

Why Female Underrepresentation Exists and The Answer to If It Can Be Solved

By Julia Fein-Ashley

It's crazy to think that only 200 years ago, women were discouraged from joining the workforce. They were expected to stay at home and take care of their family. Around 130 years ago, this began to change. A rising number of women were graduating with college degrees and seeking employment wherever they could be hired. Female pioneers worked in tedious, low-ranking jobs where they were treated like dirt and handed tasks that men did not want to do. In doing so, they paved the way for the future, inspired many of us today to create and hope for more change in the future.



Figure 1: Image sourced from Tech Diversity Magazine

Many industries still have issues in promoting diversity and encouraging representation for people from different backgrounds and genders. STEM is one of those industries and finance is considered to be a part of STEM. According to Duquesnay, a female analyst in the financial sector, Wall Street “has been a boy’s club forever”. This has been changing, as many organizations are beginning to see the value that female perspectives have.

There are so many benefits linked to females working in STEM-related jobs, especially in finance. Diouf, a researcher at a university in France, noted that female central bank chairs are often considered more stable and have outperformed their male counterparts. This is comparable in many other positions, where many women are gaining senior positions or running their own companies because of their passion and desire to continue learning. So, as Forbes puts it, introducing women to sectors like Finance is just as much a challenge as it is an opportunity. Not only is it an opportunity for the organization to benefit, but also for society as a whole to grow. To overcome this challenge of underrepresentation, we must answer the question: Why aren’t more females involved in STEM?

There are so many different factors that play this question. Political, geographic, economic, social, historical, and even biological variables must be considered. Keep in mind there are so many different subsections within each category to consider, so we will not be able to cover them all in this article. Many factors blend, as well, so it is important to think logically through different factors and reflect for yourself. As college students, we need to understand how to promote diversity as we will be entering the workforce in the next couple of years. Being able to reflect on what we can change is crucial, which is why we need to think through factors logically.

1. Social Factors

There are so many different things that make up this section. Our surroundings, including TV shows we watch, what we hear other people say, or even stereotypes, all factor into our thoughts on a specific job or industry. What society perceives as normal has a tremendous amount of pull in where we end up. Shows like the Big Bang Theory often promote stereotypes that are not seen in a positive light, as a result, girls grow up not wanting to pursue a career in areas like science. Other stereotypes or experiences also shape where we end up. Wall Street has often been considered a place where toxic masculinity runs rampant and has no tolerance for those that do not fit into their mold. Ken Fisher, former head of BofA and CitiGroup made a lewd comment publicly stating “that winning asset management business is akin to getting in a girl’s pants”. This creates the question of if this is said publicly, what is being spoken about privately? No one wants to work in a place where they are harassed because of their gender, so as a result, many women avoid the sector. This can be seen in other STEM-related industries, including computer science. Computer science is considered to be a field for anti-social men who work all day on computers. To illustrate the effect that stereotypes have on women, Hippel, McFarlane, and Sekaquaptewa conducted a study surrounding their feelings, to further understand the impact that stereotypes have on women. The conclusion was that women who experience stereotypes have more negative emotions and do not want to associate themselves with the industry. As a result of speaking about their experience with others, people have often swayed away from the field that the two spoke about.

Our family also impacts where we eventually end up in our careers. Family, religion, and politics are often intertwined and often depend on geographic location as well. Many women in the middle east have families and governments where having high-ranking jobs, or any job at all, is discouraged. Up until recently even, women in the UAE were not allowed to drive without permission until 2018. Times are changing though, as seen by this newly enacted change. This leads to the next factor that must be considered, historical context.

2. Historical Context

As stated at the beginning of the article, a lot has changed in 150 years. The women's rights movement began in the mid-1800s and mainly promoted the rights for women to vote and be considered equal to men. Fast forward today, although progress has been made, a lot more progress is still needed for women and men to be considered equal. Take into consideration the pay gap, where women earn about 82 cents for each dollar a man makes. The pay gap shows that society still does not value women to the same extent which we value men, which is disappointing. Women also aren't fully encouraged in some areas of the world to pursue careers either, because the way that given society thinks and approaches women's rights has not advanced. So, will it be better in 50 years? Who knows. Hopefully, progress and equality can be achieved, but for now, that is up to whether or not we are willing to change. Time is one of the facts that we cannot control. Often things just occur over time, but sometimes need a nudge in the right direction. When we college students enter the workforce, we can advocate for the change necessary and nudge society into the right direction.

3. Biological Factors

Often, we do not consider factors that are completely out of our control and have impacted us since day one. Interestingly enough, men have many differences when compared to women. Their brain function and development are different, their hormones are different. As a result of these two, many abilities are different in the two genders. Self-discipline, communication, and organization are impacted, but in turn, life choices, opportunities productivity, and standardized test scores are all impacted.

According to Ceci, Williams, and Barnett, members at Cornell University, women often score highly in all segments, including reading and writing, and math. Men, on the other hand, score higher in one specific section, specifically math. As a result, men feel cornered to go into something that they are good at, where women see that they have many opportunities to explore careers in numerous fields, whether it be in English or math. Another biological factor that impacts the underrepresentation of women in STEM and any career is their loyalty to family. There is an intense bond between a mother and child, and often as a result the mother feels obligated to stay at home with that child instead of sticking to her career.

The ways in which biology factors into our careers are infinite, so it is impossible to explore them all. The authors, however, drew an illustration that can help us better comprehend just what large role biology plays in career outcomes.

Main Takeaways

There are so many factors that are out of our control. Whether it is historical or biological, we need to understand that we cannot control every factor that plays into the underrepresentation of women.

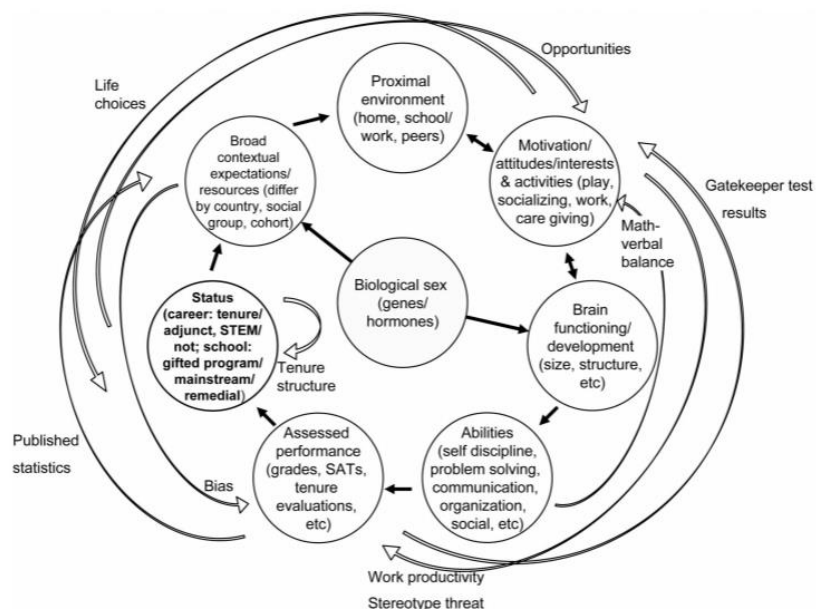


Figure 1. General causal model. STEM = science, technology, engineering, mathematics.

Figure 2: Image sourced from "Women's Underrepresentation in Science: Sociocultural and Biological Considerations"

However, understanding that various elements, including the ones discussed in this article as well as others, play a role in where we end up is a great place to start. As college students, we need to understand that we can positively impact the workforce in the next couple of years. As we enter it, we need to embrace change, create an environment diversity is promoted, and become more open to hearing each other's backgrounds and experiences.

Being able to promote a safe environment for women to work is the main priority. With having a toxic culture, change and increasing female representation will not be possible. As a result, we need to do better and change what is considered to be acceptable in the workplace.

Hopefully this article illustrated that although we cannot change everything, we do have a hand in creating a better, more equal future for future women within STEM. Change starts with the future leaders and workers of the world, which is why it is so important to understand the gravity of the situation that we are in today and will face in the future. Female representation in STEM is only possible only if we push for change, just as past individuals have done.