Women are at a disadvantage in science

Establishing a career in science, technology, engineering and mathematics (STEM) is a difficult challenge for women. The disadvantages women face on a regular basis in academic settings and in the workplace, are directly connected to gender discrimination and bias. There are three problematic issues that hinder a woman’s advancement in becoming a successful scientist. These are namely, academic environments that discourage women to pursue a path in STEM, negative stereotyping plus implicit biases, and underrepresentation of females in leadership positions. Consequently, these discriminations have formed social barriers that discourage women from receiving the opportunities and recognition that men in STEM do.

A student’s academic environment strongly influences their levels of interest and passion in what they learn in school. Boys are encouraged by teachers and parents to pursue mathematics and science subjects in school while girls tend to be encouraged to take interest in fields like caregiving. A survey of 11,500 girls aged 11-30 performed by Microsoft found that most young girls lose their interest in science and technology by the age of 15. The survey also determined that having teachers that talk about and encourage STEM, and having female STEM role models are big influencers that keep girls interested in learning. Yet, these supports are lacking. The skewed support for boys to pursue these classes in school automatically discourage girls.

Discrimination and sexism continue to pose a threat for women applying for STEM institutions and careers. A study examined over 300 letters of recommendation for an American medical school and found that letters for female applicants were shorter in length, lacked specificity and implied they were less competent (Trix and Psenka, 2003). Men were described by references with stereotypical terms like “highly motivated” or “brilliant”, and women with “considerate” or “honest”. Despite having the same credentials and abilities, men are seen as more qualified than women when in admissions due to stereotyping and gender bias, perhaps even unintentionally.

Men hold approximately 81 percent of department leadership positions in many STEM fields which overshadows the number of women who are eligible (Niemeier and Gonzalez, 2004). This underrepresentation of women poses a challenge for females in STEM as they have minor influence on decisions regarding teaching, salaries, and organisation of members in their field. Men in leadership positions have the advantage of being perceived as more capable and skilled and therefore, more likely to succeed in STEM careers – outnumbering the women who have the same qualifications.

References
