



Women in Science



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1 - Global Thrombosis Forum, Suwanee, GA and 2 - Loyola University, Chicago, IL.

Background

Women have struggled and faced much opposition in life. They were denied the opportunities and resources. Celebrating the successes of women in science can serve as an inspiration to both women and men.

Methods

Our goal was to research the data on women in, conferences, publications, leaderships, identify reasons for barriers. We have added the impressive data on female participation from our experience over the past 12 years in GTF.

Presidents, Scientific Societies



Figure 1: Our Female Celebrities

Gender Salary Comparison

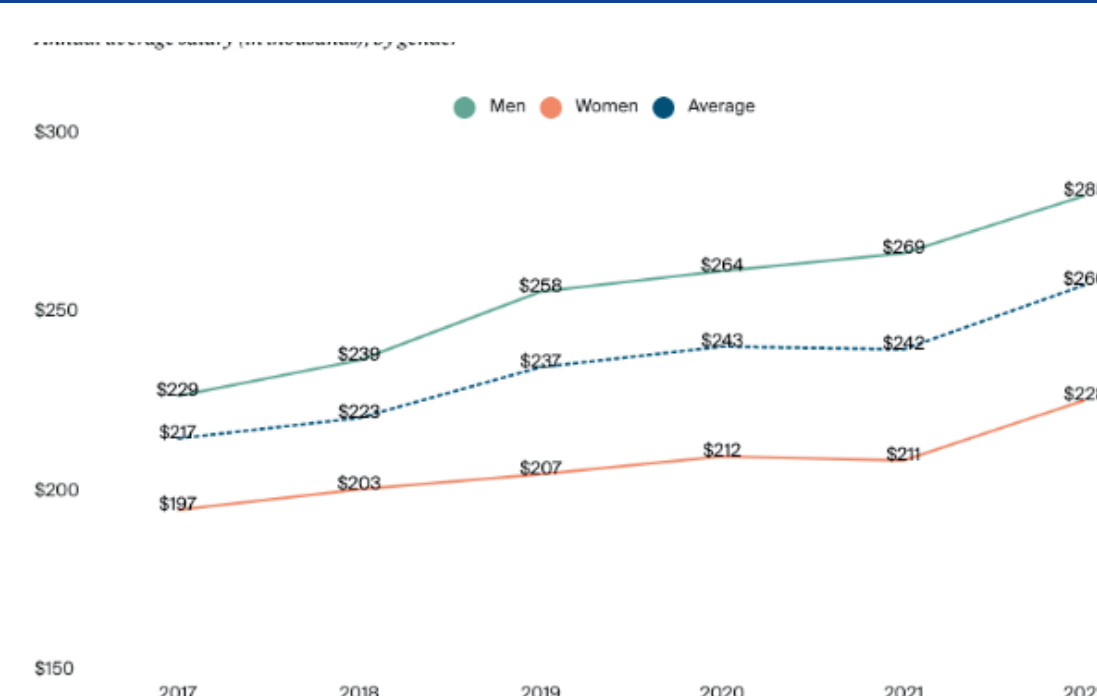


Figure 2: Gender Salary Difference

Representation in Space

Women are vastly underrepresented in space. Varsha Jain, MD, an Obstetrician-Gynecologist, recommends that females should be open to opportunities through competition.

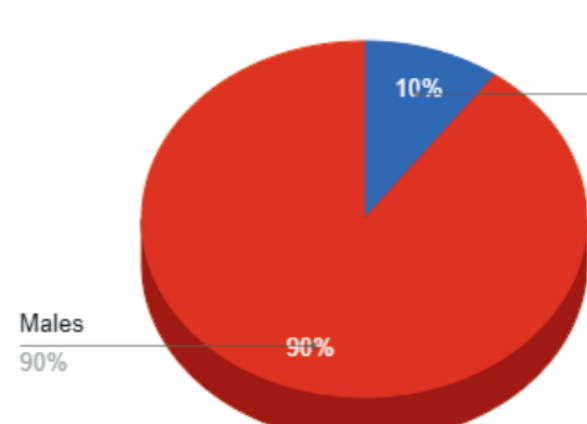


Figure 3 : Percentage of Females and Males in Space

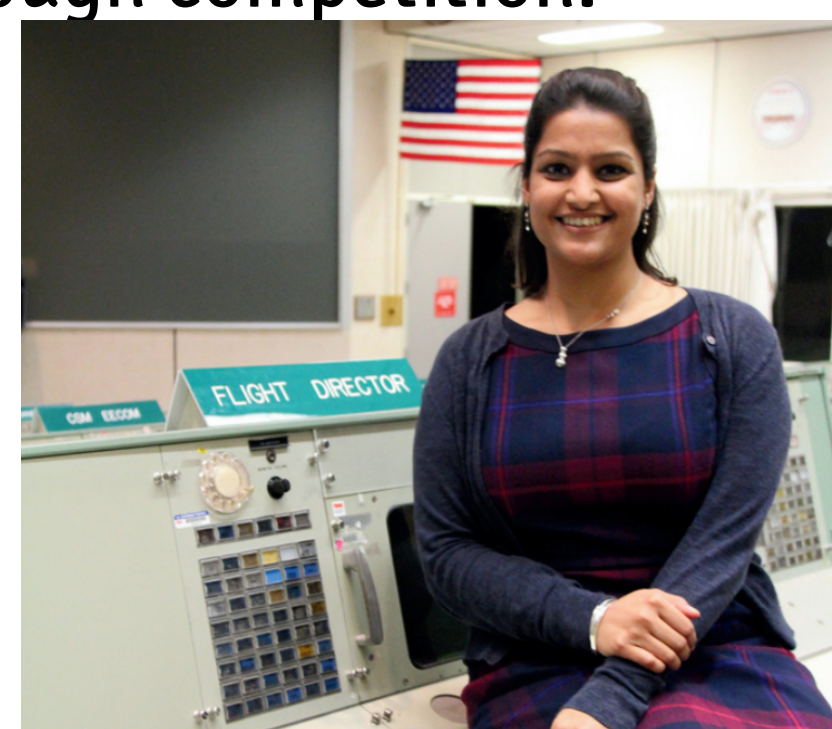


Figure 4: Varsha Jain, MD

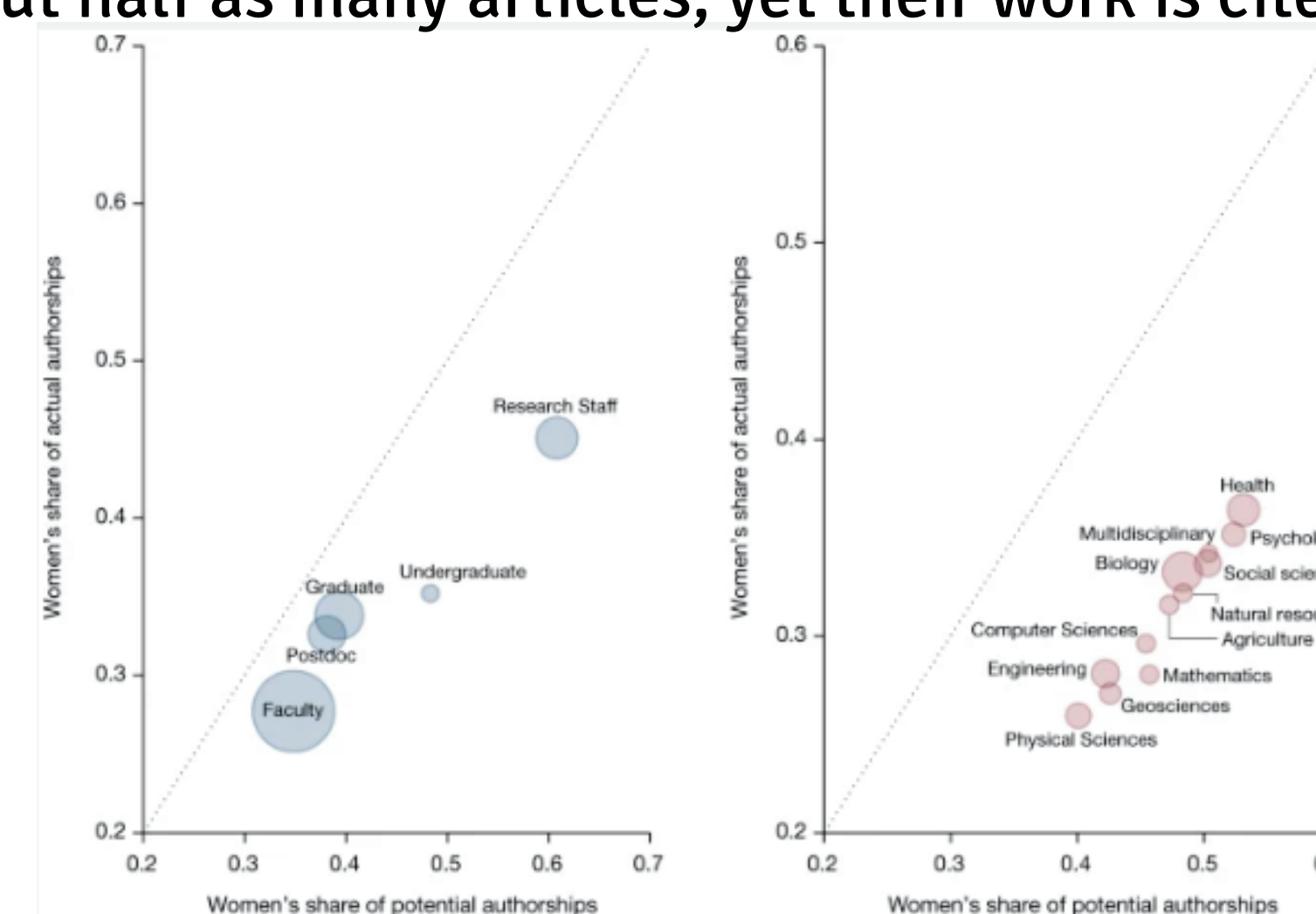
Women in Research

According to the UNESCO INSTITUTE of Statistics (UIS) less than 30% of the worlds researchers are women.

Scientific Publications

Women scientists publish fewer but higher-impact papers than men. Women produce about half as many articles, yet their work is cited more often.

Figure 5: Women in research, publications, scientific papers, and editorial boards of journals



Statistics at GTF

GTF has a strict no-discrimination recruiting/promoting policy against genders, races, nationalities, and countries of origin.
- In the past 12 years, GTF has enrolled 371 GTF Scholars, of which 242 (65%) were females, and the rest 129 (35%) were males.
- 55% females and 45% males participated in GTF projects.
- Attendance at scientific meetings: The percentage has been 59 for females and 41 for males
- Awards (Dr. B. B. L. Mathur memorial scholarships, essay writing competitions, Presidential Volunteer Services Awards) had a 61 (females) and 39 (males).

- Female Mentors: Ms. Anushka Bhate, Ms. Arushi Garud, Ms. Malvika Sawant, Ms. Neha Koganti, Ms. Priya Lokasundaram, Ms. Rashi Modey, Ms. Riddhi Surve, Ms. Sana Verma, and Ms. Sonika Tatipalli (8)
- Male Mentor: Anvit Divekar (1)

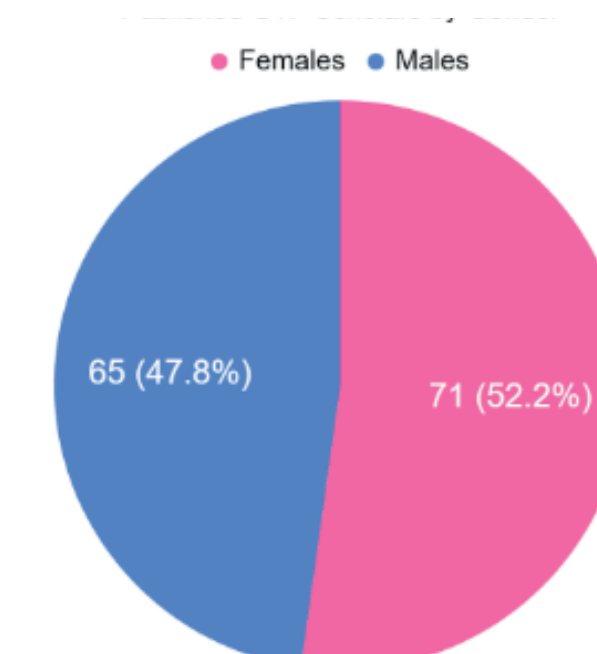


Figure 6: Publications by Gender in GTF

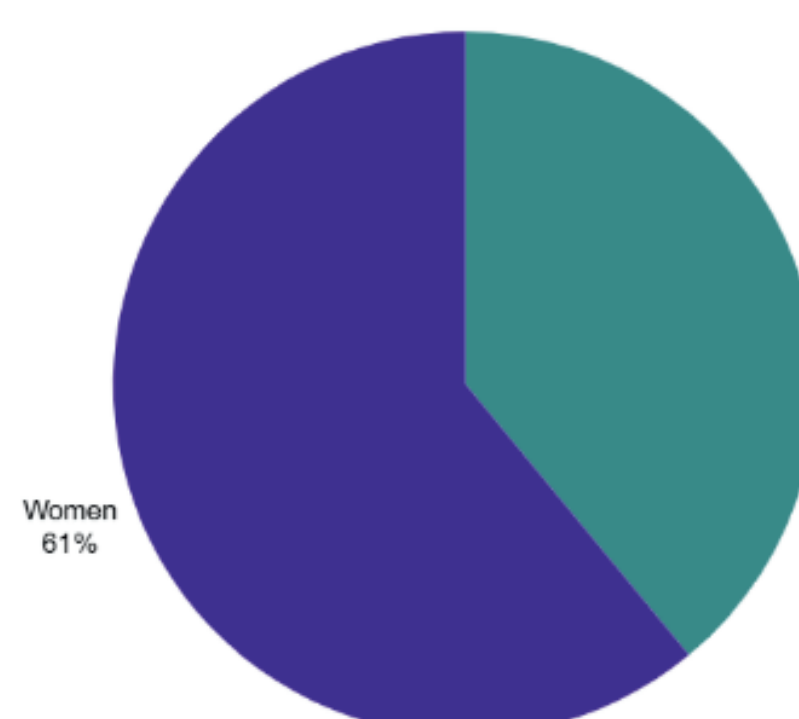


Figure 7: Percentage of Awards Won by Gender in GTF

Women in STEM

- Women are significantly underrepresented in STEM fields.
- One hundred eighty-one conferences with 701 individual meetings were analyzed, including 100 medical and 81 surgical specialty conferences. The proportion of women ranged from 0% to 82.6% of all speakers.
- As of 2022/2023, women make up 26% of the STEM workforce.
- Women constitute 28% of STEM professors and associate professors in the United States despite earning 40% of STEM degrees.
- Women hold only 16% of fellow positions in science academies worldwide, reflecting their underrepresentation in scientific leadership.
- Studies have shown that male scientists publish, on average, 13.2 papers during their careers, while female scientists publish only 9.6, resulting in a 27% publication gap.
- These stats highlight the existing gender gaps in STEM fields and reiterate the importance of continuing to support and educate women in STEM fields.

Causes for the Barriers

- Women in science face barriers including a lack of role models, unconscious bias, and institutional culture that treats genders differently. Science is often associated with men, while women are linked to the liberal arts.
- Women negotiate but struggle to get what they want, fearing assertiveness may seem unlikable. Working mothers face criticism, while fathers are praised for involvement.
- Affirmative action efforts are misperceived as giving women an unfair advantage, yet women remain underrepresented in leadership roles.

Possible Solutions

-Increasing senior women mentors and leadership coaches can support more female advancement.
- Workplaces should adjust promotion guidelines to accommodate work-life balance.
-Education on workplace discrimination and self-advocacy is essential, empowering women to be confident and informed. We must recognize and appreciate women's contributions, often overlooked, and yet impactful.

Conclusions

Our data shows that female contributions in different fields are lagging. At GTF, we are proud to see a trend reversal pattern with more female participation and contributions than their male counterparts. We should work to decrease this gap by educating people. We must spread awareness and find and productively work on solutions. Women and men physicians should be able to share the joy and the work of their lives equally. As we celebrate International Womens Day (March 8), let us reverberate the theme Accelerate Action and focus on progress toward gender equality!