

# Demographic Diversity in the Emerging US Orthopaedic Sports Medicine Workforce is Limited

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# Disclosures

- The authors have none to disclose



# Introduction

- The current state of diversity in the training pipeline for the orthopaedic sports medicine workforce is poorly understood
  
- We hypothesized that the proportion of women, racial and ethnic minorities in the emerging orthopaedic sports medicine workforce would be underrepresented relative to the US population over the past decade



# Methods

- This was a retrospective, cross-sectional study of allopathic medical students, orthopaedic surgery residents, and orthopaedic sports medicine fellows in the US (2013-2022)
- Disparities in demographic representation between orthopaedic sports medicine fellows and the 2020 US population census were quantified with percentage differences and participation-to-prevalence ratios (PPRs)



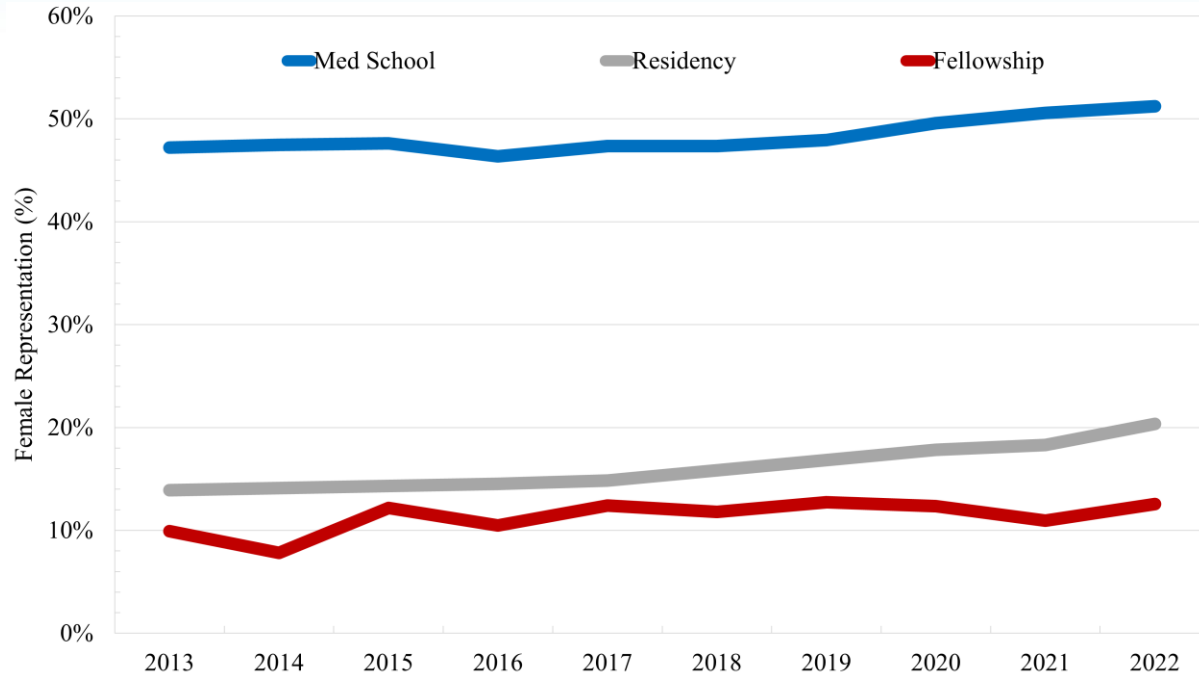
# Methods

- PPR = participation in orthopaedic sports medicine workforce (%) / prevalence in overall US population (%)
  - PPRs of 0.8-1.2 = equivalent representation
  - PPRs < 0.8 = under-representation
  - PPR > 1.2 = over-representation



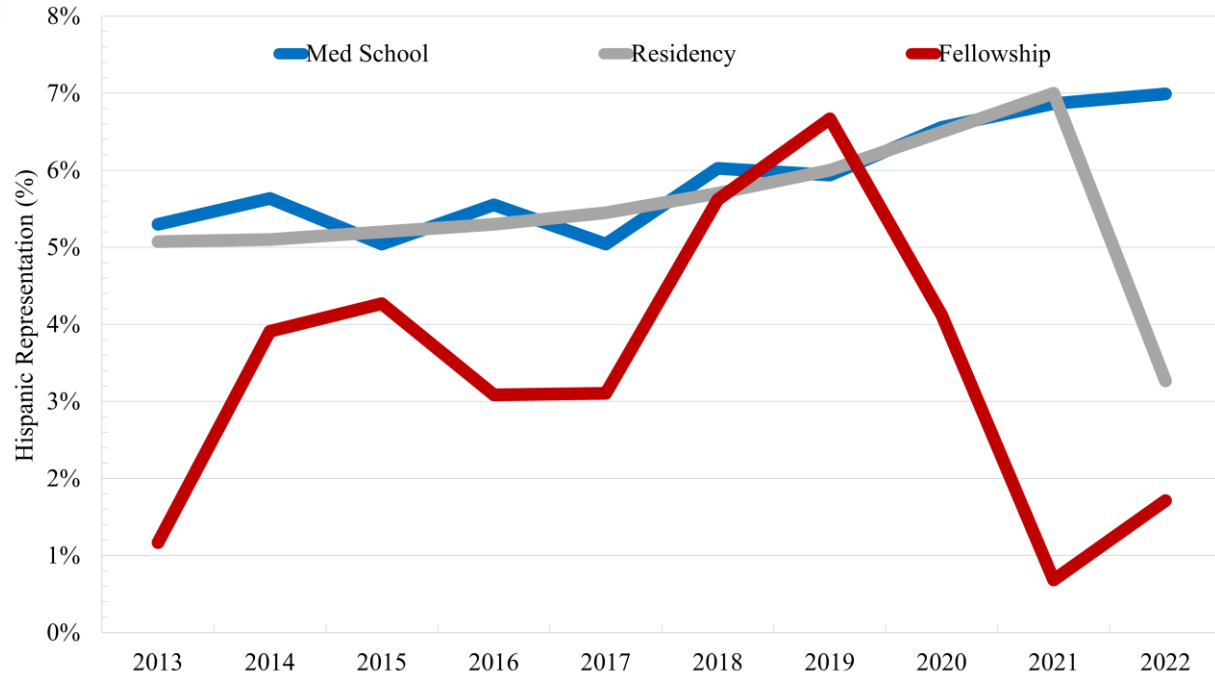
# Results

- The representation of female trainees decreased at each stage of the training pipeline ( $P < 0.001$ )
- Female trainees increased among allopathic medical school graduates (47.5% to 51.2%,  $P < 0.001$ ), orthopaedic surgery residents (13.7% to 20.4%,  $P < 0.001$ ), and orthopaedic sports medicine fellows (9.9% to 12.6%,  $P = 0.051$ )



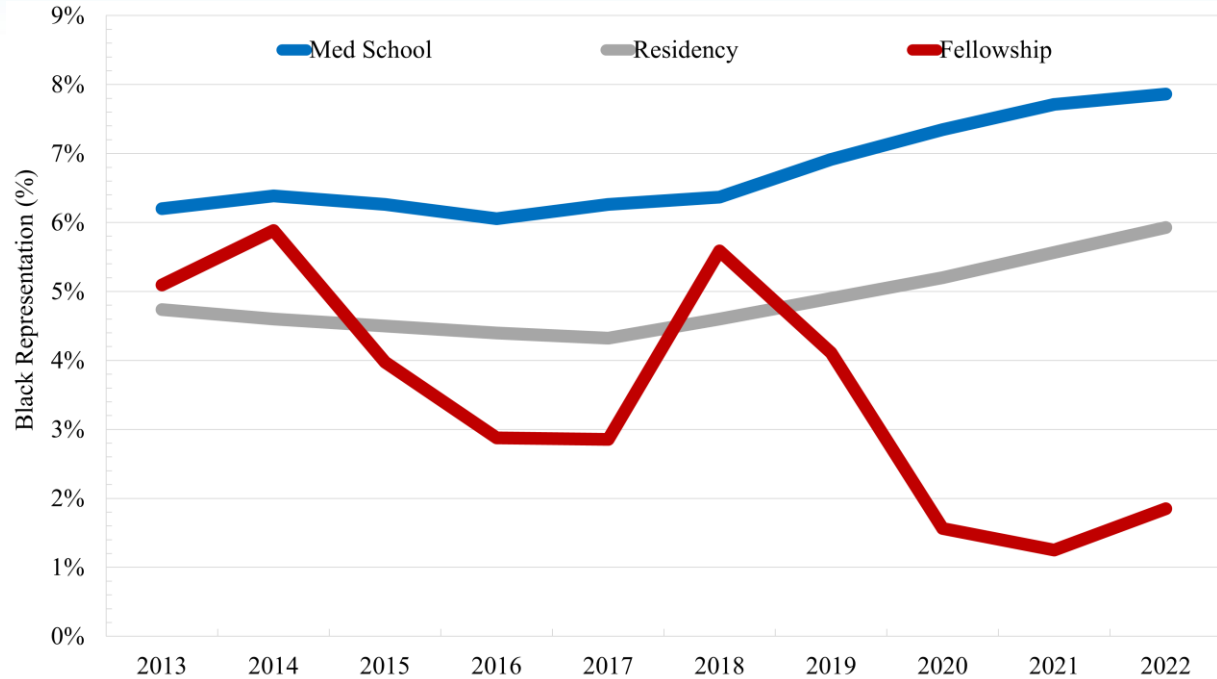
# Results

- The representation of Hispanic trainees decreased at each stage of the training pipeline ( $P < 0.001$ )
- Hispanic trainees increased among allopathic medical school graduates (5.7% to 7.1%,  $P = 0.003$ ), decreased among orthopaedic surgery residents (5.0% to 3.3%,  $P = 0.760$ ), and increased among orthopaedic sports medicine fellows (1.2% to 1.7%,  $P = 0.882$ )



# Results

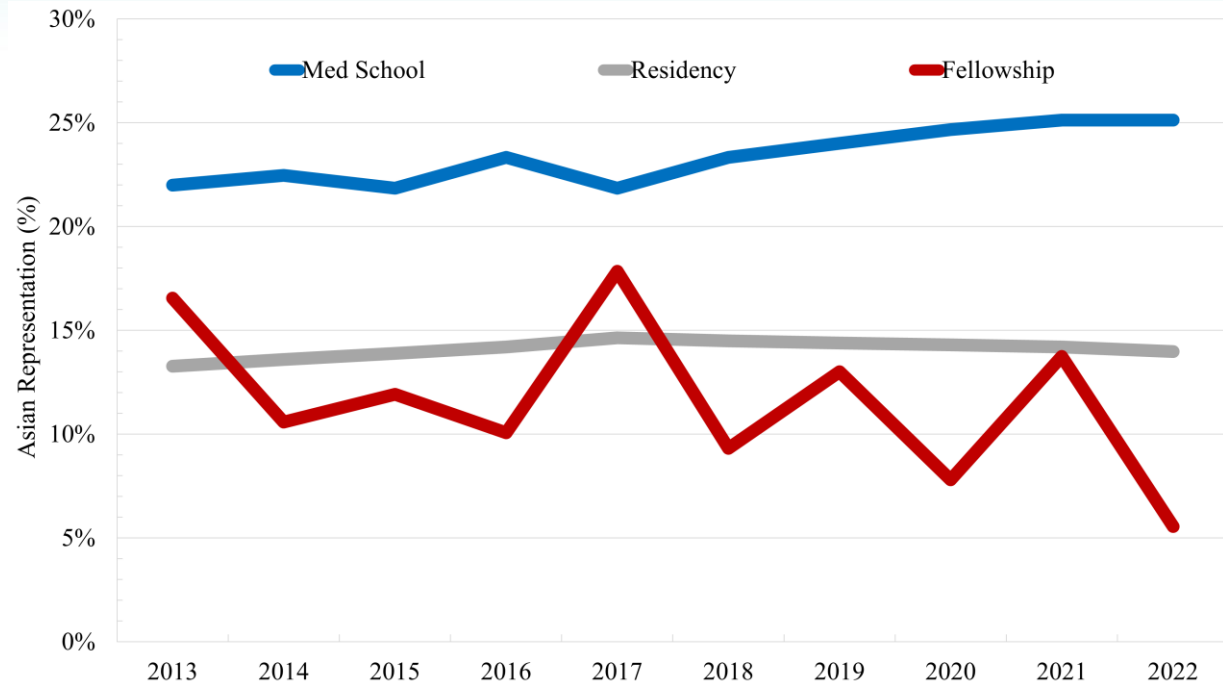
- The representation of Black trainees decreased at each stage of the training pipeline ( $P < 0.001$ )
- Black trainees increased among allopathic medical school graduates (6.5% to 8.0%,  $P < 0.001$ ), orthopaedic surgery residents (4.7% to 5.9%,  $P = 0.006$ ), and decreased among orthopaedic sports medicine fellows (5.1% to 1.9%,  $P = 0.016$ )





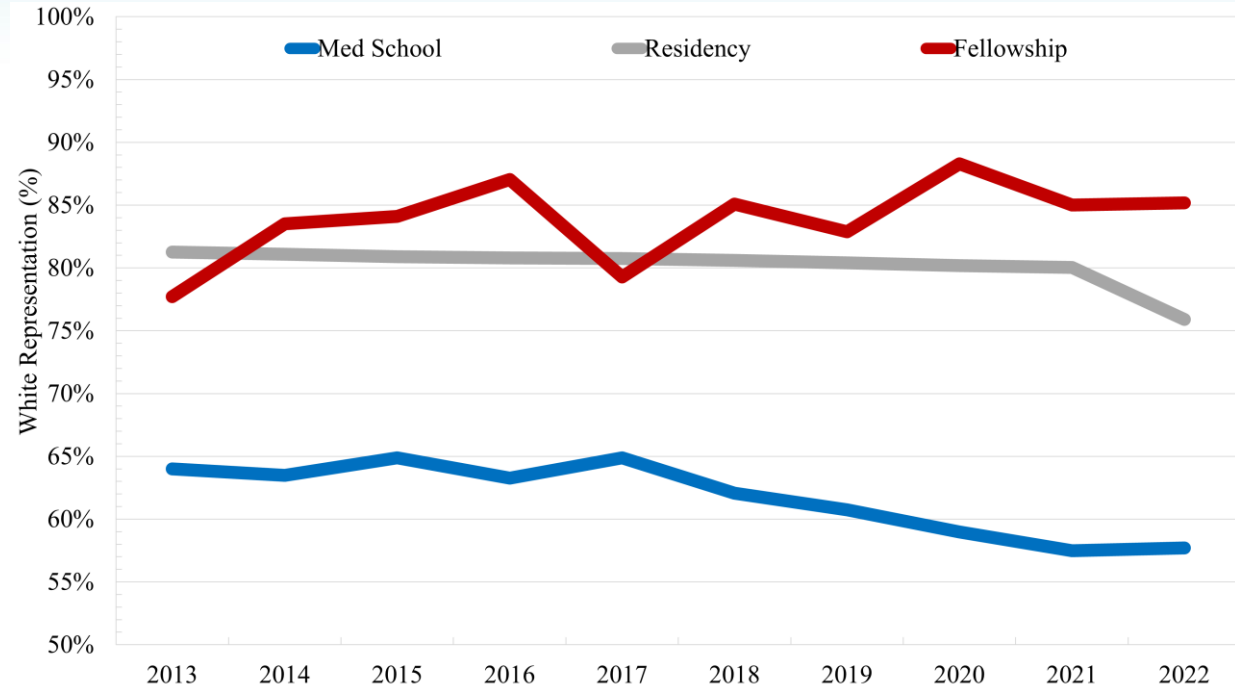
# Results

- The representation of Asian trainees decreased at each stage of the training pipeline ( $P < 0.001$ )
- Asian trainees increased among allopathic medical school graduates (22.9% to 25.7%,  $P < 0.001$ ), orthopaedic surgery residents (13.3% to 14.0%,  $P = 0.076$ ), and decreased among orthopaedic sports medicine fellows (16.6% to 5.6%,  $P = 0.173$ )



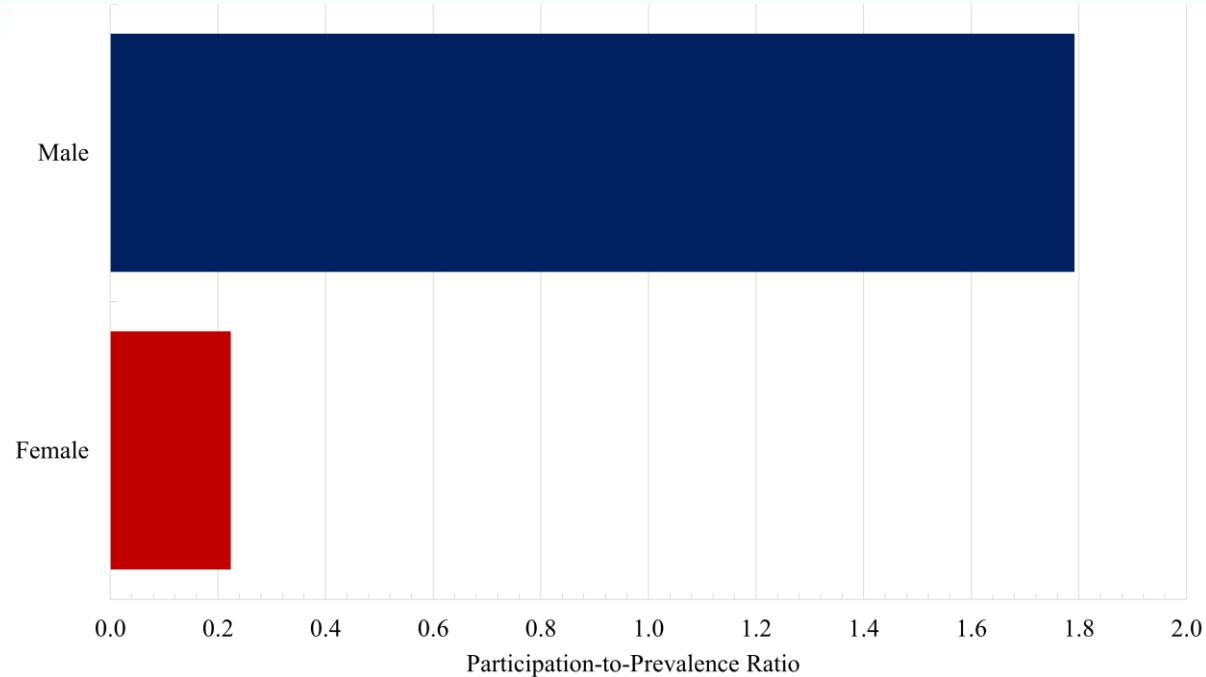
# Results

- The representation of White trainees increased at each stage of the training pipeline ( $P < 0.001$ )
- White trainees decreased among allopathic medical school graduates (64.7% to 58.9%,  $P < 0.001$ ), orthopaedic surgery residents (81.3% to 75.9%,  $P < 0.001$ ), and increased among orthopaedic sports medicine fellows (77.7% to 85.2%,  $P = 0.122$ )

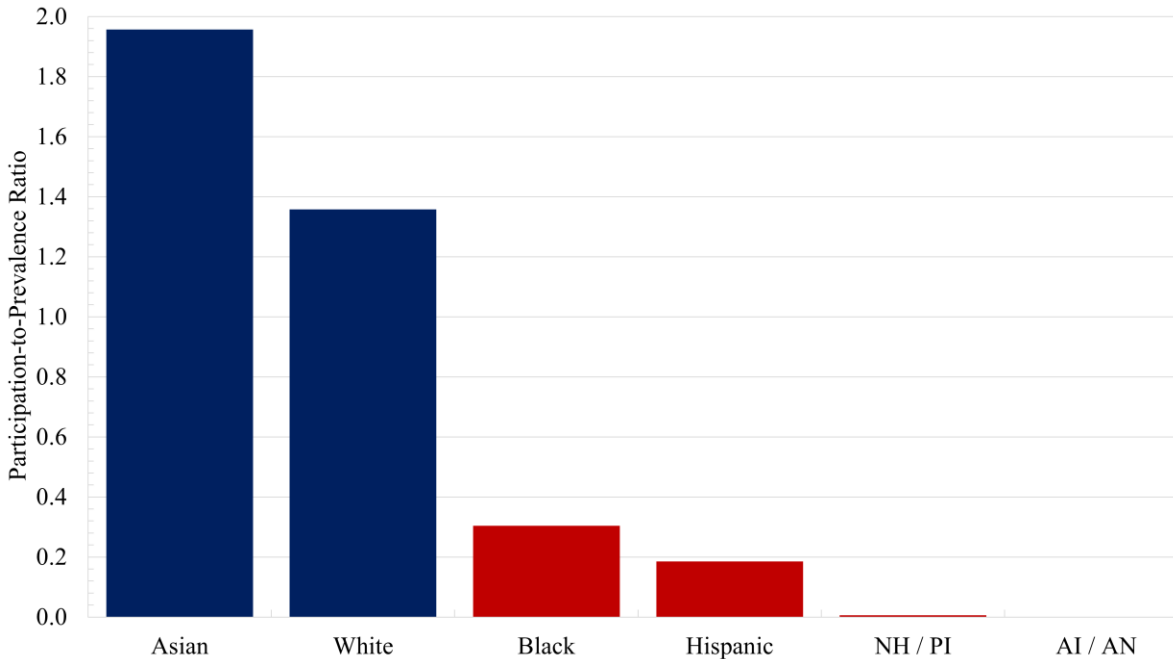


# Results

- Female trainees were underrepresented relative to the US population (PPR=0.22)
- In contrast, male trainees were overrepresented relative to the US population (PPR=1.79)



# Results



- Racial and ethnic minorities were underrepresented in orthopaedic sports medicine
  - PPR (Black) = 0.30
  - PPR (Hispanic) = 0.19
  - PPR (Native Hawaiian/Pacific Islander) = 0.01
  - PPR (Native American/Alaskan Native) = 0.00



# Discussion

- Female, Hispanic, Black, NH/PI, and NA/AN surgeons are underrepresented in the emerging orthopaedic sports medicine workforce
- More work is needed to engage faculty, program directors, and professional organizations in orthopaedic sports medicine to create longitudinal recruitment efforts that promote diversity and inclusion in the specialty

