

Appendix 4 Title: Summary of the Papers Discussing the Health Challenges 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. Fram, 2021 (42)	Female Sex is Associated With Increased Reported Injury Rates and Difficulties With Use of Orthopedic Surgical Instruments.	Survey	<ul style="list-style-type: none"> - Bias - Technical difficulties
4. Sedani , 2024 (39)	An overview of occupational injuries among female orthopaedic surgeons.	Survey	<ul style="list-style-type: none"> - Occupational injuries - Cancer/radiation - Mental health impacts
5. 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
6. Yue, 2020	Academic Gender Disparity in Orthopedic Surgery in Canadian Universities.	Cross-sectional study	- Microaggression/ Harassment - Leadership - Unequal pay - Work-Life Balance - Mentorship
7. 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 analyses	-Leadership - Bias - Mentorship - Career advancement opportunities. - Unequal pay -Fertility/ parenthood issues
8. Mulcahey, 2018 (45)	The Perception of Pregnancy and Parenthood Among Female Orthopaedic Surgery Residents.	Survey	- Fertility/ parenthood issues - Bias - Work-life balance
9. Sutherland, 2021 (27)	Gender, Race, Age, Allopathic Degree, Board Score, and Research Experience Among Applicants Matching to General and Orthopedic Surgery Residencies, 2015-2019	Retrospective Cohort Analysis	- Mentorship - Bias. - Representation. - Work-Life Balance.
10. AlSamhori, 2023 57	Factors influencing gender preference towards surgeons among Jordanian adults: an investigation of healthcare bias.	Survey	- Representation. - Biases.
11. Elkadi- 2022 (28)	Trends in Medical Training and Leadership at Academic Orthopedic Programs.	Cross-sectional	- Leadership roles. - Mentorship - Bias.

12. 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.
13. Laurie A. Hiemstra, 2022 3	Experiences of Canadian Female Orthopaedic Surgeons in the Workplace: Defining the Barriers to Gender Equity.	Survey	<ul style="list-style-type: none"> -Mental health impacts - Career advancement opportunities - Mentorship -Microaggression/ Harassment
14. Haruno 2023 (46)	Racial and Sex Disparities in Resident Attrition in Orthopaedic Surgery.	Retrospective study	<ul style="list-style-type: none"> - Mentorship - Mental health impact -Microaggression/ harassment
15. Kerluku, 2023 (44)	Assessing Gender Differences in Technical Skills and Confidence in Orthopaedic Surgery Residency Applicants	Prospective	<ul style="list-style-type: none"> - Technical difficulties - Biases
16. Ramos, 2022 (30)	Representation of Women on Editorial Boards of Medline-Indexed Spine, Neurosurgery, and Orthopedic Journals.	Cross-sectional	<ul style="list-style-type: none"> - Academic/ research opportunities. - Leadership roles. - microaggression/ harassment.
17. Daniels, 2018	Gender Disparities Within US Army Orthopedic Surgery: A Preliminary Report	Observational study	<ul style="list-style-type: none"> - Representation - Bias - Mentorship

18. Sobel, 2023 (31)	Interpersonal Interactions and Biases in Orthopaedic Surgery Residency: Do Experiences Differ Based on Gender?	survey study	- Academic/research opportunities. - Work-life balance -Mental health impacts
19. Hiemstra, 2019 3	Dissecting disparity: improvements towards gender parity in leadership and on the podium within the Canadian Orthopaedic Association	Descriptive study	- Bias - Mentorship
20. <u>Hull, 2022</u>	Women in Surgery Events Alone do not Change Medical Student Perceptions of Gender Bias and Discrimination in Orthopaedic Surgery	survey-based study	- Bias
21. Thiart, 2023 48	Operating in the margins: Women's lived experience of training and working in orthopaedic surgery in South Africa	Descriptive qualitative study	- Work life balance - Mental health impacts -Bias. - Microaggression/harassment
22. Mason, 2023 (47)	Perceptions of Racial and Gender Microaggressions in an Academic Orthopaedic Department	survey-based study	-Microaggressions
23. Hiemstra, 2023	Rates of Burnout in Female Orthopaedic Surgeons Correlate with Barriers to Gender Equity	survey-based study	-Mental health impacts -Bias