

# Promoting Gender Equality in Cybersecurity through Education and Mentorship

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## Introduction

Despite the growing importance of cybersecurity, gender inequality and the underrepresentation of women remain major challenges. While there has been broader progress in gender representation, this imbalance in cybersecurity limits its growth and weakens its ability to respond to emerging threats. Addressing these issues through targeted educational efforts is essential to support both current professionals and aspiring women entering the field. This paper explores the key challenges women face in cybersecurity and offers practical solutions to foster a more inclusive and equitable environment.

## Research methodology

This study uses a qualitative literature-based methodology, synthesizing insights from academic sources, reports, and data visualizations to identify key challenges faced by women in cybersecurity. It evaluates practical interventions, such as mentorship programs, educational initiatives, and awareness campaigns, and uses visual analysis (e.g., Figures 1 and 2) to show gender representation trends and empowerment barriers.

## Challenges of gender equality

Cybersecurity is booming yet remains male-dominated. Equal access to opportunities, recognition, and pay for women is essential [1]. While education opens doors, women often lack support, confidence, and role models, discouraging entry into the field [2]. Figure 1 shows racial inclusivity improving among younger workers, but women, especially white women, still account for only 10% of cybersecurity roles [3]. Multiple barriers fuel this imbalance and the pay gap, but targeted educational reforms—addressing over half the obstacles shown in Figure 2—can help close the gap [5].



Figure 1: Cybersecurity workforce [3]

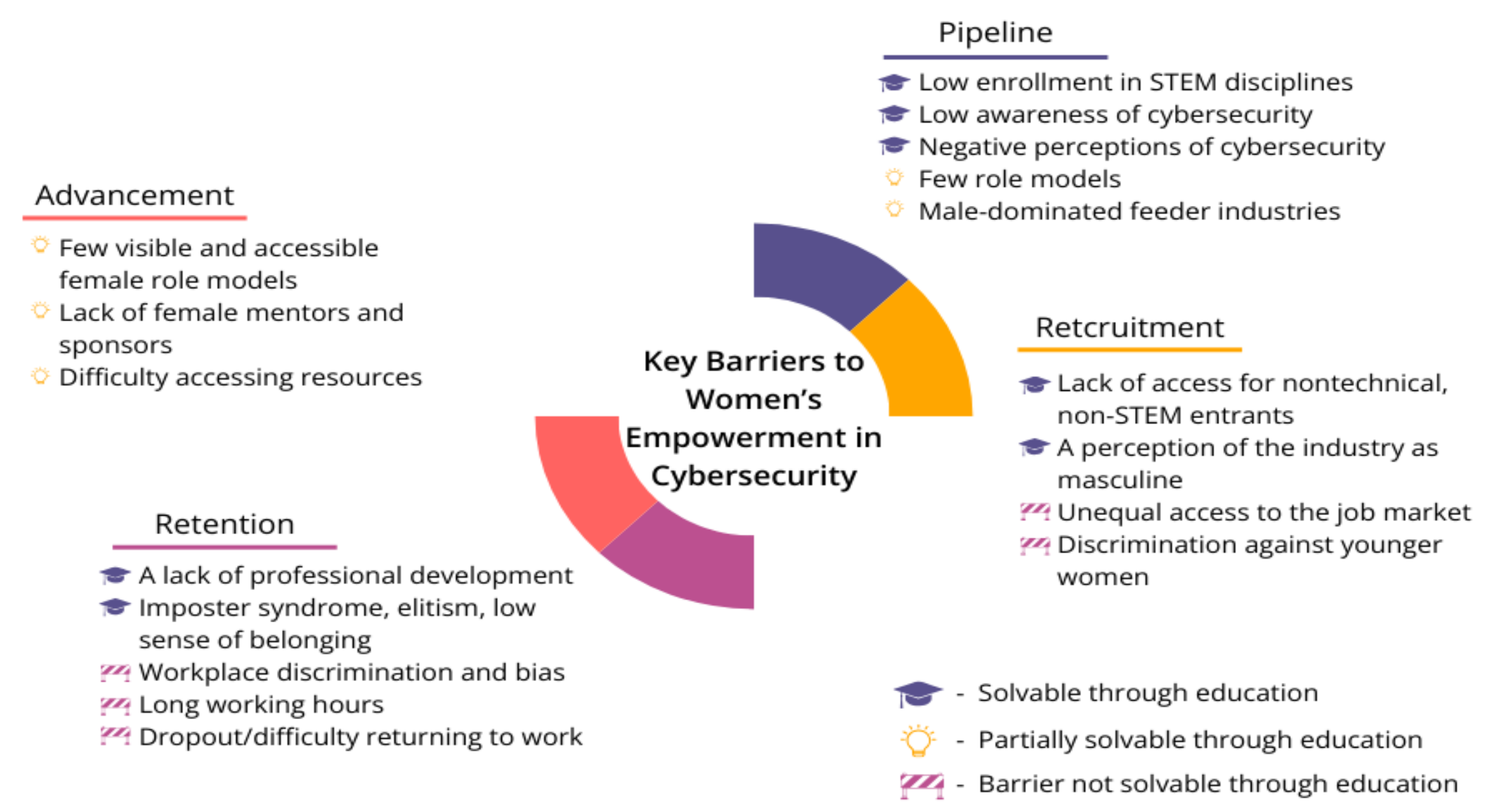


Figure 2: Key barriers to women's empowerment in Cybersecurity

## Addressing the challenges

Gender equality enhances cybersecurity. Diverse teams offer broader perspectives and better problem-solving, making them more effective and innovative [6]. To attract more women, companies should partner with educational institutions and host workshops like WiCyS and ITU Women in Cyber, which boost confidence and interest [7, 8]. Highlighting female role models also helps inspire new talent. Mentorship and inclusive workplaces are essential. Promoting flexibility, eliminating bias, and ensuring equal pay through transparent practices all support gender equity [9].

Most importantly, women supporting each other through strong networks improves retention and encourages more to enter and succeed in the field [7].

## Summary

Improving gender equality in cybersecurity requires broad societal engagement. Structured educational initiatives, targeted mentorship programs, industry conferences, and highlighting the achievements of women have proven effective in promoting inclusion. Active participation and mutual support among women in the field further encourage more to join and advance. To effectively address the challenges women face, a comprehensive approach is needed—one that integrates education, mentorship, support, and active societal involvement.

## References

