Gender equality challenges in orthopaedic surgery: A systematic review

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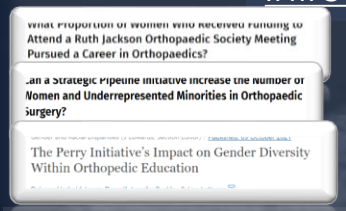
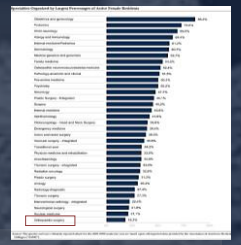
Introduction





Materials & Methods

Search Strategy

PubMed

Embase

• gender	• differ*
• sex	• difference
• equal	• different
• equality	• orthopedic
• equal*	• orthopaedic
	• orthop*

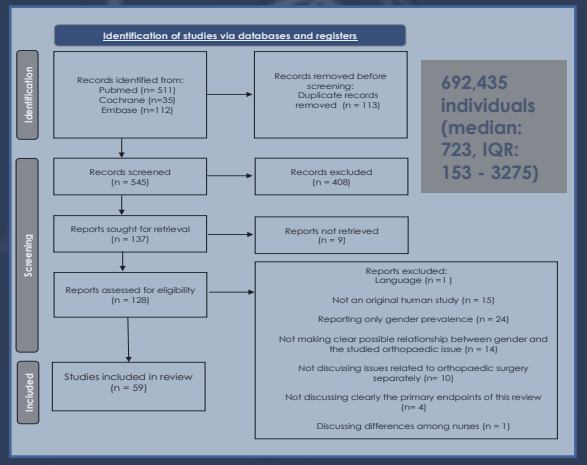
Inclusion criteria

i. written in English, German or French language
ii. investigating gender as barrier in orthopaedic surgery as primary or secondary outcome
iii. prospective, or retrospective cohort studies or cross-sectional studies or clinical trials
iv. final results presented
v. gender gap is not a random occurrence.

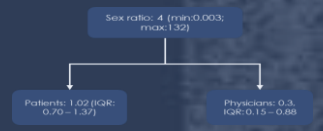
Exclusion criteria

i. comorbidities in which gender is considered a proven risk factor or
ii. gender ratio (i.e., female/male) ≠1 is commonly acknowledged
iii. pregnant women
iv. experts' opinion

Results (1)



692,435 individuals (median: 723, IQR: 153 - 3275)



Sub-specialty	N (%)
Sports medicine	12 (20.3)
Reconstructive orthopaedics	5 (8.5)
Trauma	5 (8.5)
Spine surgery	5 (8.5)
Paediatric orthopaedics	4 (6.8)
Musculoskeletal oncology	1 (1.7)
Foot & Ankle	1 (1.7)
Hand surgery	1 (1.7)
Academic field	6 (10.2)

Physicians

Targeted issue	N (%)
factor influencing workload, income and salary	4 (6.8%)
carrier choices	5 (8.5%)
employment offers	6 (10.2%)
academic and leadership perspectives	6 (10.2%)
were evaluating generally the gender diversity	3 (5.1%)

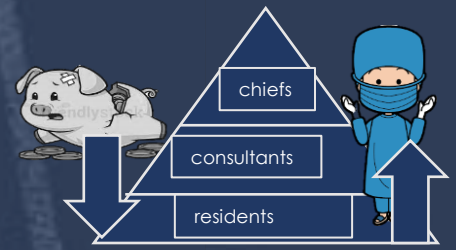
Patients

Targeted issue	N (%)
possible obstacle to safe treatment	8(13.56%)
risk factor for the studied pathology	13 (22.1%)
a prognostic factor influencing the progression of the pathology or the success of treatment	14 (23.7%)

Results (2)

- Orthopaedic surgery is described as an unfriendly career field for women as surgeons or sports leading physicians while women are generally underrepresented in the academic field of orthopaedics. Regarding patients, female gender consists both a risk and prognostic factor influencing the prevalence of degenerative disease and the outcome of the operative treatment in reconstructive orthopaedics.

- Female gender is a risk factor for multiple sports injuries and influences the pathogenetic mechanisms resulting in ACL reconstruction. Regarding spine surgery, women are less likely to have surgery suggested, and such suggestion underlines severe disease's progression.



Discussion

Conclusions

Gender differences affect orthopaedic patient-physician-healthcare system interactions. Recognizing biases and their patterns is useful to improve the actual situation. By preventing those an unbiased, tolerant, and egalitarian workplace for physicians and a healthcare system that provides the best treatment to patients could be created.