

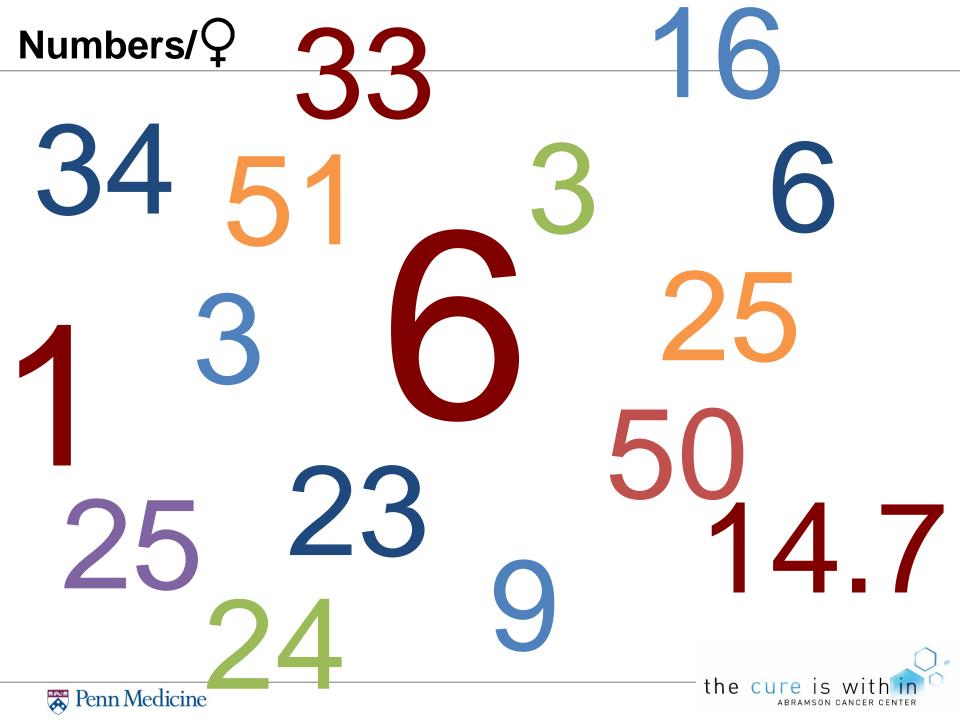
Women in Orthopaedics and Implicit Bias

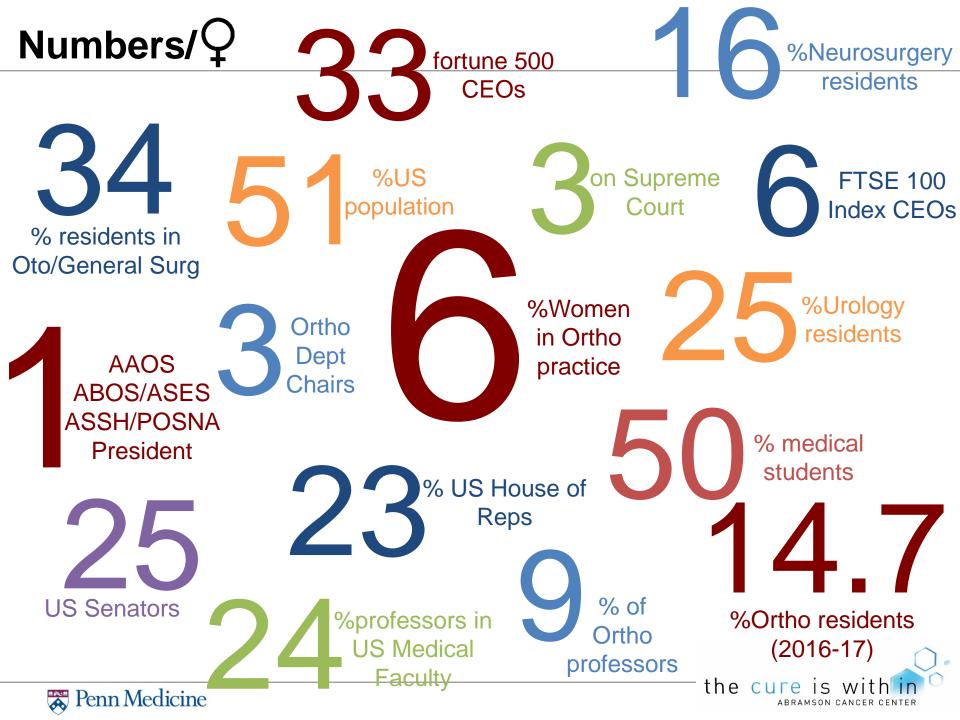
Oregon Association of Orthopaedic Surgeons

November 1, 2019

Kristy Weber, MD Professor - U Penn Orthopaedics AAOS President







Why Diversity Matters in Orthopaedics

- More striking disparity in gender/race
- Field does not reflect our patients
- We are missing out on the best and brightest
- Risk of losing relevance to prospective surgeons and patients

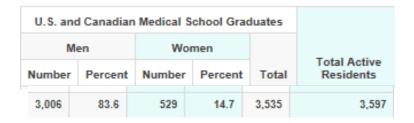
Critical assumptions:

- People have equal rights regardless of differences
- Applicants who meet/exceed the criteria for selection into Ortho Residency programs are equally recruited and have the potential to become competent Ortho surgeons
 - Board scores, Core Clerkships, Research, Volunteer service, Letters of Ref





Women Residents in Surgical Specialties



2016-2017 Orthopaedic Surgery

*14.7%

Wide variation in academic departments of those considered underrepresented



%Women in Other Specialties

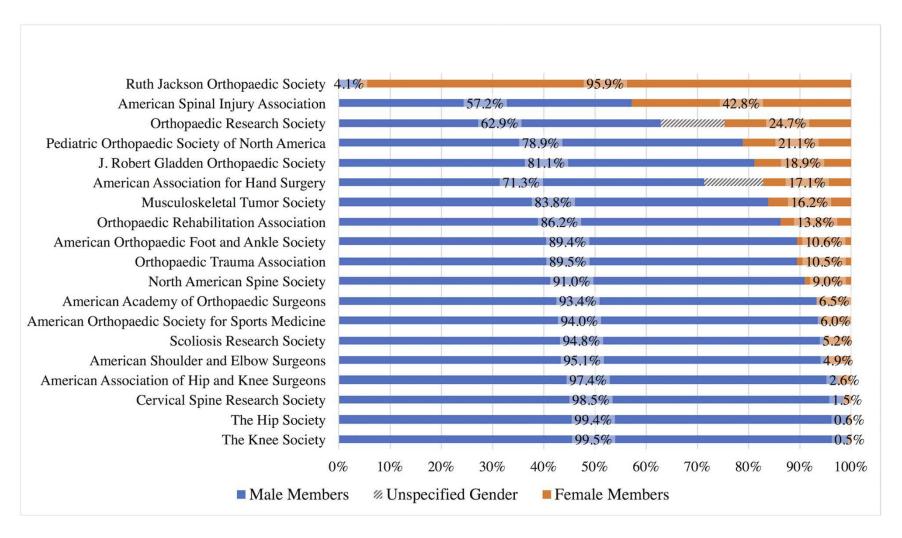
Colorectal Surgery –	36.6%
General Surgery –	34.4%
Otolaryngology –	34.3%
Vascular Surgery –	28.3%
Plastic Surgery –	25.6%
Urology –	25.3%
Thoracic Surgery –	20.6%
Neurosurgery –	16.4%

Self fulfilling prophecy





Sex Demographic Data of Ortho Specialty Societies - 2017



Chambers CC, JBJS 2018



If Diversity Matters......How do we get there?

- Define 'there'.....
- KW when there are no barriers to admission of qualified applicants to residency and to leadership roles(to check the 'box')
- Dilemma:
- 1. Recruit more women/URM **Culture Change**
 - More role models (Can't be what you can't see)*
 - Increase the pipeline (Perry Initiative and Nth Dimensions)*
 - Ortho rotations/lectures in medical school

- Recruit more women/URM 2. Culture Change
 - RJOS/Gladden societies*
 - ICLs/Symposia/Grand Rounds*
 - Need white men to champion
 - Captive audience for exposure (ASES, COA, etc)





Perry Initiative





Orthopaedic Pipeline Programs

Clin Orthop Relat Res (2016) 474:1962–1966 DOI 10.1007/s11999-016-4908-y Clinical Orthopaedics and Related Research®



SYMPOSIUM: WOMEN AND UNDERREPRESENTED MINORITIES IN ORTHOPAEDICS

The Perry Initiative's Medical Student Outreach Program Recruits Women Into Orthopaedic Residency

Lisa L. Lattanza MD, Laurie Meszaros-Dearolf PhD, Mary I. O'Connor MD, Amy Ladd MD, Amy Bucha BE, Amy Trauth-Nare PhD, Jenni M. Buckley PhD

Published online: 31 May 2016 © The Association of Bone and Joint Surgeons® 2016

Abstract

Background Orthopaedic surgery lags behind other surgical specialties in terms of gender diversity. The percentage of women entering orthopaedic residency persistently remains at 14% despite near equal ratios of women to men in medical school classes. This trend has been attributed to negative perceptions among women medical students of workplace culture and lifestyle in orthopaedics as well as lack of exposure, particularly during medical school when most women decide to ente the field. Since 2012, The Perry Initiative, a nonprot organization that is focused on recruiting and retaining women in orthopaedics, had conducted extracurricult outreach programs for first- and second-year female medical students to provide exposure and mentorin opportunities specific to orthopaedics. This program, calle the Medical Student Outreach Program (MSOP), is ongoing at medical centers nationwide and has reached over 30 cm of the provided of the provided over 30 cm or 30 cm

Clin Orthop Relat Res (2016) 474:1979–1985 DOI 10.1007/s11999-016-4846-8





SYMPOSIUM: WOMEN AND UNDERREPRESENTED MINORITIES IN ORTHOPAEDICS

Can a Strategic Pipeline Initiative Increase the Number of Women and Underrepresented Minorities in Orthopaedic Surgery?

Bonnie S. Mason MD, William Ross MD, Gezzer Ortega MD, MPH, Monique C. Chambers MD, MSL, Michael L. Parks MD

Published online: 25 April 2016

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Abstract

Background Women and minorities remain underrepresented in orthopaedic surgery. In an attempt to increase the diversity of those entering the physician workforce, Nth Dimensions implemented a targeted pipeline curriculum that includes the Orthopaedic Summer Internship Program. The program exposes medical students to the specialty of orthopaedic surgery and equips students to be competitive applicants to orthopaedic surgery residency programs. The effect of this program on women and underrepresented minority applicants to orthopaedic residencies is highlighted in this article.





2019-2020 Penn Women Residents/Faculty



Residents

2017: 26%

2018: 31%

2019: 31%

Definitions

- ◆ Explicit Bias: Reflection of conscious attitudes or set beliefs which people are usually unwilling to change
- Implicit (Unconscious) Bias: Reflection of unconscious attitudes or stereotypes that affect individual decisions and actions

Microaggression

- Casual degradation of any marginalized group
- Brief everyday exchanges that send denigrating messages to certain individuals because of their group membership — Derald Wing Sue (psychologist)

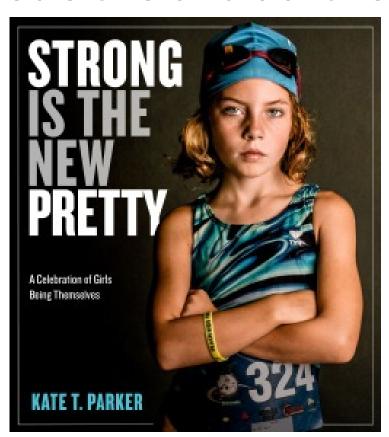




Implicit (Unconscious) Bias

 Implicit (Unconscious) Bias: Reflection of unconscious attitudes or stereotypes that affect individual decisions and actions

You are really 'strong for a girl'.....



Has this happened to you?



Dr. Wilson

Kristy





Implicit Bias in Patient Care



"We're doing everything we can to make him comfortable, short of dressing up as male doctors."



Implicit Bias

- Universal
- Compelling body of scientific evidence
- Human survival identify friend vs foe
- Human mind quickly/automatically categorize people (provides order)
- Categorization foundation of stereotypes
- Resistance to change prejudice
 - Despite evidence contrary to views
 - Embrace anecdotal experiences that reinforce bias





Implicit (Unconscious) Bias - Gender

Examples in Ortho:

- Avoid ranking residents who might get pregnant
- Different introductions during Grand Rounds for men/women
- Women residents assumed by patients to be nurses
- Persistence of 'wives events' at meetings
- Sexist names (sweetie, sugar, honey)
- Resident nights out at strip club/entertainment at meetings
- Golf outings for graduation (without other more inclusive events)
- Being spoken over or talked down to at meetings, in board rooms
- Not having, or being aware of, maternity leave/lactation policies

Speaker Introductions at Internal Medicine Grand Rounds: Forms of Address Reveal Gender Bias. – J Womens Health 2017



Surgeon Stereotype

Prescriptive Gender Norms

- Men = <u>Agentic</u> (decisive, competitive, ambitious, independent, willing to take risks)
- Women = <u>Communal</u> (nurturing, gentle, supportive, sympathetic, dependent)

- Social penalties for violating norms
 - Assertive women are less well liked
 - Women who reach positions of power/influence
 - 'style becomes an issue'
- Most effective leadership = <u>Transformational</u>



Managing Gender Stereotypes





Threading the needle......





NY Times – August 27, 2019 – "But is she likable enough?"

"Women who behave in authoritative ways risk being disliked as insufferable prima donnas, pedantic schoolmarms or witchy women."

— **Joan C. Williams**, professor of law, on the "likability trap" that continues to plague powerful women

"Likability Trap"

"Gender Judo"

"It's not <u>women</u> who are the problem. It's that we still define leadership in male terms."

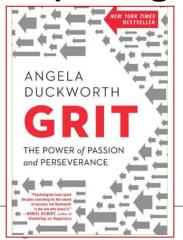
Sylvia Ann Hewlett - economist





Grit/Resilience related to Bias in Orthopaedics

- Potential for Bias is increased in current culture
- Those in the minority are not as advantaged
- Grit/resilience critical for success/staying power
- Grit alone is not enough (change the environment)







Implicit Bias

- Different than conscious intention
- Different than stated values/beliefs
- Reflects a wealth of assumptions about people (based on experiences)
- Predicts nonverbal behavior (+ comments)
- May impact how we see another person
- Downstream effects on decisions

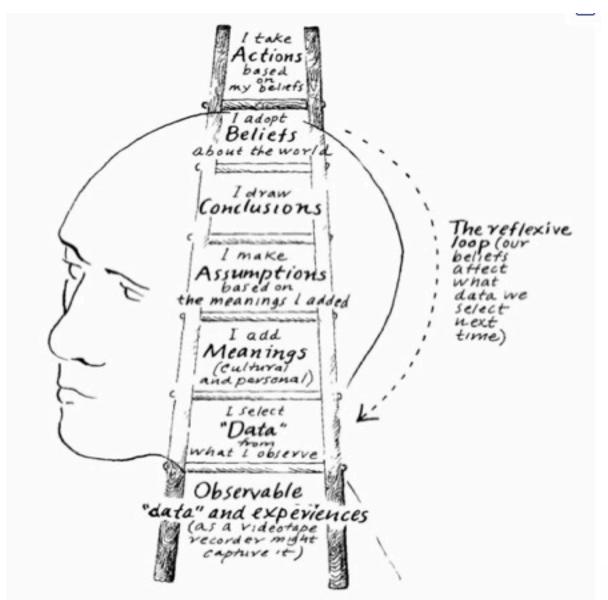
 Key step – individual chooses to explore attitudes toward others







Ladder of Inference





ABRAMSON CANCER CENTER

Ladder of Inference – Ortho Example

- Ortho Residency 21M/4F
- 1 female resident has 2 young kids
- 8 male residents have young kids
- All residents/faculty are at Dept picnic with families
- You focus preferentially on female resident with 2 kids | Select data
- "Woman is likely spending much of her time outside of work caring for children"
- "She must not be spending time preparing for cases or OITE"
- "She must not be as competent as male residents or residents without children"
- "Her OITE scores are probably low"
- Develop belief that women don't perform as well as men in orthopaedics
- This bias affects how potential female resident candidates are viewed during selection

Observed facts

Add meaning

MakeAssumption

Conclusion

Form belief

Allows us to ignore the facts

Implicit Bias

- When the author's gender is known, women are less likely to have their publications accepted (Budden et al. Trends Ecol Evol 2008)
- ◆ Women faculty are provided fewer institutional resources and lower pay (Lo Sasso et al Health Affairs 2011, Ash et al Ann intern Med 2004, Tesch et al JAMA 1995)
- Women faculty are more likely to be assigned 'institutional housekeeping' duties (DesRoches et al Acad Med 2010, Shollen et al Acad Med 2009)
- ◆ Letters of recommendation for women faculty are shorter, have more references to personal life, and contain fewer 'outstanding' descriptors (Trix & Psenka Discourse & Soc 2003)

WISELI 2010



Change the Habit of Gender Stereotype Bias

- What You Don't Know: The Science of Unconscious Bias –
 AAMC (video)
- Bias Literacy learn types of bias in academic settings
 - Expectancy bias
 - Prescriptive gender norms
 - Occupational role congruity
 - Redefining credentials
 - Stereotype priming
 - Stereotype threat
- Overcome bias with evidence-based strategies
 - Stereotype replacement
 - Positive counterstereotype imaging
 - Perspective taking
 - Individuation
 - Increasing opportunities for contact with counterstereotypic exemplars





Positive Data About Women in Medicine

JAMA Internal Medicine | Original Investigation

Comparison of Hospital Mortality and Readmission Rates for Medicare Patients Treated by Male vs Female Physicians

Yusuke Tsugawa, MD, MPH, PhD; Anupam B. Jena, MD, PhD; Jose F. Figueroa, MD, MPH; E. John Orav, PhD;

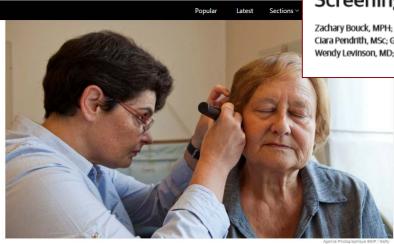
Daniel M. Blumenthal, MD, MBA; Ashish K. Jha, MD, MPH



Original Investigation | Health Policy

Physician Characteristics Associated With Ordering 4 Low-Value Screening Tests in Primary Care

Zachary Bouck, MPH; Jacob Ferguson; Noah M. Ivers, MD, PhD; Eve A. Kerr, MD, MPH; Kaveh G. Shojania, MD; Min Kim, MSc; Peter Cram, MD, MBA; Ciara Pendrith, MSc; Graham C. Mecredy, MSc; Richard H. Glazier, MD; Joshua Tepper, MD; Peter C. Austin, PhD, MSc; Danielle Martin, MD, MPP; Wendy Levinson, MD; R. Sacha Bhatia, MD, MBA



Evidence of the Superiority of Female Doctors

New research estimates that if all physicians were female, 32,000 fewer Americans would die every year.







Minimizing Implicit Bias – What can 'you' do?

Self awareness

 Recognition that bias exists and awareness of your own blind spots and hot buttons (take the IAT)

Slow Down

 We are most prone to bias when work quickly, are stressed or tired

Transparency and Inquiry

- Make your assumptions, perspective and data clear to yourself and, if appropriate, the other person
- MRI Most Respectful Interpretation, taking the other person's perspective
 - From Nancy Rothbard, Professor of Management, Wharton School, Leadership Edge





Implicit Bias can be Measured



Project Implicit®

LOGIN TAKE A TEST ABOUT US EDUCATION BLOG HELP CONTACT US DONATE

Implicit Association Test

*People favor men, white, youth, physically able

*Men linked with sciencewomen with liberal arts

*Unconscious gender bias found in men and women

Age ('Young - Old' IAT). This IAT requires the ability to distinguish old from young faces. This test Age IAT often indicates that Americans have automatic preference for young over old. Disability ('Disabled - Abled' IAT). This IAT requires the ability to recognize symbols representing Disability IAT abled and disabled individuals. Weapons ('Weapons - Harmless Objects' IAT). This IAT requires the ability to recognize White Weapons IAT and Black faces, and images of weapons or harmless objects. Presidents ('Presidential Popularity' IAT). This IAT requires the ability to recognize photos of Presidents IAT Donald Trump and one or more previous presidents. Asian American ('Asian - European American' IAT). This IAT requires the ability to recognize Asian IAT White and Asian-American faces, and images of places that are either American or Foreign in origin. Religion ('Religions' IAT). This IAT requires some familiarity with religious terms from various Religion IAT world religions. Gender - Career. This IAT often reveals a relative link between family and females and between Gender-Career IAT career and males. Gender - Science. This IAT often reveals a relative link between liberal arts and females and between Gender-Science IAT science and males Arab-Muslim ('Arab Muslim - Other People' IAT). This IAT requires the ability to distinguish Arab-Muslim IAT names that are likely to belong to Arab-Muslims versus people of other nationalities or religions. Sexuality ('Gay - Straight' IAT). This IAT requires the ability to distinguish words and symbols Sexuality IAT representing gay and straight people. It often reveals an automatic preference for straight relative to gay people. Skin-tone ('Light Skin - Dark Skin' IAT). This IAT requires the ability to recognize light and dark-Skin-tone IAT skinned faces. It often reveals an automatic preference for light-skin relative to dark-skin. Race ('Black - White' IAT). This IAT requires the ability to distinguish faces of European and Race IAT African origin. It indicates that most Americans have an automatic preference for white over black. Weight ('Fat - Thin' IAT). This IAT requires the ability to distinguish faces of people who are obese Weight IAT and people who are thin. It often reveals an automatic preference for thin people relative to fat people. Native American ('Native - White American' IAT). This IAT requires the ability to recognize White Native IAT

and Native American faces in either classic or modern dress, and the names of places that are either

Copyright © Project Implicit

American or Foreign in origin.

https://implicit.harvard.edu/implicit/education.html



Addressing Gender Bias in Ortho: 1 on 1

Women

- Find ways to constructively educate colleagues about disrespectful comments
- Be clear and confident
- Consider humor, don't lecture or whine

Men

- Don't be defensive if woman (esp trainee) provides feedback
- Ask about the minority perspective listen
- Make an effort to change behavior

*There can also be same sex gender bias...





Mentoring Women Ortho in the #MeToo Era

- Fear/concern
 - Women of harassment



- Men of being accused of harassment
- Harder for women to find male mentors
 - Given the #s, women NEED male mentors
- Middle ground between inappropriate and avoiding mentoring
- Reality is complicated and nuanced



How does Bias play out in Orthopaedics?

- Culture of Ortho (medical student view)
 - Top women (and some men) students not impressed with locker room culture in OR – Be mindful/aware
- Residency Interviews
 - Ask questions about agility, decision-making in difficult situations....not about football
- Residency Training
 - Assumption that women aren't tough or strong enough False
- Faculty hire
 - Lack of women Include ♀ on search committee/interviews
- Promotion and Tenure
 - Penalty for women who take time to have children or have disproportionate caregiving responsibilities – Amend policy
- Private Practice
 - Lack of women partners Ask why/consider flex policies





Including Women at the Table Changes the Conversation

POLITICS

13 Men, and No Women, Are Writing New G.O.P. Health Bill in Senate





By ROBERT PEAR MAY 8, 2017



the cure is within

NIH Director Francis Collins: I won't go on another all-male panel

The "manel" is a longstanding problem for women in STEM — and for science itself.

By Sigal Samuel | Jun 14, 2019, 2:30pm EDT

NATIONAL

California Becomes 1st State To Require Women On Corporate Boards

October 1, 2018 · 4:47 PM ET

Home > EEOC > 2019 - "The Year Of the Woman" in Employment Law

2019 – "The Year Of the Woman" in Employment Law

By Barbara E. Hoey and Diana R. Hamar on February 21, 2019

Posted in Discrimination, EEOC

NEWS & ANALYSIS > ASAP

Hawaii Joins Salary History Ban Trend

By William J. Simmons, Martha J. Keon and Judy M. Iriye on July 6, 2018







Culture Change

Structural/Institutional

- Policies
 - parental leave, eligibility for leadership roles, academic promotion rules, flexibility, women at table
- Pay Inequities
- Traditions
 - ortho organizational leadership, graduation activities, 'majority culture'
- Discuss diversity/inclusion captive audience
- AAOS change volunteer structure/bias training/leadership training





Early 1970s – Orchestra Auditions

- Introduction of a screen to 'blind' selections to orchestra
- Use of a committee rather than sole evaluator
- Instructed women to remove shoes
- More women advanced through auditions
 - Increased likelihood of ~50%
- Should other opportunities be 'blinded'?

How blind auditions help orchestras to eliminate gender bias

To get more women into their ranks, many orchestras use blind auditions where musicians perform behind a screen. Could we replicate this in business?



▲ The number of female musicians in orchestras has increased since blind auditions became commonplace Photograph: Lebrecht Music And Arts Photo Li/Alamy

Rias cannot be avoided we just can't belo ourselves. Research shows that we



AAOS 2018 Work Culture Survey

Member Group	Invited
Resident	1565
Candidate Member	646
Fellow	2937
Emeritus Fellow	490
Total	5638

Role	Responded	
Department/Division Head	125	
Trainee Supervisor	55	
Attending Physician/Surgeon	662	
Clinical Team Member	57	
Trainee-Resident Fellow	204	
Other Clinical Role	46	
Non-Clinical Role	52	

Ethnicity	Invited*
African American	311
Asian	177
Caucasian	1705
Hispanic/Latino	296
Other	83

Survey Data: Career Stage Q.6	Responded
Residency Training/Fellowship	197
In Practice 1-5 years	164
In Practice 6+ years	514
Retired	45
Other	7
Total	927

Career Stage	Responded	Percent
Residency Training/Fellowship	197	21%
In practice 0-10 years	287	31%
In practice 11-20 years	188	20%
In practice 21 or more years	203	22%
Retired	45	5%
Other	7	1%
Total	927	100%

Gender	Invited	Responded	Response Rate
Female	2322	621	27%
Male	3316	305	9%

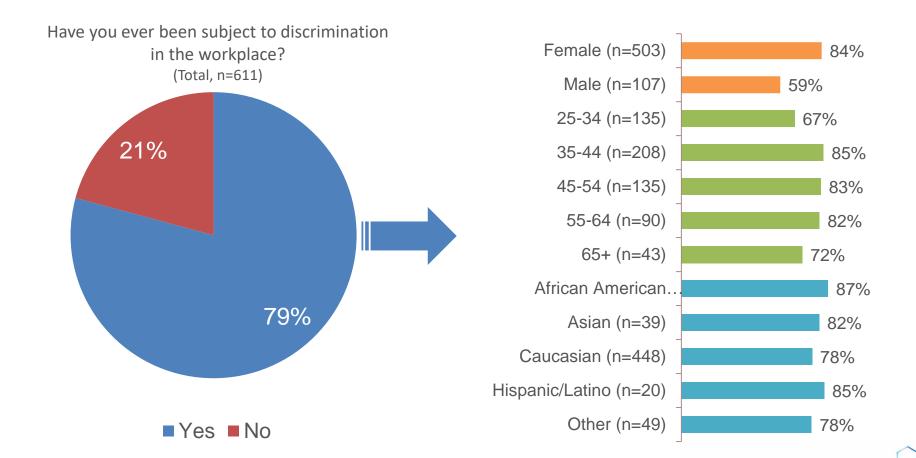
^{* 3,066} invited did not indicate ethnicity.





Discrimination: Demographics

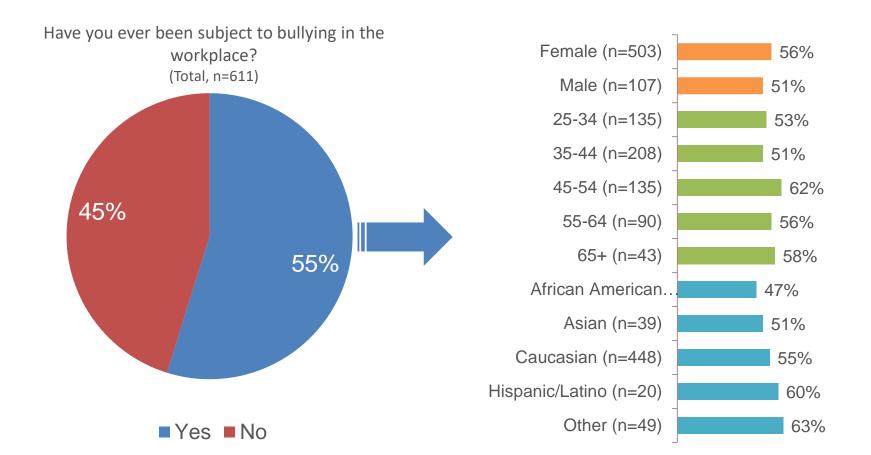
Nearly four in five members surveyed report discrimination in the workplace, with females more likely to do so. Additionally, members age 35-64 are more likely than younger members to report discrimination.





Bullying: Demographics

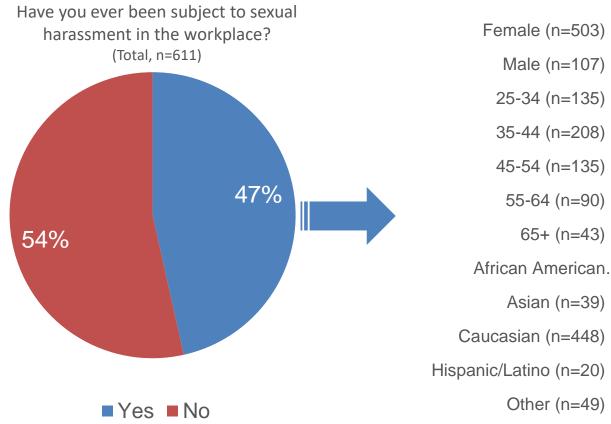
Over half of members surveyed reported bullying in the workplace, with female members aged 45-54 reporting this more frequently than those aged 35-44.

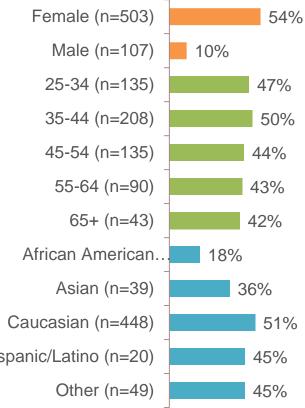




Sexual Harassment: Demographics

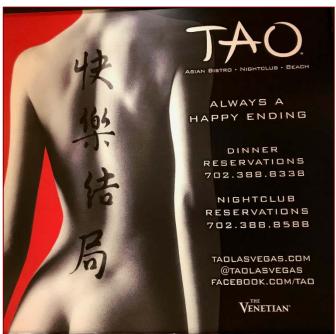
Close to half of members surveyed have been subject to sexual harassment in the workplace, with females far more likely to respond affirmatively. Additionally, members who are Caucasian or "Other" ethnicities are more likely than African American members to indicate sexual harassment occurred.











Cultural Disconnect





2019 – 2023 Strategic Plan

- New vision for the Academy
- 3 primary goals
- 4 key enablers
 - Advocacy
 - Communications
 - Partnerships
 - Technology

The Trusted Leaders in Musculoskeletal Health



Learn more at AAOS.org/StrategicPlan





AAOS Core Values

Leading to serve

- We relentlessly focus on enabling our profession to better serve our patients
- We mentor and support our members to drive excellence in musculoskeletal health
- We engage members, partners, and patients where they are, and lead them forward
- 4. We practice transparent decision-making and open communication

Shaping our future

- We use data and evidence to stay a step ahead
- 2. We advocate to promote quality musculoskeletal care
- We proactively embrace disruptors, and develop innovative products and services

Excellence together

- We empower and seek input from all people, not just the majority
- We acknowledge unconscious biases, and seek to address barriers to inclusion
- 3. We **collaborate** based on mutual respect and trust





September, 2019



Asia Australia Middle East Africa Inequality Cities Global development

A textbook case of sexism in medicine?

In a classic book on orthopaedics, photographs show male doctors examining smiling female patients in see-through underwear...





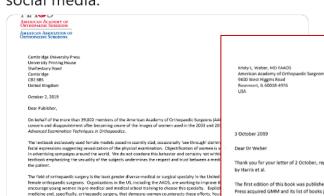
Figure 2.13 Testing the deltoid

Figure 2.14 Testing pectoralis major.

▲ Illustrations from the 2014 edition of Examination Techniques in Orthopaedics, published by Cambridge University Press. Photograph: Cambridge University Press

n case you are unaware of the potentially sexually charged atmosphe of an orthopaedic clinic, we point you in the direction of the erotic

(1/2) We'd like to thank our members who respectfully addressed the inappropriate images in the training textbook earlier this month. On behalf of our members, @AAOS1 President, Kristy Weber, MD wrote a letter based on the powerful conversation starters through social media.



message that women are viewed as objects, with an inappropriate focus on their appearance

We understand that Cambridge University Press has plans to publish a third edition of this textboo

mentions that you are reviewing the images to "ensure that they are appropriate and relevant to t necessary to demonstrate relevant areas of the musculoskeletal system, it should be done in a pro-

We denounce the prior editions of the text as degrading to women, eroding the trust in the medical

efforts to welcome all genders to the field of orthopaedic surgery. We look forward to understandinedition will correct these offenses.

Kristy L. Weber, MD, FAAOS

President, American Academy of Orthopaedic Surgeon

Thank you for your letter of 2 October, regarding the book Examination Techniques in Orthopaedics, edited by Harris et al.

The first edition of this book was published by Greenwich Medical Media in 2003, Cambridge University Press acquired GMM and its list of books just after that title was published. The Press asked the editors to replace the inappropriate images ahead of a second edition, which we published in 2014. It is clear however that the images in the second edition are still unacceptable. We deeply regret that this happened and have removed the current edition from sale. It will remain out of print (and unavailable for purchase in digital format) until a thoroughly revised third edition is produced.

We are working closely with the volume editors on the third edition, and there is a clear understanding that

We are confident that the steps in place to monitor the preparation of the third edition will ensure that the community's concerns are addressed, but we apologize unreservedly for the offense the previous editions have caused.

CAMBRIDGE UNIVERSITY PRESS

University Printing House Shaftesbury Road

Cambridge CB2 8BS, UK

www.cambridge.org

the new edition will contain no images that could be interpreted as portraying women in a potentially exploitative or sexualized role. Furthermore, we are insisting that a more diverse set of images and models is used for the third edition, including a balance of male and female doctors. Our in-house team will ensure that all images are carefully vetted and approved before production begins. Furthermore, all images in the book will be sent to a panel of both female and male orthopaedic surgeons to check that they are suitable for publication. As part of that process, we would welcome the opportunity to send the final proofs to a member (or members) of the AAOS of your choosing - we want to be sure that the orthopsedics community (including the AAOS) is happy with the content of the third edition.

I hope that this addresses your concerns, but do please let me know if you have further questions.

Penn Medicine

<u>1917</u>

Jeannette Rankin – Montana 1st F elected to federal office 128 yrs after 1st US Congress

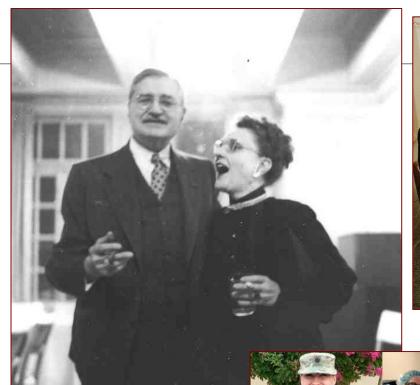


this Congress, which marks 100 years men won the right to vote, and as we



2019 127 F in US Congress (23.7%)









Final Thoughts - Homework

Consider another perspective

Challenge your assumptions

Practice once each day

