#189 Pregnancy and Parenthood as a Woman in Orthopaedic Surgery: A Scoping Review

UNIVERSITY OF CALGARY

Laura Morrison MD MSc¹, Annalise Abbott MD¹, Zoe Mack MASc², Prism Schneider MD PhD FRCSC¹, Laurie A. Hiemstra MD PhD FRCSC^{1,3}

1. Department of Surgery, University of Calgary, Calgary, Canada 2. Cumming School of Medicine, University of Calgary, Calgary, Canada 3. Banff Sport Medicine Foundation, Banff, Canada

Background

- Orthopaedic surgery (OS) remains the surgical specialty with the lowest proportion of women (Van Heest, 2020).
- Gender-based discrimination can affect women who are, or who wish to become, parents while pursuing a career in OS; this could be contributing to the gender gap (Nemeth, 2020).

Research Aims

- (1) To characterize the current literature pertaining to pregnancy and parenthood as a woman in OS
- (2) To synthesize the perceptions and experiences of and about pregnant and parenting women in OS

Methods

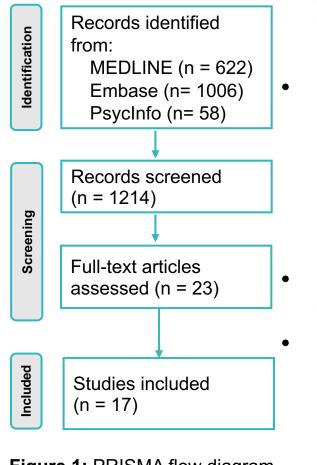


Figure 1: PRISMA flow diagram

- Arksey and O'Malley framework for scoping studies followed
- PsycINFO searched on June 7th, 2021 with combinations of terms: pregnancy, parenthood, maternal, and OS
- Inclusion: attendings, fellows, and residents
 Quantitative and qualitative analyses performed to characterize the literature and identify themes

Results

17 studies included

PREGNANCY

- 2006-2021 with >50% published within last 2 years
- Location: USA (n=15), UK (n=2)
- Study design: **survey (n=13), r**eview (n=3), case series (n=1)



When asked about reasons for delaying having children, women residents were significantly more likely than men residents to report concerns regarding reputation (57.6% versus 0.8%, p<0.001) and effects on career opportunities (42.4% versus 7.6%, p<0.001) (Reid, 2021).

FAMILY pregnancy/parenthood Decision to delay pregnancy/parenthood

Risks and complications

↑ Fertility issues

↑ Fertility issues

↑ Incidence of preterm labor

↑ Average maternal age

Potential work hazards

Extended work hours/standing
Stress
Heavy lifting/lead
Radiation/toxic chemicals

PARENTHOOD

Limited support

Lack of peer mentors

Variable access to lactation
facilities, childcare

Financial barriers

Figure 2: Results of thematic analysis revealed three stages at which pregnant and parenting women surgeons encountered gender-based discrimination, as well as structural and social barriers to wellbeing.

TRAINEE HIGHLIGHTED CONCERNS

Lack of time

NCE

- Fear of disrupted training
- Financial constraints
- Restricted maternity leave

STAFF HIGHLIGHTED CONCERNS

- Regret delaying and/or wish they had children sooner
- Incurred financial loss due to having children
- Children have slowed/interfered with career
- Limited/inadequate policy support



Scan here for references, contact info, and more.

First Author (Year)	Ham. (2012)	Poon (2020)	Reid (2021)
Respondents with at least one	128	452	179
child, n (%)	(57.4)	(60.0)	(39.5)
Mean number of children	2.1	NR	1.6
Mean age at time of first delivery	33.1	33.6	NR
Delay in childbearing due to	NR	304	191
career, n (%)		(67.4)	(42.9)
Pregnancy complication, n (%)	82	207	NR
	(31.2)	(24.4)	
Miscarriage, n (%)	17	160	NR
	(6.5)	(32.9)	
Infertility, n (%)	45	NR	NR
	(35.2)		
Fertility treatment, n (%)	27	105	NR
	(21.1)	(12.4)	

 Table 1: Pregnancy characteristics in survey studies.

Future Directions

- (1) Investigate local barriers to recruitment/ retainment of woman surgeons who have or wish to start a family; consider qualitative methods for an understanding of local issues.
- (2) Investigate factors influencing fertility and pregnancy complications; consider using experimental research methods.

Conclusion

Experiences of pregnancy and parenthood represent one element of gender-based discrimination in orthopaedic surgery that may be perpetuating the gender gap. A concerted effort is needed to shift the culture to embrace rather than denounce the possibility of pregnancy and parenthood for women in orthopaedics.