

Appendix 3 title: Summary of the Papers Discussing the Emotional Environment Domain.

1st author and the published year	Title	Study type	Challenges summary
1. 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
2. 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
3. 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
4. Cohen-Rosenblum, 2022 (43)	Repetitive Musculoskeletal Injuries: A Survey of Female Adult Reconstruction Surgeons.	Survey	<ul style="list-style-type: none"> - Occupational injuries. - Parenthood/ fertility issues
5. Mulcahey, 2018 (45)	The Perception of Pregnancy and Parenthood Among Female Orthopaedic Surgery Residents.	Survey	<ul style="list-style-type: none"> - Fertility/ parenthood issues - Bias - Work-life balance
6. Phillips, 2014 51	Does a surgical career affect a woman's childbearing and fertility? A report on pregnancy and fertility trends among female surgeons.	Survey	<ul style="list-style-type: none"> - Fertility/ parenthood issues

7. 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
8. Xu, 2023 (14)	The Importance of Perceived Barriers to Women Entering and Advancing in Orthopaedic Surgery in the US and Beyond	Survey-based study	<ul style="list-style-type: none"> - Representation. - Mentorship. - Career advancement. - Leadership. - Fertility/parenthood issues
9. Keene, 2011	Occupational Hazards to the Pregnant Orthopaedic Surgeon	review of existing literature	<ul style="list-style-type: none"> - Occupation injuries - Fertility/parenthood issues
10. Compton, 2021 62	Pregnancy and Parental Leave During Orthopaedic Surgery Residency	Review article	-Fertility/ parenthood issues
11. Hamilton, 2012 61	Childbearing and Pregnancy Characteristics of Female Orthopaedic Surgeons	Cross-sectional survey	-Fertility/ parenthood issues
12. Chou , 2023 (40)	Health Considerations for Female Orthopaedic Surgeons	Review and survey studies	<ul style="list-style-type: none"> - Radiation/ cancer - Fertility/parenthood issues - Occupational injuries

13. 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
14. Poon, 2020 60	Does a Career in Orthopaedic Surgery Affect a Woman's Fertility?	survey-based research study	-Fertility/ parenthood issues
15. Chou, 2012	Increased Breast Cancer Prevalence Among Female Orthopedic Surgeons	survey-based study	-Radiation/ cancer risk
16. Chou, 2010	Prevalence of Cancer in Female Orthopaedic Surgeons in the United States	cross-sectional survey	-Cancer
17. Chou, 2022	Increased Prevalence of Breast and All-cause Cancer in Female Orthopaedic Surgeons	survey-based observational study	-Radiation
18. Valone, 2016 (41)	Breast Radiation Exposure in Female Orthopaedic Surgeons	observational study	-Radiation
19. Ruse, 2022 66	Pregnancy in Orthopaedic Residents: Peripartum Barriers Identified	Survey study	- Work-life balance - Fertility/ parenthood issues
20. Nemeth, 2020 62	Program Directors' Perception of Pregnancy and Parenthood in Orthopedic Surgery Residency	Survey	Fertility/ parenthood issues