorship
34.Payares, 2023	The Current State of Diversity in Orthopaedics	Review/Analysis of existing data	Representation
35.Ramos, 2022	Women in Leadership in State and Regional Orthopaedic Societies	based on survey data	Leadership
36.Linscheid, 2020 65	Women in academic surgery over the last four decades	retrospective analysis	- Mentorship - Work-life balance - Academic/research opportunities
37.Rajani, 2019	Geographic Differences in Sex and Racial Distributions Among Orthopaedic	secondary data analysis study.	-Representation

	Surgery Residencies: Programs in the South Less Likely to Train Women and Minorities		
38. Incoll, 2019 (22)	Diversity in Orthopaedic Surgery: International Perspectives	qualitative assessment	Representation
39. Tabie, 2023	AOA Critical Issues: Perceptions on the State of Diversity, Equity, and Inclusion in Orthopaedic Surgery	Cross-sectional survey	- Mentorship - Representation
40. Summers, 2020 64	Closing the Gender Gap: Barriers to Success for Recruitment and Retention of the Female Orthopaedic Surgery Applicant	Review	-Representation -Recruitment effort -Fertility/ Parenthood issues -Work-life balance - Mentorship
41. Saxena, 2019 (29)	Does the Proportion of Women in Orthopaedic Leadership Roles Reflect the Gender Composition of Specialty Societies?	cross-sectional analysis	- Leadership
42. Rodgers, 2022	How Does Orthopaedic Surgeon Gender Representation Vary by Career Stage, Regional Distribution, and Practice Size? A Large- Database Medicare Study	retrospective study	Representation
43. Hill, 2013 (24)	Residents' Perceptions of Sex Diversity in Orthopaedic Surgery	survey-based research study	- Mentorship - Academic/research opportunities

44. Day, 2010	Diversity Based on Race, Ethnicity, and Sex Between Academic Orthopaedic Surgery and Other Specialties	comparative study	-Representation - Academic/research opportunities
45. Chambers, 2018	Women in Orthopaedic Surgery Population Trends in Trainees and Practicing Surgeons	descriptive analysis	-Representation - Academic/research opportunities
46. Acuna, 2021 (12)	How Long Will It Take to Reach Gender Parity in Orthopaedic Surgery in the United States? An Analysis of the National Provider Identifier Registry	observational analysis	Representation
47. cho, 2023	Match Rates Among Underrepresented Minority and Female Applicants to Orthopaedic Surgery Residency Programs from 2011 to 2021 How Are We Doing?	Retrospective analysis	Representation

