

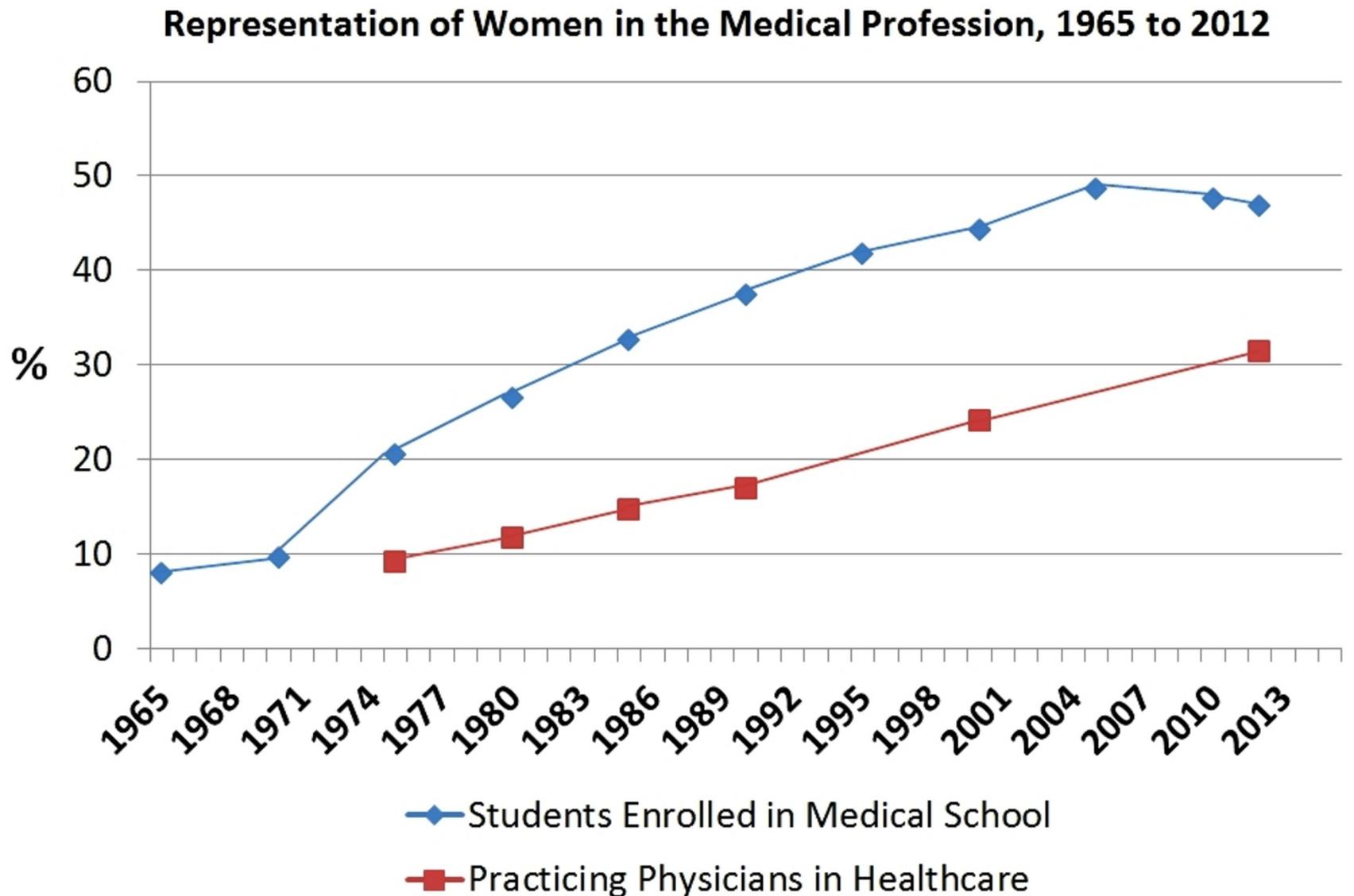
Equity and Success in Academic Medicine

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Outline

- Current participation of women and racial/ethnic minorities in medicine
- Evidence suggesting dysfunction in the pipeline
- Examining the nature and causes of inequities in academic medicine
- Interventions targeting inequity

Women in the Medical Profession



Women in Leadership

- Low proportions of senior academic positions are held by women
 - In 2013-2014
 - 21% of full professors were women
 - 15% of department chairs were women
 - 16% of medical school deans were women

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.

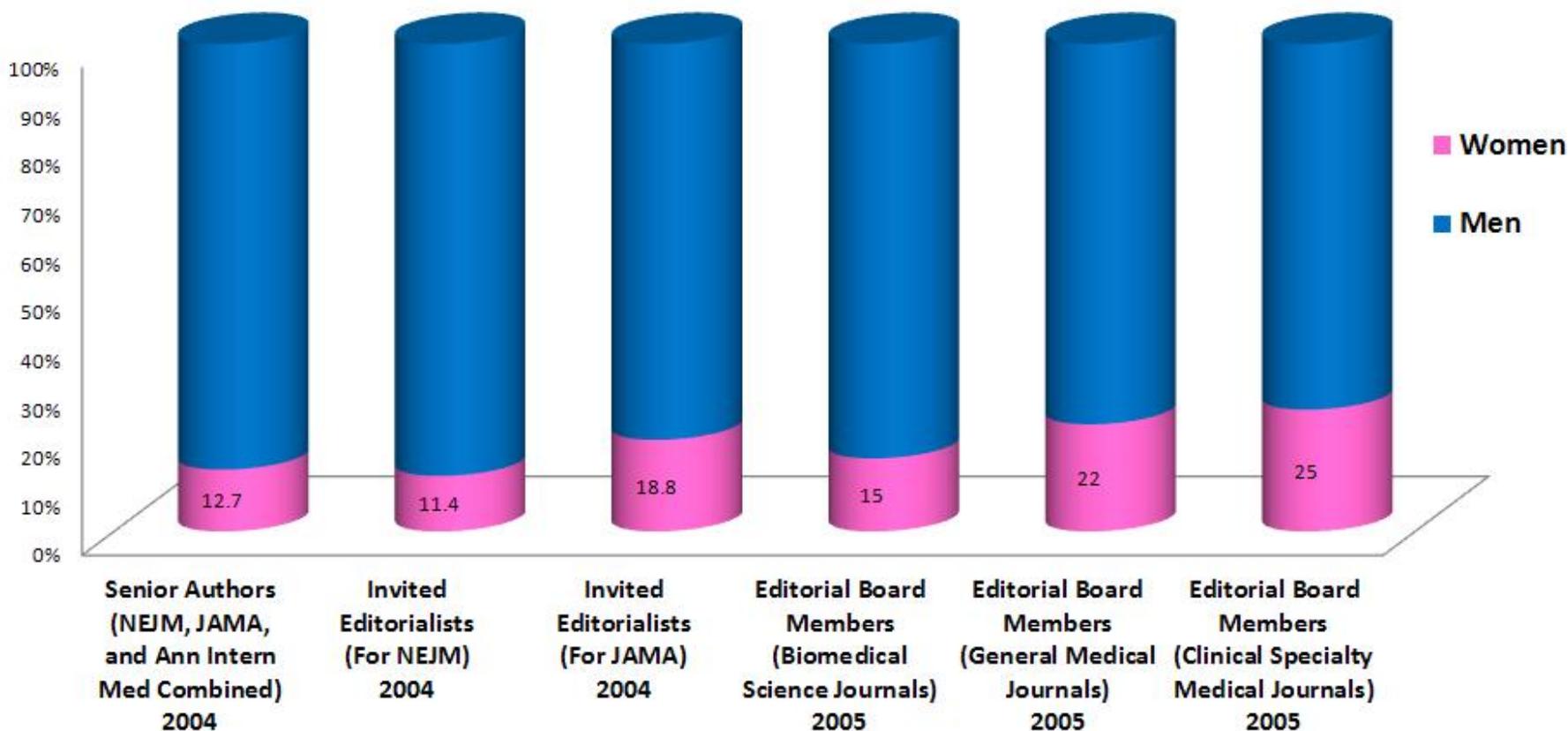
RESEARCH LETTER

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

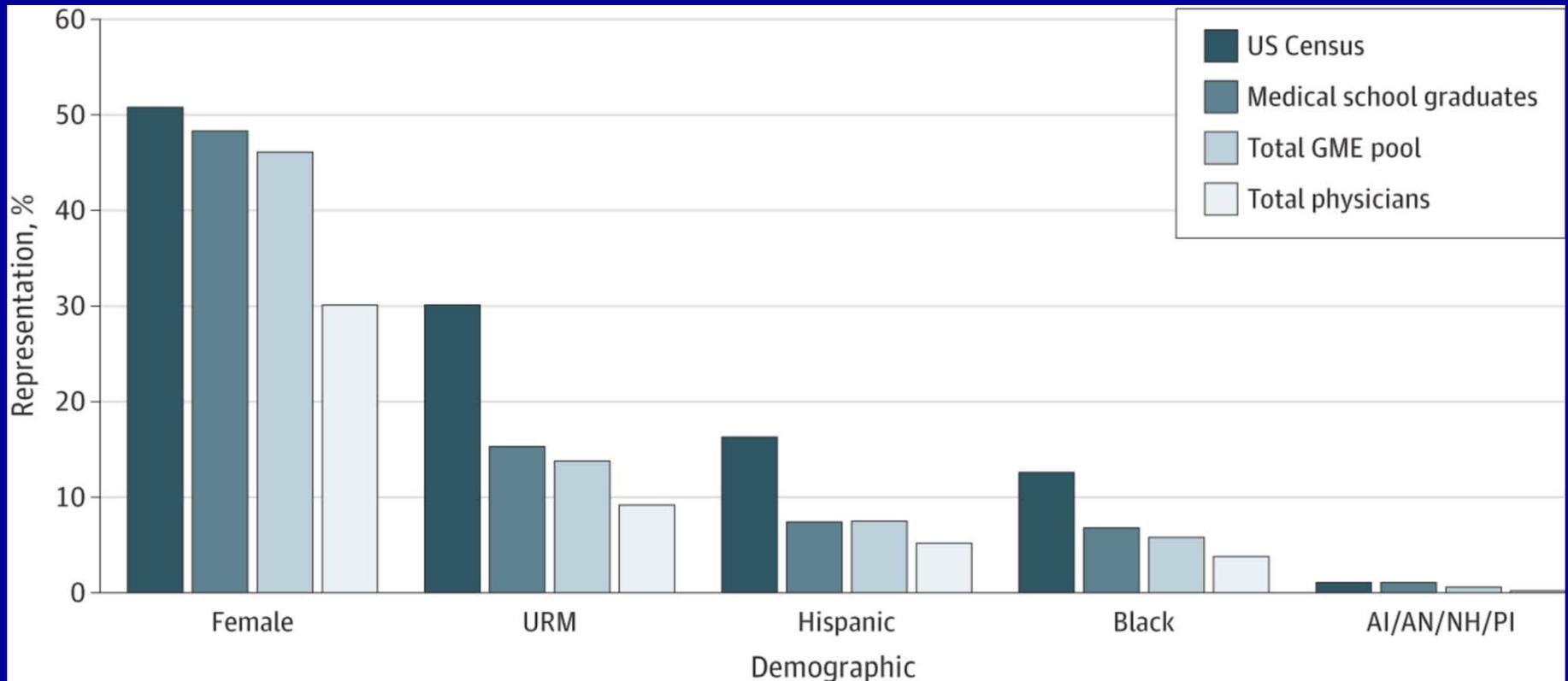
The Representation of Women on the Editorial Boards of Major Medical Journals: A 35-Year Perspective

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Gender versus Racial/Ethnic Minority Representation in Medicine



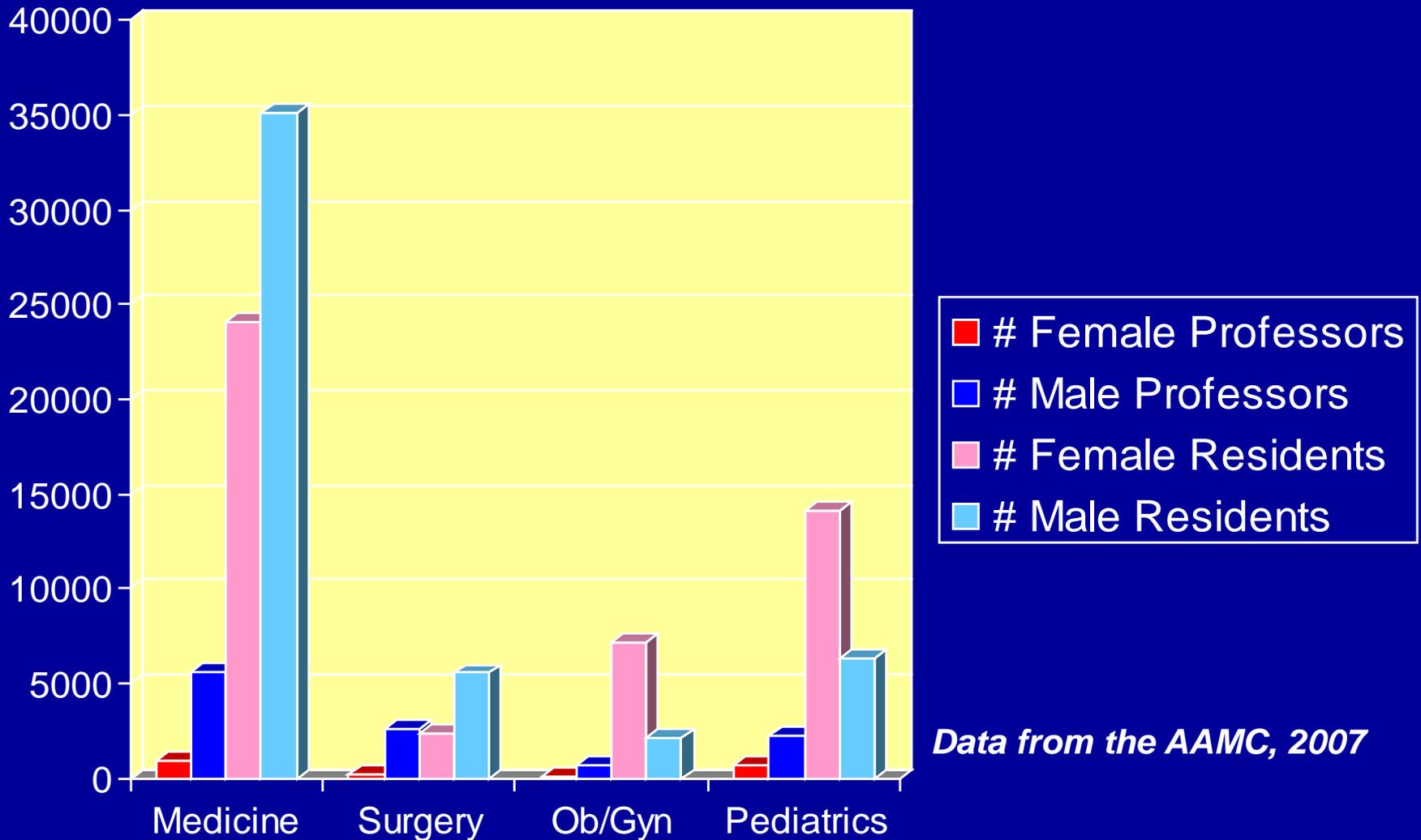
From: **Diversity in Graduate Medical Education in the United States by Race, Ethnicity, and Sex, 2012**

JAMA Intern Med. 2015;175(10):1706-1708.

Does it matter?

- Deontological arguments
- Teleological arguments

Role Models



Data from the AAMC, 2007

Should we worry?

- Pipeline hypothesis
 - suggests that we need to increase efforts to recruit URMs to medicine but can just wait for gender equity to spontaneously develop
- 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

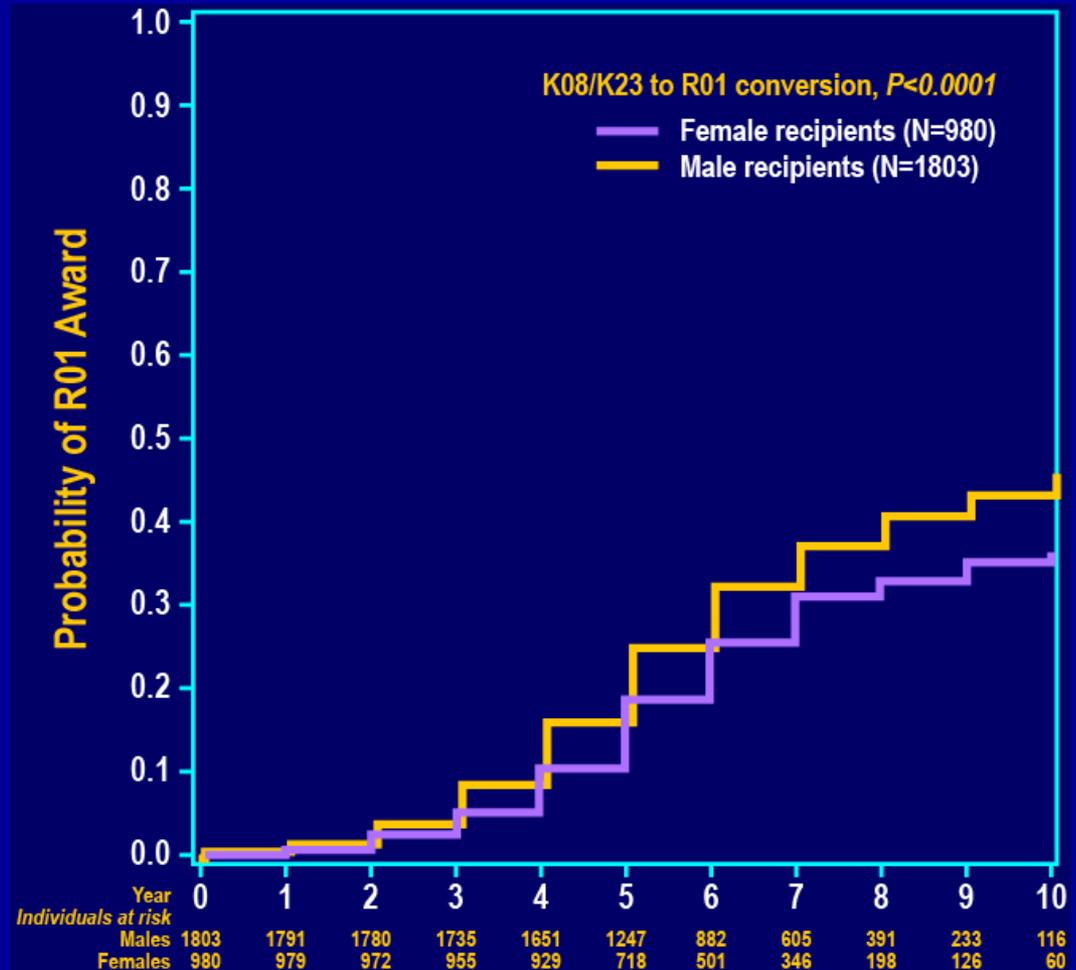
NIH K08 and K23 Awards

- Highly competitive grants made to junior academic medical faculty
 - clinical doctorates
 - demonstrated aptitude and commitment towards research careers
- Articulated goal: to foster career development into independent investigators
- Ideal study population: homogeneous & recent cohort among whom success would be expected
 - Lends insights into the mechanisms underlying observed gender differences
 - Too few URMs to study race effects

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

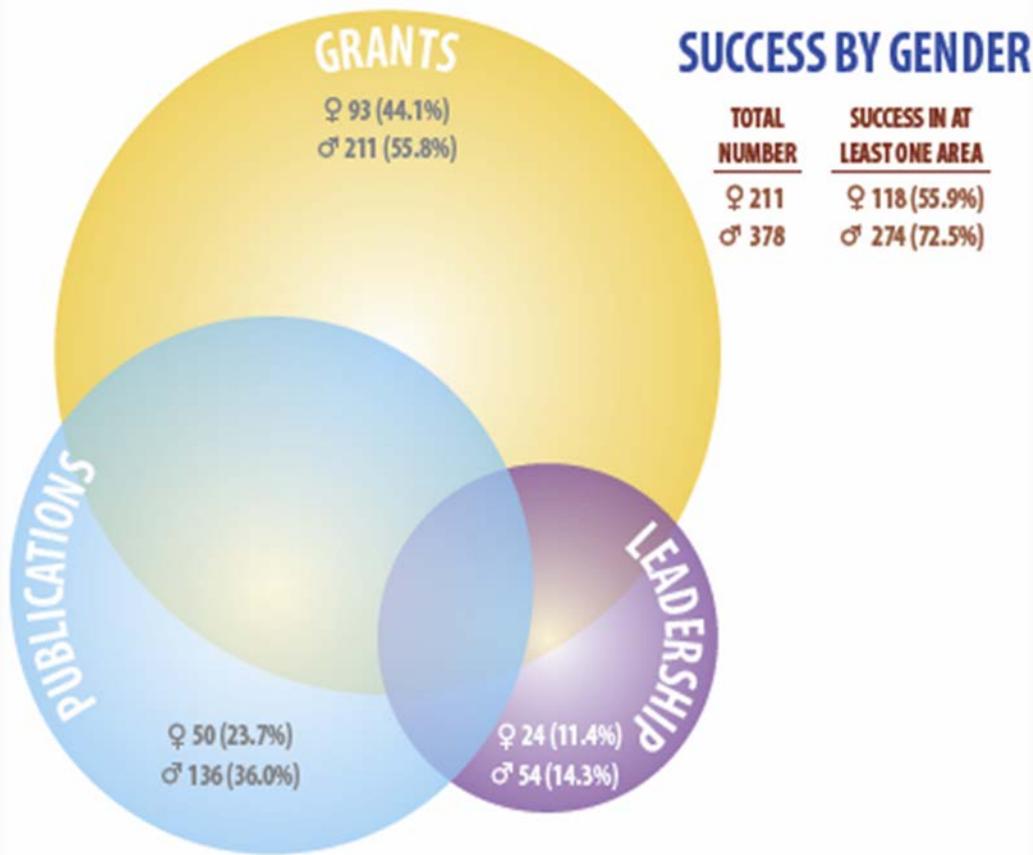
- 5-yr rate of R01 attainment: 19% among women and 25% among men
- Gender (HR 0.8, $p=0.002$) independently significant predictor of R01 attainment on multivariate analysis controlling for K award type, year of award, funding institute, institution, and specialty



Similarities and Differences in the Career Trajectories of Male and Female Career Development Award Recipients

Reshma Jaggi, MD, DPhil, Rochelle DeCastro, MS, Kent A. Griffith, MS, Soumya Rangarajan, MPP, Cristina Churchill, Abigail Stewart, PhD, and Peter A. Ubel, MD

Acad Med. 2011;86:1415-1421.
First published online September 26, 2011
doi: 10.1097/ACM.0b013e3182305aa6



Compensation

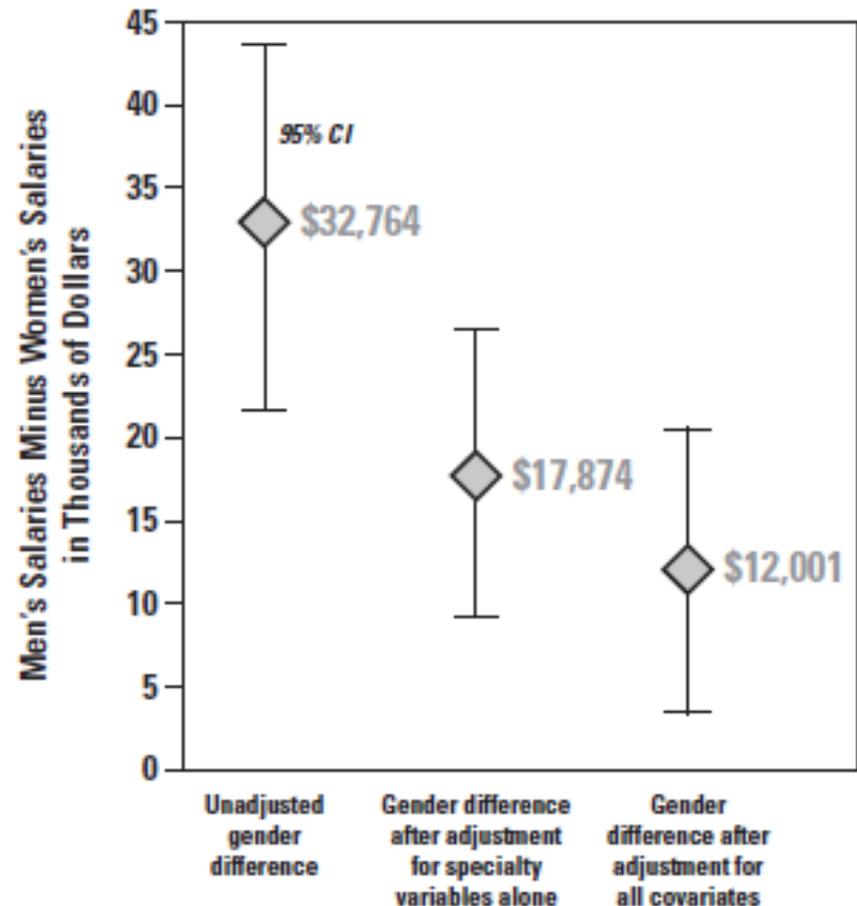
- 800 MDs who were still working at academic institutions responded to our surveys of K awardees from 2000-2003
- Significant gender difference in annual salary even after adjustment for numerous measures of success/productivity, specialization, and other factors
 - Age
 - Race
 - Marital status
 - Parental 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

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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
 - Important because negotiation doesn't only impact salary but also access to all resources necessary to succeed

Differences in Employer Behavior towards Men and Women?

- Statistical discrimination
 - employers make inferences based on the mean characteristics of a group rather than considering individual characteristics when setting salaries
- The concept of the family wage

Unconscious Biases

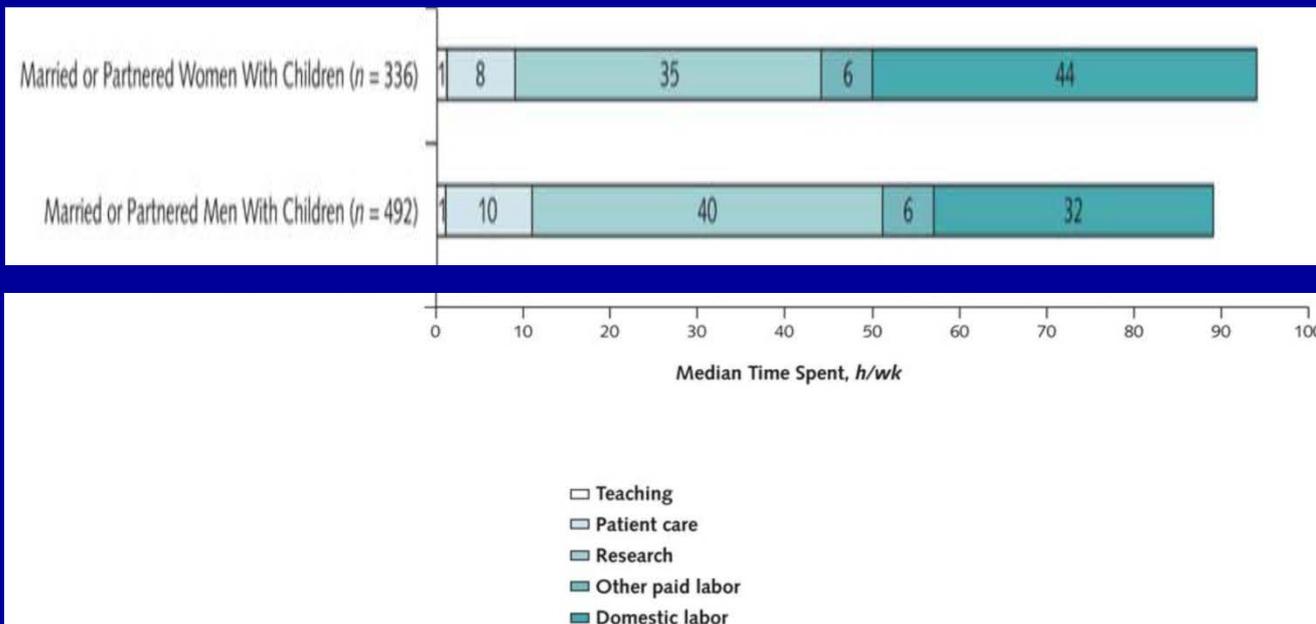
- Deeply ingrained notions of gender roles and stereotypes about racial/ethnic minorities
- NAS report
 - *“An impressive body of controlled experimental studies and examination of decision-making processes in real life show that, on the average, people are less likely to hire a woman than a man with 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.”*
- Qualitative studies & anecdotes

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
 - 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

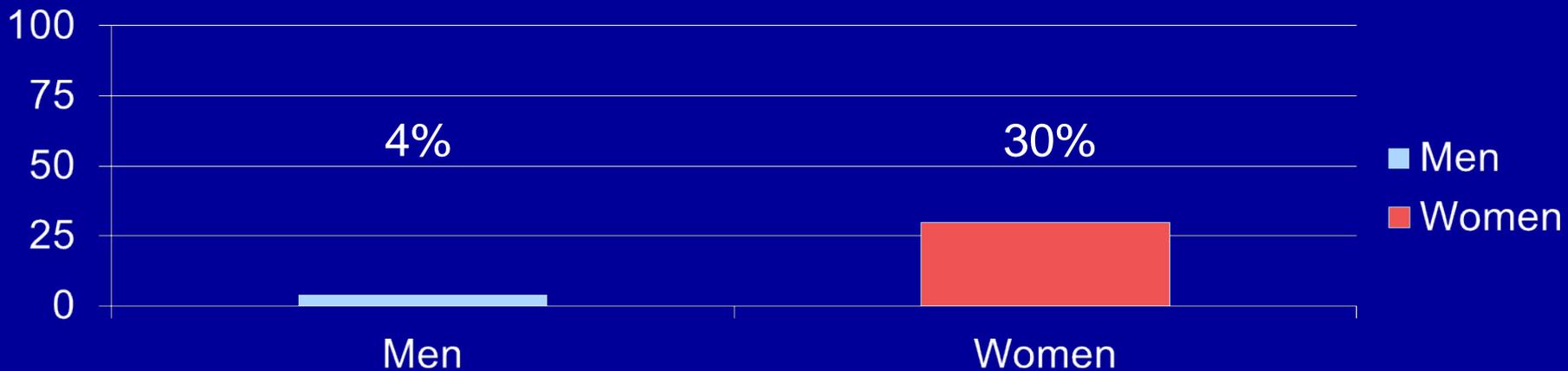
Ann Intern Med. 2014;160(5):344-353. doi:10.7326/M13-0974



- 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%).

Sexual Harassment and Discrimination Experiences of Academic Medical Faculty

In your professional career, have you encountered unwanted sexual comments, attention, or advances by a superior or colleague?

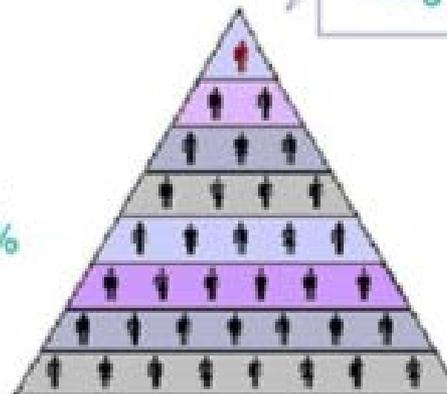


- 40% of these were more severe forms (unwanted sexual advances, subtle bribery to engage in sexual behavior, threats to engage in sexual behavior, coercive advances)
- 59% perceived a negative effect on confidence in themselves as professionals
- 47% reported that these experiences negatively affected their career advancement

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.

After many iterations the top level was 65% male.



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

Developing Targeted Interventions

- Concrete, targeted interventions necessary
- Just as many practices contributing to inequity appear gender- or race-neutral, interventions may not need to be obviously gender- or race-specific either
- Success with initiatives at one institution should be shared to promote development of similar programs elsewhere

Mentoring Programs

- May allow women and URMs access to opportunities that otherwise might be allocated by an informal 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.
- May help “outsiders” 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.
- Still, must be careful not to focus exclusively on “fixing the victim”

Institutional Changes

- Ultimately, equity must be promoted through recognition and changes at the institutional level
 - Interventions to provide support at stages of particular vulnerability
 - Distinguished Scholar Awards, FRCS
 - Jagsi R, Butterson J, Starr R, Tarbell NJ. A Targeted Intervention to Promote Women's Careers in Academic Medicine. Arch Intern Med 2007.
 - Bias literacy and cultural transformation
 - Hopkins (Task Force), Mount Sinai (Just Desserts), Michigan (ADVANCE: recruitment, retention, climate, leadership), Wisconsin (WISELI: Bias Literacy Workshop), Penn (cultural transformation initiative)
 - Development of transparent & consistent criteria for advancement & compensation

Conclusions

- Women and URMs are important contributors to the medical workforce, but gaps remain (at senior levels for women and throughout for URMs)
- The cause is not simply a slow pipeline: even similarly situated men and women do not appear to be rewarded similarly even today, and URM representation in medical student body is far lower than in the population
- Institutions must develop targeted interventions to support equity and success of all with the potential to contribute to the mission of academic medicine

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