Do Surgery Residents Feel Pain?
A Survey Evaluating Musculoskeletal Pain in Residents After Operating

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Background:

- Occupational injuries have been studied in a variety of surgeons:
  - Specialties: general[1], orthopedic[2], plastic[3], ENT[4], GYN[5-6], ophthalmic plastic[7], and others
  - Types of surgery performed: laparoscopic[8-9], robotic[9-10], and seated[11]
- Occupational injuries or the exacerbation of unrelated injuries in surgeons does not always prompt medical attention[12]
- These studies' subjects are almost always attending surgeons
- Surgical residents are a unique population, compared to attending surgeons:
  - Younger
  - More female trainees
  - Training with different types of surgery and more minimally invasive cases than earlier decades[13]
  - May be less likely to request time off for medical attention[14]

Objectives:

- This study addresses:
  - whether general surgery residents experience musculoskeletal pain that is worse after operating
  - how likely they are to seek medical attention for this complaint
- This study generates areas to focus on in resident education and wellness

Methods:

- Cross-sectional, anonymous, electronic survey in 2016
- Single institution
- Examined:
  - the residents' perception of musculoskeletal pain after operating
  - if residents sought medical attention
  - whether specific operative/procedural instruments were regarded as uncomfortable using a 5 point Likert scale

Demographics:

- General surgery and non/designated preliminary surgery residents at the Yale School of Medicine
- 101 surveys with an 81% response rate
- 65.8% male, 34.1% female
- Mean age was 29 years
- 60.9% non-Hispanic White, 19.5% Asian

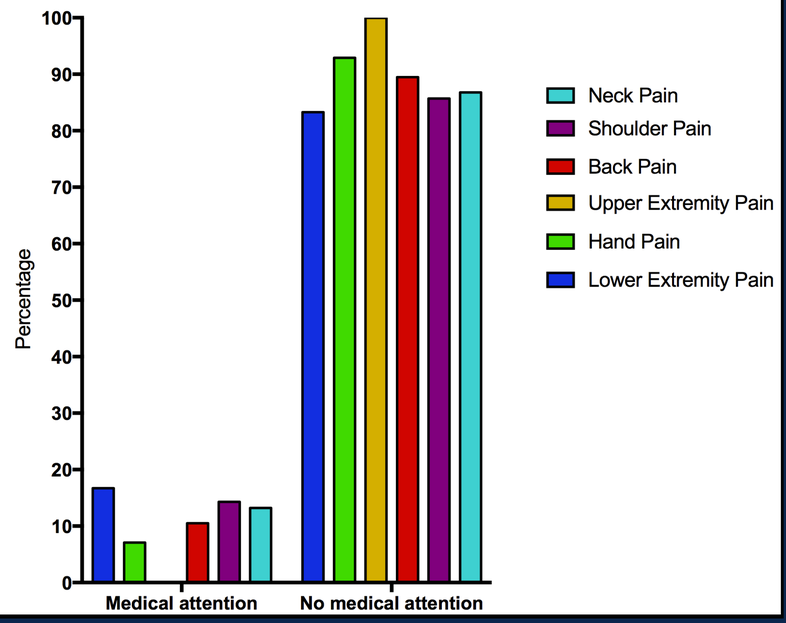
Junior Residents are more likely to experience shoulder pain after operating (32.1% vs 10.3%, p = 0.022)

Female residents more likely than male to find these instruments less comfortable:

Instrument	Gender	Mean Rank*	p-value
Lower GI endoscopes	Male	2.96	
	Female	3.48	0.049
Endoscopic Surgical Staplers	Male	2.17	
	Female	2.81	0.010
Open Surgical staplers	Male	1.77	
	Female	2.61	0.002
Foot pedals	Male	2.38	
	Female	3.00	0.019

* 1 = Extremely comfortable … 5 = Extremely uncomfortable

Percentage of residents with pain after long OR cases who have sought medical attention for their pain



No gender difference in pain or in seeking medical attention (med attn)

	Pain	No pain	Total
Male	41 (73.2%)	15 (26.8%)	56
Female	22 (75.9%)	7 (24.1%)	29
Total	63	22	85

p = 0.504

	Med attn	No med attn	Total
Male (with pain)	4 (9.8%)	37 (90.2%)	41
Female (with pain)	2 (9.1%)	20 (90.9%)	22
Total	6	57	63

p = 0.653

Conclusions:

- Junior residents are more likely than senior residents to experience shoulder pain after operating
- Female residents are more likely than male residents to find a variety of instruments uncomfortable
- There is a disconnect between residents experiencing pain and seeking medical attention

Next Steps:

- Targeted ergonomics education, especially for junior residents
- Designing and implementing alternate instruments
- Identifying and reforming factors responsible for > 90% of residents who experience pain not seeking medical attention

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