



Tomorrow's Doctors, Tomorrow's Cures®

Ensuring Safe and Equitable Environments in Academic Medicine

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**2019 AAMC Leadership Forum:
Washington, DC
June 18, 2019**

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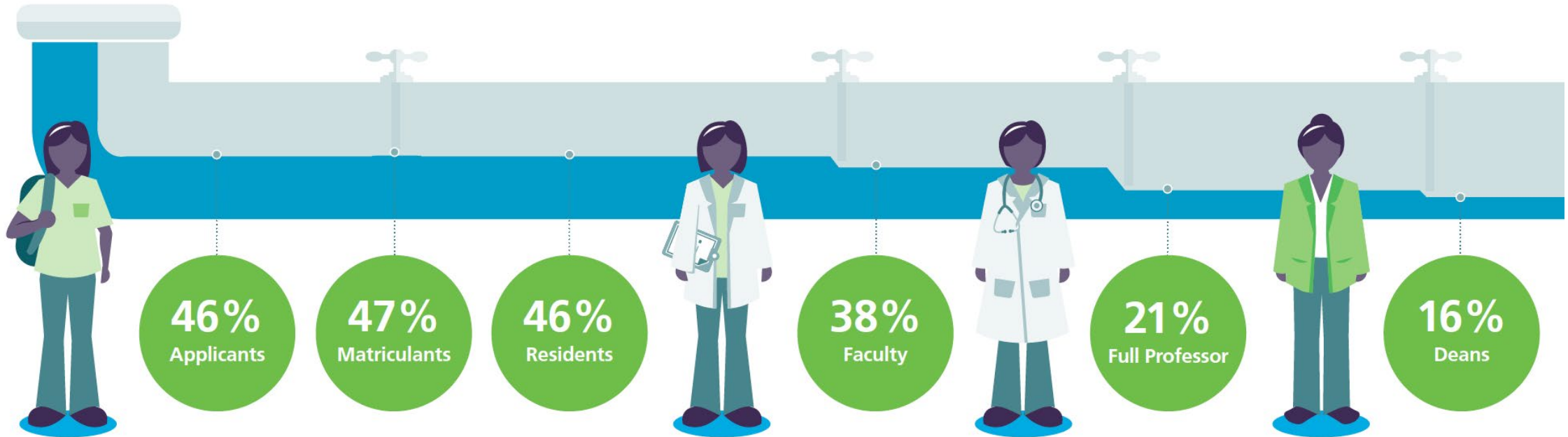


Association of
American Medical Colleges

Outline

- **Nature, importance, and causes of gender inequity in academic medicine**
 - Jeopardize the mission of AMCs
 - Not simply due to a slow pipeline
 - Rather, reflects the differential impact of
 - Unconscious biases
 - Gendered expectations of society
 - Harassment
- **Evidence-based interventions**

Women in Leadership



From AAMC, The State of Women in Academic Medicine: The Pipeline and Pathways to Leadership, 2013-14, Courtesy Diana Lautenberger

SPECIAL ARTICLE

The “Gender Gap” in Authorship of Academic Medical Literature — A 35-Year Perspective

Reshma Jagsi, M.D., D.Phil., Elizabeth A. Guancial, M.D.,
Cynthia Cooper Worobey, M.D., Lori E. Henault, M.P.H., Yuchiao Chang, Ph.D.,
Rebecca Starr, M.B.A., M.S.W., Nancy J. Tarbell, M.D.,
and Elaine M. Hylek, M.D., M.P.H.

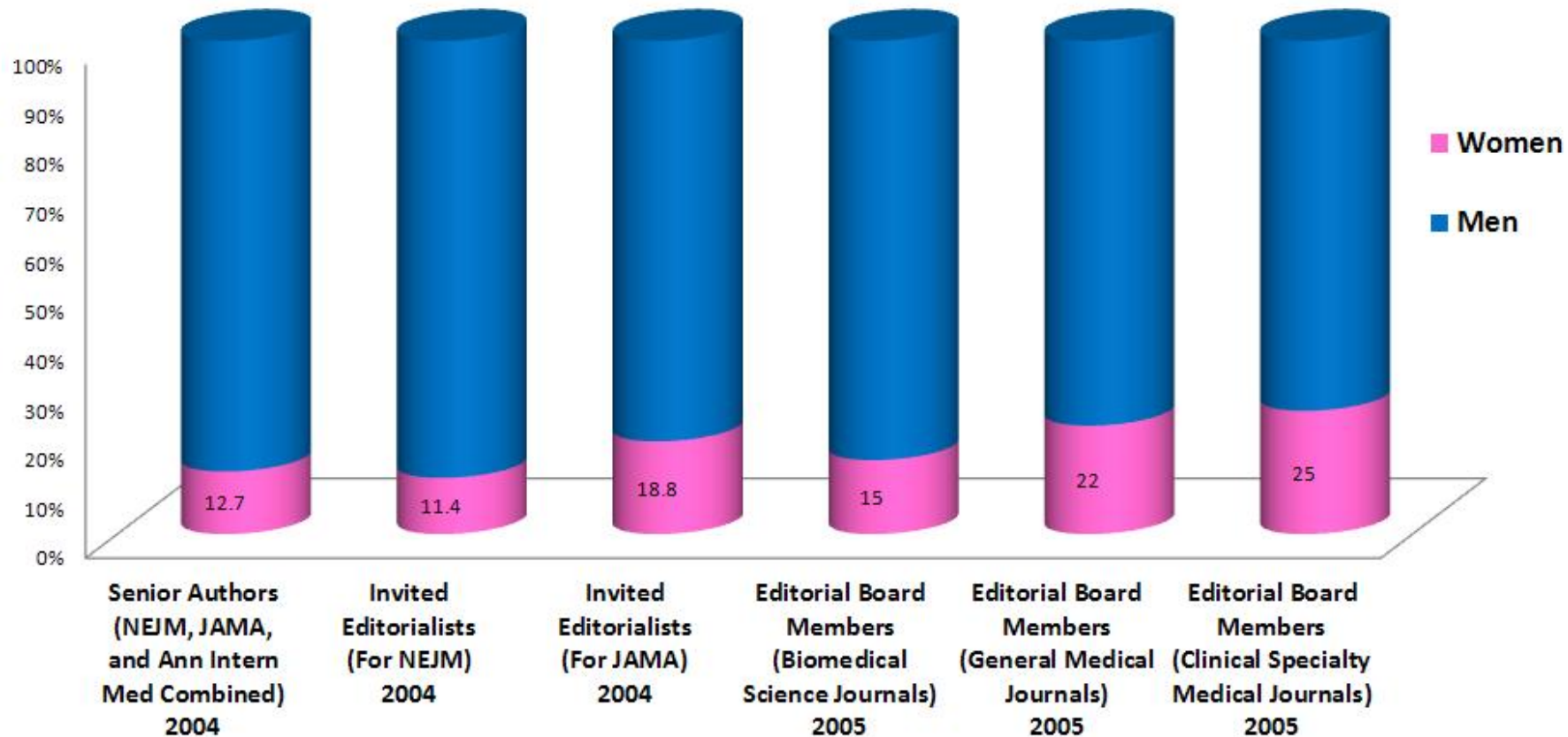
RESEARCH LETTER

Arch Intern Med. 2008;168(5):544-548.

The Representation of Women on the Editorial Boards of Major Medical Journals: A 35-Year Perspective

Reshma Jagsi, MD, DPhil
Nancy J. Tarbell, MD

Lori E. Henault, MPH
Yuchiao Chang, PhD
Elaine M. Hylek, MD, MPH



Consequences

- Both deontological and teleological arguments can be articulated about the need to promote gender equity
- In medicine, certain teleological arguments are highly compelling

Ethological observations of social behavior in the operating room



Laura K. Jones, Bonnie Mowinski Jennings, Melinda K. Higgins, and Frans B. M. de Waal

PNAS July 17, 2018 115 (29) 7575-7580; published ahead of print July 2, 2018 <https://doi.org/10.1073/pnas.1716883115>

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

PNAS

Proceedings of the
National Academy of Sciences
of the United States of America

Patient-physician gender concordance and increased mortality among female heart attack patients

Brad N. Greenwood, Seth Carnahan, and Laura Huang

PNAS published ahead of print August 6, 2018 <https://doi.org/10.1073/pnas.1800097115>

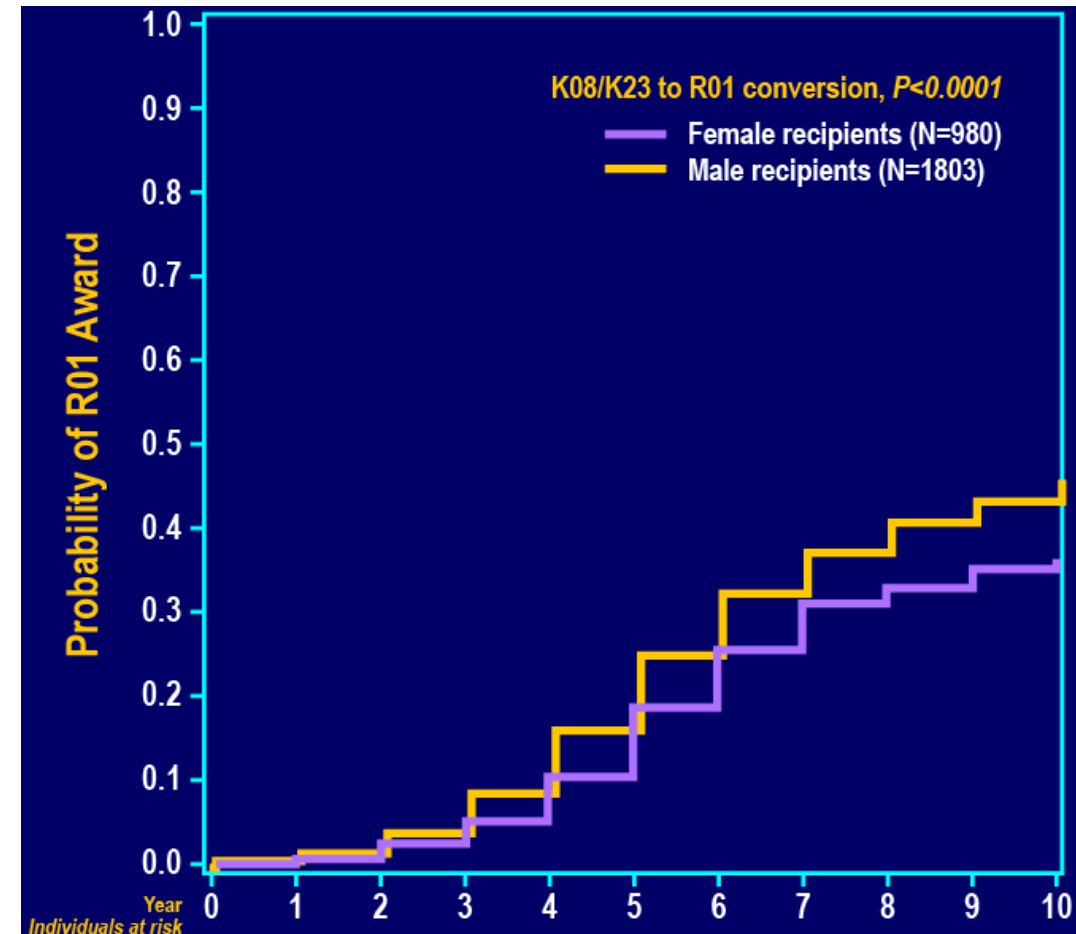
Should We Just Be Patient?

- **Pipeline hypothesis**
- **Nonnemaker** (*N Engl J Med* 2000;342:399-405)
 - 15 cohorts graduating medical school 1979-1993
 - proportion of women who advanced to associate professor significantly lower than expected in all but 2 of the 15 cohorts
 - even women who reached the rank of associate professor less likely to become full professor than male counterparts
 - criticisms
- **Need for further research**

Sex Differences in Attainment of Independent Funding by Career Development Awardees

Reshma Jagsi, MD, DPhil; Amy R. Motomura, BSE; Kent A. Griffith, MS; Soumya Rangarajan, MPP; and Peter A. Ubel, MD

- 5-yr rate of R01 attainment: 19% among women and 25% among men
- Gender (HR 0.8, $p=0.002$) independently significant predictor of R01 attainment on multivariable analysis controlling for K award type, year of award, funding institute, institution, and specialty



Compensation

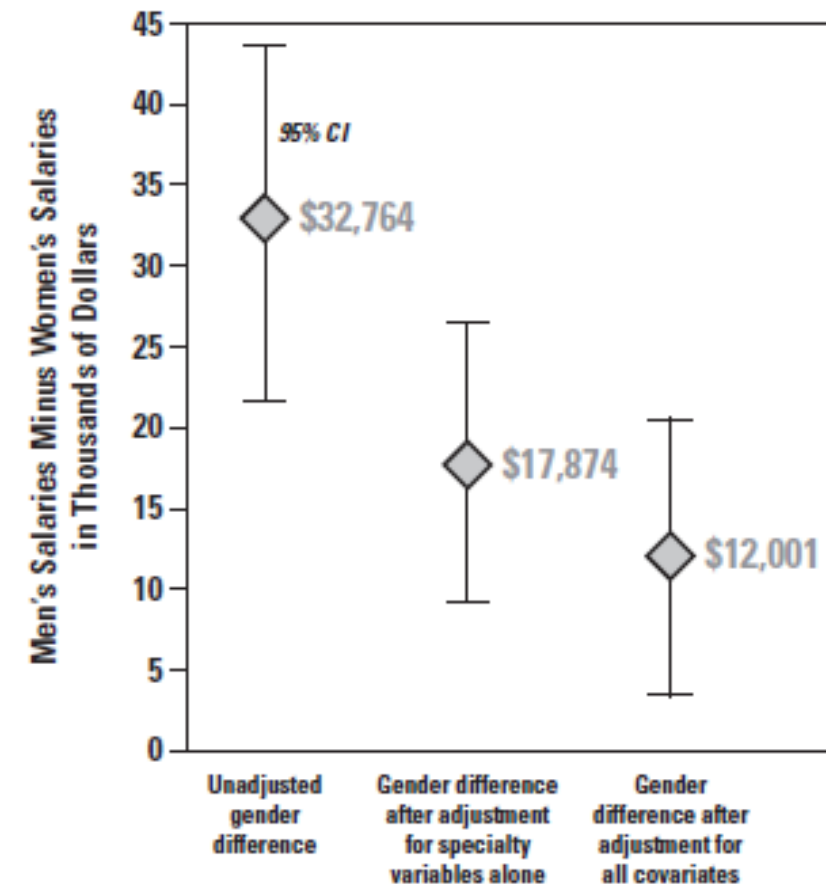
- 800 MDs who were still working at academic institutions responded to our surveys of K awardees from 2000-2003
- Significant gender difference in annual salary even after adjustment for numerous measures of success/productivity, specialization, and other factors
 - Age
 - Race
 - Marital status
 - Parental status
 - Additional doctoral degree
 - Academic rank
 - Leadership positions
 - Specialty
 - Current institution type (public/private)
 - Current institution region
 - Current institution NIH funding rank group
 - Whether changed institutions since K award
 - K award type
 - Years since K award
 - K award funding institute
 - Receipt of R01 or >\$1 million in grants
 - Publications
 - Work hours
 - Percent time in research

ORIGINAL CONTRIBUTION

JAMA The Journal of the
American Medical Association

Reshma Jagsi, MD, DPhil
Kent A. Griffith, MS
Abigail Stewart, PhD
Dana Sambuco, MPPA
Rochelle DeCastro, MS
Peter A. Ubel, MD

Gender Differences in the Salaries of Physician Researchers



What Drives These Differences?

- **Specialty “choice”**
 - Women may be encouraged to occupy lower-paid specialties, specialties chosen by women may pay less partly because they are predominated by women or involve less valued “feminine” behaviors
- **Differences in productivity, hours, and “willingness” to change institutions**
 - Constraints of a gender-structured society
- **Differences in rank and leadership**
 - May reflect biased processes for determining rewards
- **But a substantial unexplained gender difference remained even after accounting for all of these factors and more**

Gender Differences in Values or Behavior?

- **Perhaps mothers are more likely to sacrifice pay for unobserved job characteristics such as flexibility and fathers wish to earn more to support their families**
 - Relatively homogeneous job type
 - No interaction between gender and parental status; even women without children had lower pay than men
- **Perhaps women don't ask**

Differences in Employer Behavior towards Men and Women?

- **Statistical discrimination**
 - employers make inferences based on group characteristics (such as mean productivity level) rather than considering individual characteristics when setting salaries
- **The concept of the family wage**

Unconscious Biases

- Deeply ingrained notions of gender roles
- NAS report

An impressive body of controlled experimental studies and examination of decision-making processes in real life show that, on the average, people are less likely to hire a woman than a man with identical qualifications, are less likely to ascribe credit to a woman than to a man for identical accomplishments, and, when information is scarce, will far more often give the benefit of the doubt to a man than a woman.

Multiple Identities

Jagsi R. How Deep the Bias? *JAMA* 2008



Not a Level Playing Field

Seemingly gender-neutral norms, practices, and policies can have a disparate negative impact upon women

- **Examples**

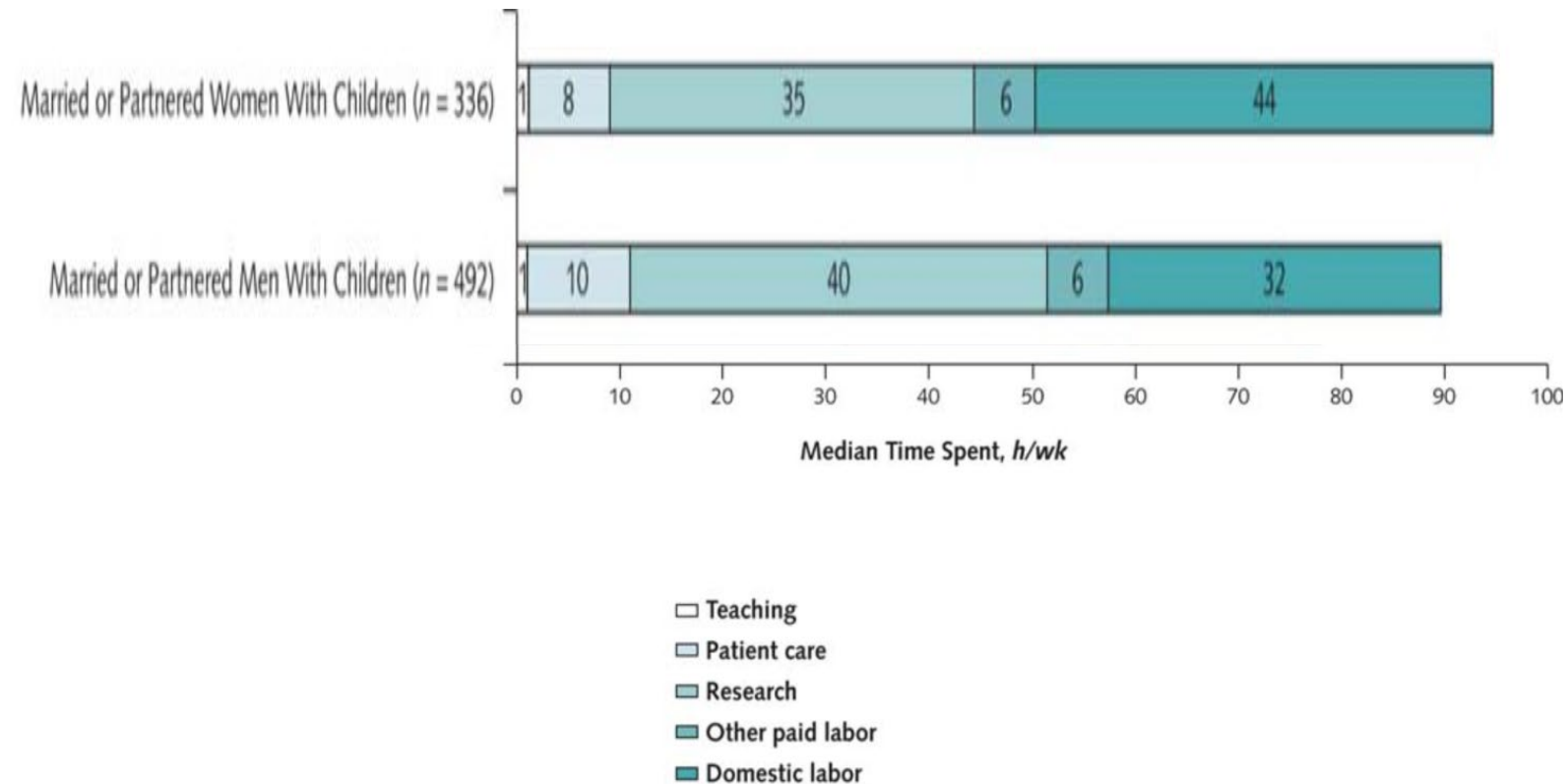
- Leave policies
 - Jagsi, Weinstein, Tarbell, *N Engl J Med* 2007
 - Magudia, Bick, Cohen, Ng, Weinstein, Mangurian, Jagsi, *JAMA* 2018
- Expectations regarding work hours
 - Jagsi & Surender, *Soc Sci Med* 2002
- Tenure clocks & limits on grant eligibility

- **Mechanisms**

- forcing collision of biological & professional clocks
- magnifying the inequities of the traditional gendered division of labor in our society, in which many women continue to bear the greater burden of domestic responsibility

Gender Differences in Time Spent on Parenting and Domestic Responsibilities by High-Achieving Young Physician-Researchers

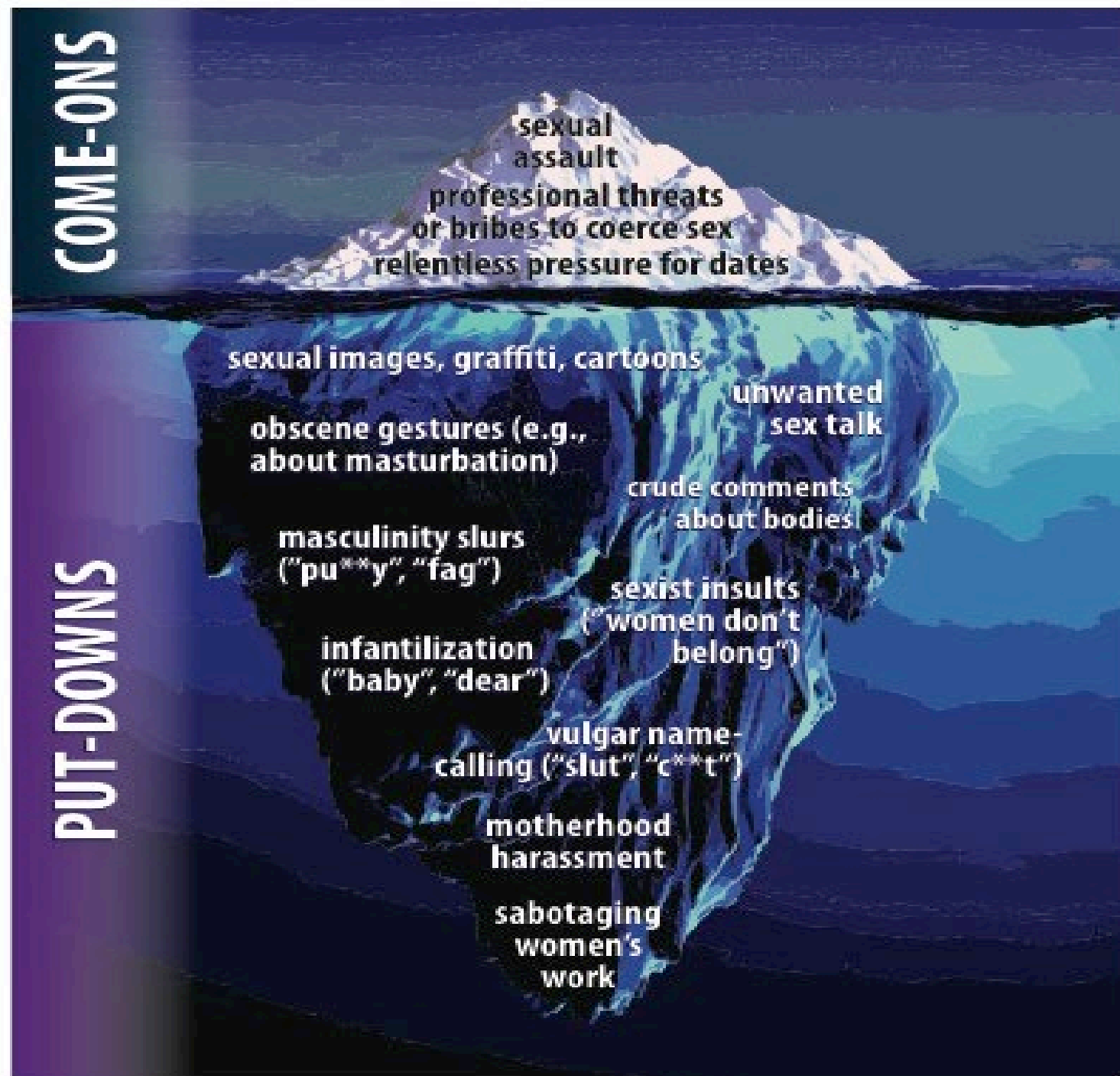
Ann Intern Med. 2014;160(5):344-353. doi:10.7326/M13-0974



- Among married or partnered respondents with children, after adjustment for work hours, spousal employment, and other factors, women spent 8.5 more hours per week on domestic activities.
- In the subgroup with spouses or domestic partners who were employed full-time, women were more likely to take time off during disruptions of usual child care arrangements than men (42.6% vs. 12.4%).

The Iceberg of Sexual Harassment

*Image courtesy
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held by Lilia Cortina*



Reshma Jaggi, MD, DPhil
Kent A. Griffith, MS
Rochelle Jones, MS
Chithra R. Perumalswami, MD
Peter Ubel, MD
Abigail Stewart, PhD

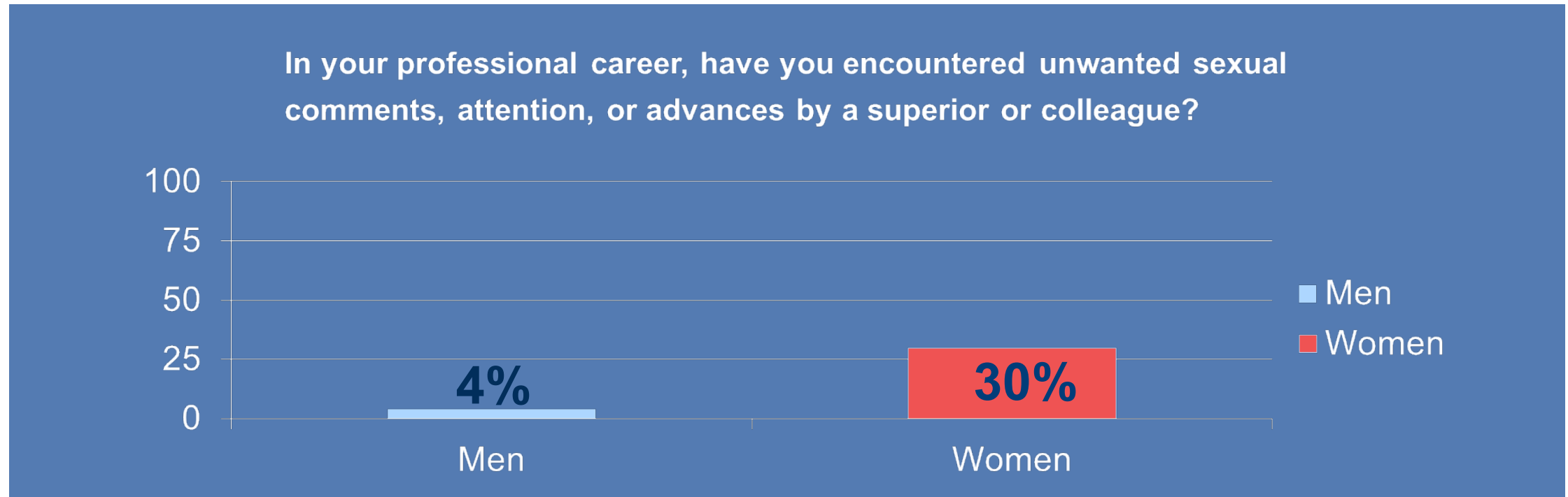
Sexual Harassment and Discrimination Experiences of Academic Medical Faculty

Self-Reported Experiences of Recipients of NIH K08 and K23 career development awards from 2006-2009 (survey conducted in 2014)

	Women No. (%) n = 493	Men No. (%) n = 573
Respondents who perceived gender-specific bias in the academic environment	343 (69.6)	125 (21.8)
Respondents who reported they personally experienced gender bias in professional advancement	327 (66.3)	56 (9.8)
Respondents who reported they personally experienced harassment *	150 (30.4)	24 (4.2)

* "In your professional career, have you encountered unwanted sexual comments, attention, or advances by a superior or colleague (yes or no)?"

Sexual Harassment and Discrimination Experiences of Academic Medical Faculty



- 59% perceived a negative effect on confidence in themselves as professionals
- 47% reported that these experiences negatively affected their career advancement

Dr. Jagsi,

Your paper struck a particular chord with me... I brushed what happened under the rug; and in a residency program where the chair invites the male (and not female) residents & attendings over every week for poker, these things largely go unnoticed.

Over the past 4 years, I've wondered if something was pathologically wrong with me that I invited that kind of behavior (was it because I wasn't smart enough, was it because I was soft-spoken, was it because there was something so wrong with me that I couldn't even recognize it) and whether it would keep me from achieving anything of merit.

I read your article with a mixture of simultaneous dismay and relief - dismay because how could such successful women be subject to that kind of discrimination - relief because despite what they endured, they were successful...and if they have gone through similar things, then maybe I'm not defective.

I don't think I can ever talk about my experiences partially because of fear, partially because it seems ungrateful to do so...

I hope institutions pay attention. I hope people care. Your article helped me gain the closure that I didn't realize I needed.



The NEW ENGLAND JOURNAL *of* MEDICINE

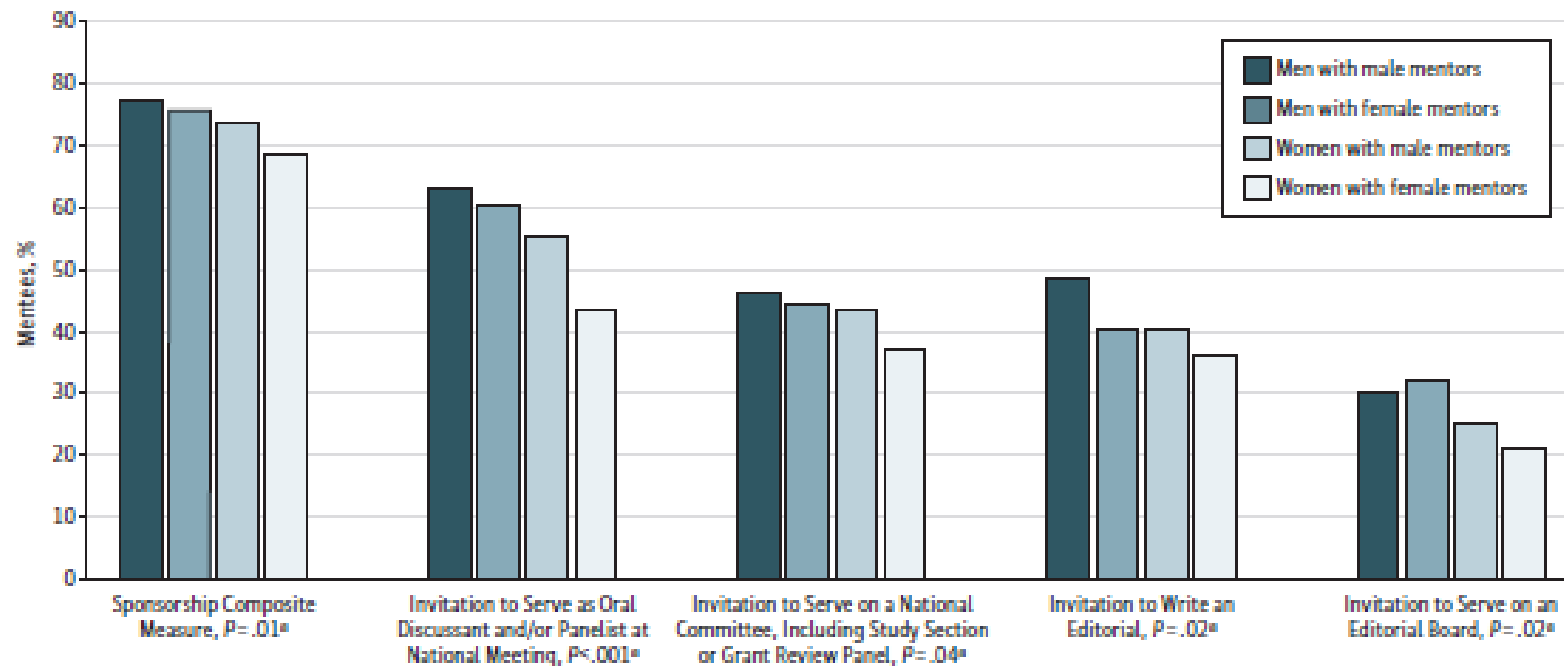
Perspective

Sexual Harassment in Medicine — #MeToo

Reshma Jagsi, M.D., D.Phil.

Sponsorship and the Catch-22 for Women in Medicine

Figure. Experiences of Sponsorship by Sex



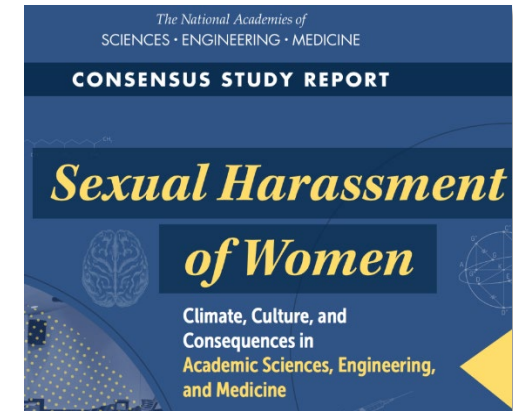
This graph depicts self-reported experiences of sponsorship by K08 and K23 award recipients for men with male mentors ($n = 442$), men with female mentors ($n = 89$), women with male mentors ($n = 323$), and women with female mentors ($n = 131$). Unadjusted percentages are depicted for each of 4 individual sponsorship experiences and for a composite binary measure of having reported at least 1 of the 4 individual experiences.

^a P values evaluate the presence of a difference between men and women holding National Institutes of Health (NIH) Mentored Career Development (K) awards in regression models that adjust for other demographic characteristics (age, race), job characteristics (grant type, year of grant award, medical specialty), level of funding for the NIH institute that granted the K award, and level of NIH funding received by the individual's institution of employment.

What Can Medicine Learn from Social Scientific Studies of Harassment?

Cortina L, Jagsi R. *Ann Intern Med* 2018.

- **Organizational Psychology Findings**
 - Harassment more common:
 - In historically male-dominated fields
 - Where big power differentials/hierarchies exist
 - Where women are in the minority
 - **And when institutions are perceived to tolerate the behavior**



Interventions

- To address strikingly high rates of harassment in medicine, must learn from evidence:
 - **Gather data**
 - Inform interventions
 - Demonstrate commitment
 - **Facilitate reporting and offer choices**
 - **Clarify policies**
 - *Lowest rates of sexual harassment in organizations that proactively develop, disseminate, and enforce sexual harassment policy (Gruber 1998)*
 - **Address harassment by patients & families**

EQUITY IS ESSENTIAL

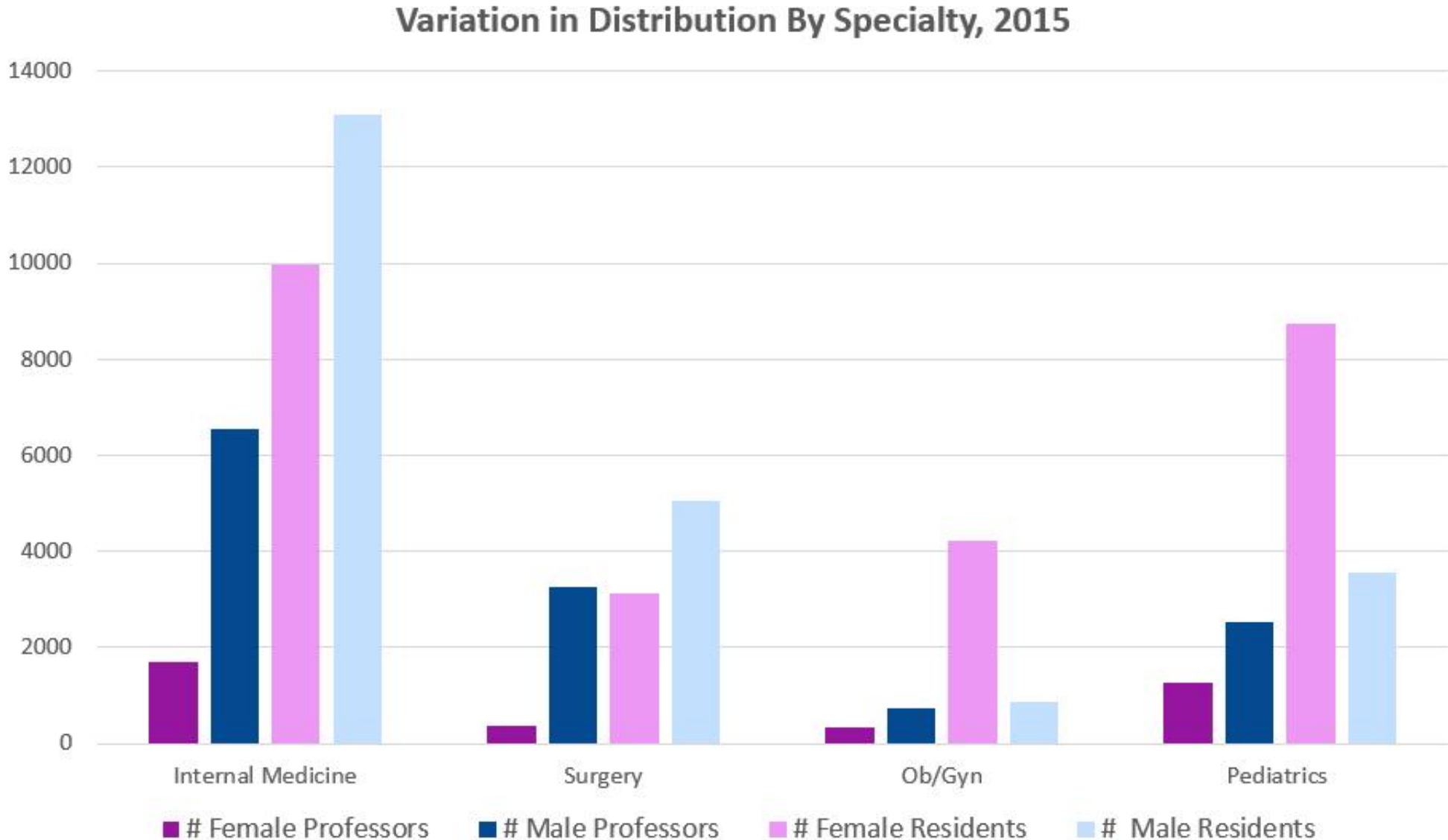
- **Change the structures that support harassment**
 - Employ more women
 - Promote more women
 - Integrate more women into every level of the organization

Goal:

a ‘well-integrated, structurally egalitarian workplace,’ in which women and men equally share power and authority

(Schultz 2003 qtd in Cortina & Berdahl 2008)

Time Really is Up



Mentoring Programs

- **May allow women access to opportunities that otherwise might be allocated by an informal old-boy's network to which they are not privy**
 - Tracy EE, Jagsi R, Starr R, Tarbell NJ. Outcomes of a pilot faculty mentoring program. *Am J Obstet Gynecol*. 2004;191(6):1846-50.
 - Patton E, Griffith K, Jones R, Stewart A, Ubel P, Jagsi R. Differences in mentor-mentee sponsorship in male vs female recipients of NIH grants. *JAMA Internal Medicine* 2017; 177(4): 580-1.
- **May help women to “play games” not learned in childhood**
 - DeCastro R, Sambuco D, Ubel PA, Stewart A, Jagsi R. Batting 300 Is Good: Perspectives of Faculty Researchers and Their Mentors on Rejection, Resilience, and Persistence in Academic Medical Careers. *Acad Med* 2013;88(4):497-504.
- **May teach negotiation skills**
 - Sambuco D, Dabrowska A, Decastro R, Stewart A, Ubel PA, Jagsi R. Negotiation in Academic Medicine: Narratives of Faculty Researchers and Their Mentors. *Acad Med* 2013;88(4):505-511.
- **Should help develop mentor networks rather than hierarchical dyads**
 - Decastro R, Sambuco D, Ubel PA, Stewart A, Jagsi R. Mentor Networks in Academic Medicine: Moving Beyond a Dyadic Conception of Mentoring for Junior Faculty Researchers. *Acad Med* 2013;88(4):488-496.
- **And consider sponsorship as well**
 - Gottlieb AS, Travis EL. Rationale and Models for Career Advancement Sponsorship in Academic Medicine: The Time Is Here; the Time Is Now. *Acad Med* 2018.
- **Still, must be careful not to focus exclusively on “fixing the women”**

Institutional Changes

Ultimately, gender equity must be promoted through recognition and changes at the institutional level

- Evidence-based implicit bias training
 - Carnes M, Devine PG, Baier Manwell L, Byars-Winston A, Fine E, Ford CE, Forscher P, Isaac C, Kaatz A, Magua W, Palta M, Sheridan J. The effect of an intervention to break the gender bias habit for faculty at one institution: a cluster randomized, controlled trial. Acad Med 2015.
- Cultural transformation
 - Michigan ADVANCE, Hopkins Task Force
 - Pati S, Reum J, Conant E, Tuton LW, Scott P, Abbuhl S, Grisso JA. Tradition meets innovation: transforming academic medical culture at the University of Pennsylvania's Perelman School of Medicine. Acad Med 2013.
- Transparent and consistent criterion-based evaluation, promotion, compensation processes
- Term limits

Novel Programs

Creative interventions to recognize service and support work-life integration

- Distinguished Scholar Awards & FRCS
 - Jagsi R, Butters J, Starr R, Tarbell NJ. A Targeted Intervention to Promote Women's Careers in Academic Medicine. Arch Intern Med 2007.
 - Jagsi R, Jones RD, Griffith KA, et al. An Innovative Program to Support Gender Equity and Success in Academic Medicine: Early Experiences from the Doris Duke Charitable Foundation's Fund to Retain Clinical Scientists. Ann Intern Med. 2018;169(2):128-130
- Time Banking
 - Fassiotto MA, Maldonado YA. A time banking system to support workplace Flexibility.
<http://wellmd.stanford.edu/content/dam/sm/wellmd/documents/Time-banking-system.pdf>.



Jane D Claflin

Clyde Smith, artist

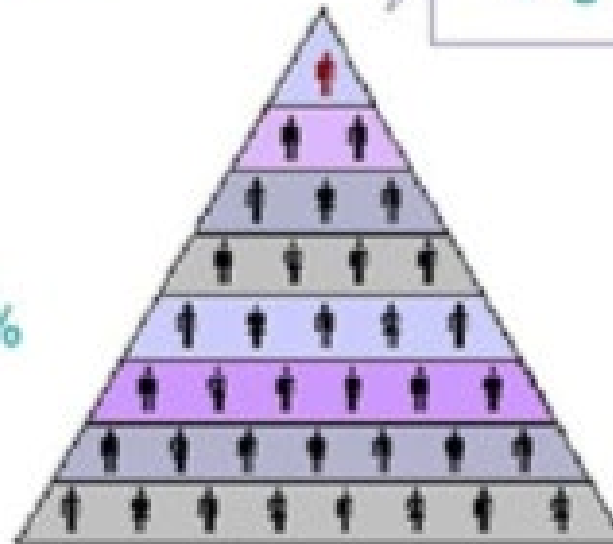
*MGH Archives & Special
Collections Office*

Accumulation of Disadvantage

Martell, Lane, and Emrich's (1996) model assumed a tiny **bias** in favor of men, which accounted for only **1% of variance** in promotion.

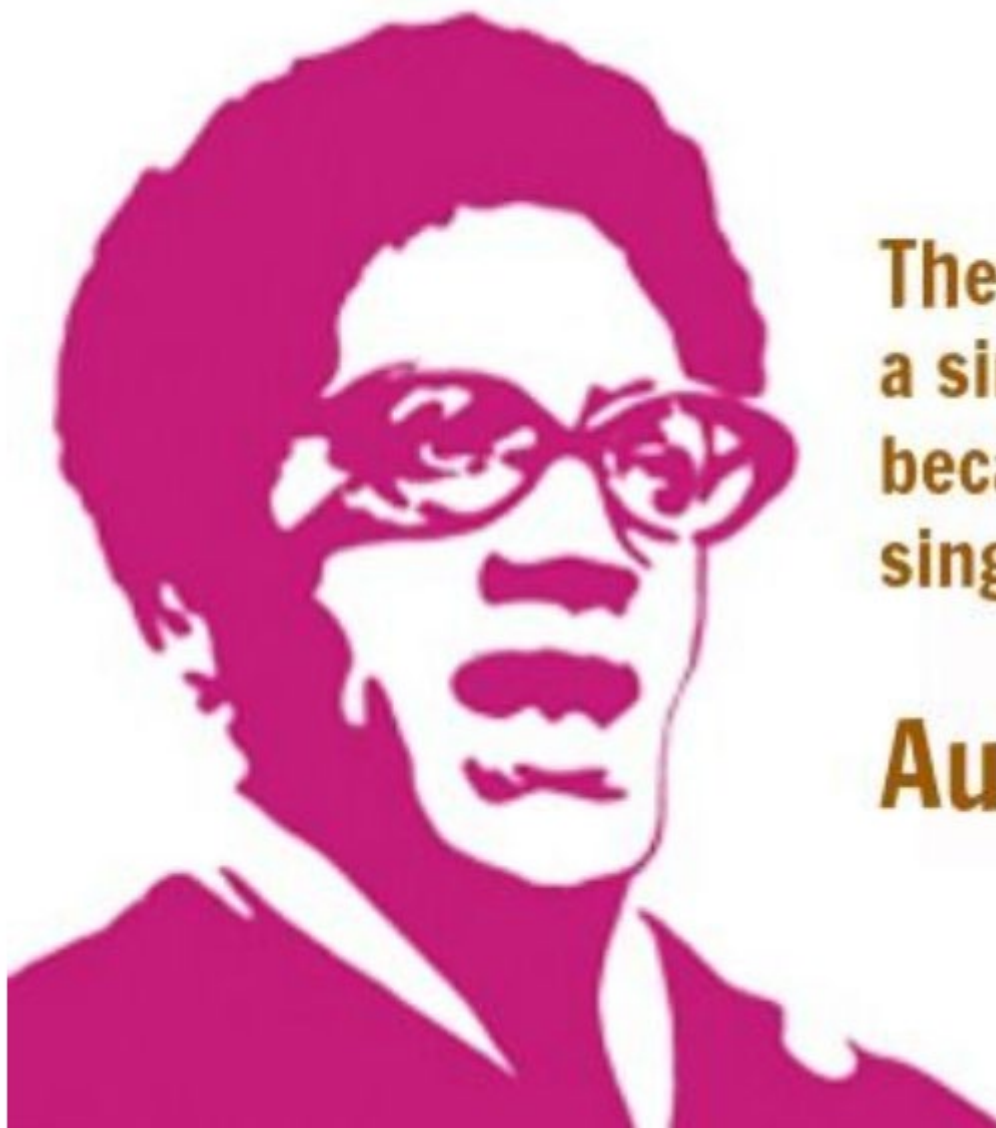
Operating at a systematic minute disadvantage can have substantial long term effects.

After many iterations the **top level was 65% male**.



Martell, Lane & Emrich (1996)

Source: Valian (2007)



**There is no such thing as
a single-issue struggle
because we do not live
single-issue lives.**

Audre Lorde

Conclusions

- Women do not share equally in power and authority in the field of medicine
- The cause is not simply a slow pipeline: even similarly situated men and women do not appear to be rewarded similarly even today
- To recruit, retain, and advance women in medicine, evidence-based interventions must target the root causes of gender inequity
- More attention to tailor interventions for women from under-represented groups sorely needed
- Leaders in academic medicine must share insights about how best to **transform culture and climate**

Acknowledgments

Collaborators

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Abigail Stewart, PhD	Soumya Rangarajan, MPP
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Elizabeth Patton, MD	Dana Telem, MD
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Pamela Douglas, MD	SWRO

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- Burroughs-Wellcome Fund/Alliance for Academic Internal Medicine





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