HOW IS A SUCCESSFUL ACADEMIC SURGEON SUPPOSED TO LOOK AND SOUND LIKE?

I Gendelman MD[1], S Park MD, MS[1], H Gurley MD[1], J Castro [1], T Schnelldorfer MD, PhD[1]

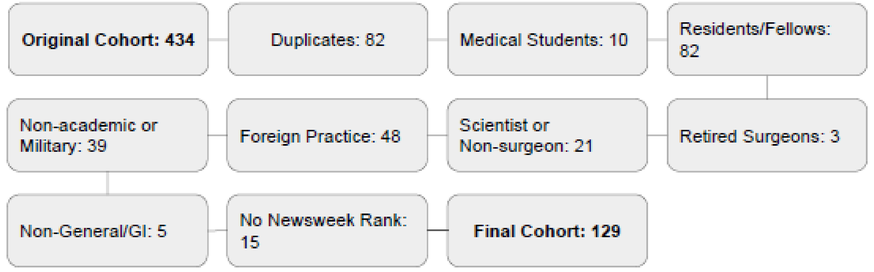
[1]Tufts Medical Center, Surgical Imaging Lab, Boston, MA

INTRODUCTION

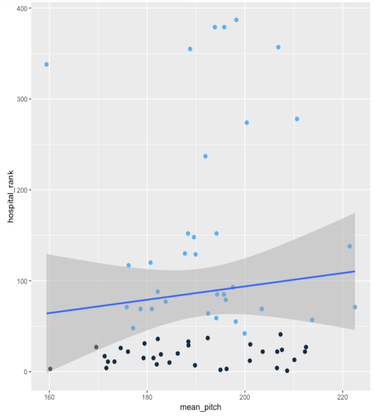
- Decisions about career advancement and hiring in academic surgery can be subject to biases
- Efforts to mitigate some of the better known biases (race and gender), while other biases have not been assessed
- This study evaluated potential bias indicators among academic general and GI surgeons to determine if factors were associated with employment at a top academic hospital.

METHODS

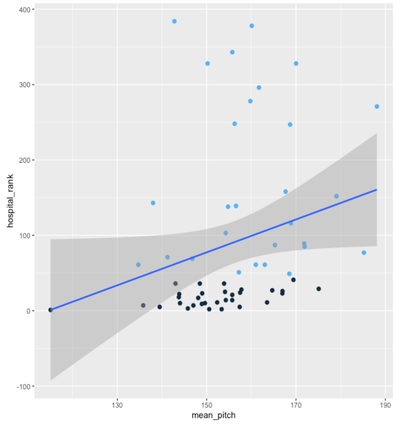
- Academic general and GI surgeons presenting at 2022 SAGES meeting were divided into 2 groups
  - Employed at top-10% hospital as ranked by Newsweek vs those who were not
- Surgeons had to have podium presentations and recorded video had to be available
  - Surgeon's image and voice samples were gathered
- Image processing used to measure surgeon's relative height, estimated BMI, skin tone, 9 validated facial geometric features associated with beauty, leadership, maturity, and trustworthiness
- Perceived US census race was determined using NAMSOR name-origin tool



Women pitch and rank



Men pitch and rank



Results

- No significant difference in gender, height, BMI, skin tone, perceived-name-race, or facial features associated with beauty, leadership, maturity, and trustworthiness
- Mean voice pitch for male surgeons from Newsweek top 10% hospital was significantly lower by -8.7Hz (p=0.008)
- Mean voice pitch for female surgeons from Newsweek top 10% hospital was lower by -3.4Hz.(p=0.317)

Parameter	p-value	Top 10% mean	Non Top 10% mean	Δ
All Genders				
Relative Height	0.697	0.915	0.926	0.011
WHR	0.584	2.172	2.152	-0.021
CJWR	0.908	1.238	1.237	-0.002
PAR	0.227	0.085	0.089	0.004
FWLFH	0.95	1.189	1.19	0.001
Mean ITA	0.491	13.922	18.032	4.11
Mean Pitch	0.074	171.334	178.384	7.05
REH	0.104	0.122	0.132	0.01
Face Elongation	0.89	1.343	1.34	-0.003
Men				
Relative Height	0.664	1.001	1.017	0.017
WHR	0.739	2.131	2.113	-0.018
CJWR	0.813	1.237	1.231	-0.007
PAR	0.114	0.081	0.089	0.007
FWLFH	0.972	1.18	1.181	0.001
Mean ITA	0.427	10.742	3.849	-6.893
Mean Pitch	0.008	151.977	160.687	8.71
REH	0.381	0.121	0.13	0.009
Face Elongation	0.996	1.36	1.36	0
Women				
Relative Height	0.865	0.841	0.846	0.005
WHR	0.572	2.213	2.184	-0.03
CJWR	0.927	1.24	1.242	0.002
PAR	0.909	0.089	0.09	0.001
FWLFH	0.994	1.198	1.198	0
Mean ITA	0.099	16.739	29.713	12.974
Mean Pitch	0.317	189.519	192.958	3.439
REH	0.145	0.122	0.133	0.011
Face Elongation	0.916	1.326	1.324	-0.003

Conclusion

- On average, top ranked academic GI surgery employ diverse looking surgeons
- Study does suggest they tend to employ male surgeons with deeper voices
- Further studies are required and further validation in other data samples are required as well to assess all potential biases affecting surgical career advancements