British Cardiovascular Society
'Promoting excellence in cardiovascular care'

BCS Editorial

Women in Cardiology: An Update

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Take Home Messages

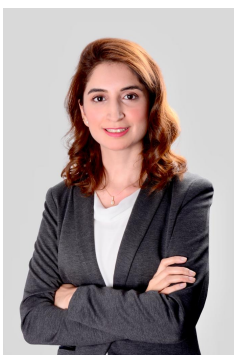
- There continues to be an under-representation of women in cardiology as a career, although recent data suggests this is improving.
- Gender discrimination and the difficulty in maintaining a healthy work-life balance in this competitive field are some of the major barriers faced by women.
- Bullying, harassment and negative attitude in cardiology is prevalent and should not be tolerated.
- The British Cardiovascular Society and Women in Cardiology groups have made innumerable contributions and efforts to help women overcome these barriers.

Introduction

A large number of career-oriented and ambitious women are drawn towards cardiology (1). The percentage of women joining medical school is growing remarkably but that does not translate into similar stratified proportions in specialties like cardiology (1). Indeed, evidence suggests that recruiting a greater proportion of female Cardiologists may result in better patient outcomes. According to a recent study, the likelihood of misdiagnosis of cardiac conditions in females is as high as 50% and the chances are much higher if the treating physician is a male. Similarly, the survival rates were reported to be lower in female patients admitted with a myocardial infarction if they were treated by a male doctor (4). Innumerable efforts have been made towards reducing gender disparities in fields like internal medicine which have noted a surge of women in recruitment by up to 40%. However, the numbers remain as low as 20% for women in cardiology and only 4% for interventional cardiology (2).

In 2019, a prior British Cardiovascular Society (BCS) editorial highlighted some of the challenges faced by women in cardiology and also identified the reasons behind their underrepresentation in the field (3). In this editorial, we aim to provide an update on the previously reported challenges and also discuss some unaddressed issues faced by women in cardiology. What are these barriers, what is being done, and what more can be done to help improve the situation (**Table 1**)?

About the authors



Dr Khadija Amanullah graduated from the National University of Medical Sciences, Pakistan in 2018 and is currently working as a foundation doctor. Dr Amanullah is an advocate for promoting equality and diversity at the workplace and is planning to pursue a career in Cardiology.

Dr Raheel Ahmed graduated from Newcastle University in 2014. He is an ST5 Cardiology registrar in the Northern deanery and is currently undertaking an MD(res) at the Royal Brompton Hospital investigating cardiac sarcoidosis. He plans to subspecialise in interventional cardiology.

Table 1. A summary of the challenges faced by women in Cardiology

Barriers	What is being done	What more can be done
Long working hours inconducive to child care commitments	• Flexible training opportunities including less than full time training	• Improve access and availability of affordable child care facilities at the workplace. • Initiatives in the form of tele-consultations.
Adverse working environments impacting work-life balance	• Establishing part-time consultant job plans • Shared parental leave • Guardian of safe working • Exception reporting	• Change the work environment, work schedules and culture to reduce the stigma attached to those seeking a work-life balance.
Fear of radiation exposure, especially in pregnancy	• Mandatory training in radiation safety. • Published guidance for pregnant cardiologists.	• Phased return to work after a break. • Expand radiation safety training to foundation/intermediate trainees, and undergraduates.
Sexism and gender discrimination	• Confidential reporting of gender biases in the workplace • Enhance gender diversity • Freedom to speak up Guardians	• Create an environment where employees feel comfortable to report such incidents and ensure they are followed up with appropriate actions. • Educate employees to identify unconscious gender bias.
Underrepresentation of women in procedural subspecialties	• Accessibility to subspecialties such as electrophysiology and interventional cardiology. • Specialty showcase webinars run by the British Cardiovascular Society Women in Cardiology committee.	• Organizing regular awareness workshops/conferences regarding the scope and safety of advanced subspecialties
Lack of guidance/role models	• Structured mentorship programmes	• Assigning mentors to trainees during their specialist training. • Approachable faculty that could facilitate trainees in future career decision making.
Underrepresentation of women in academic cardiology	• Increased female representation in editorial boards and international cardiology committees	• Creating ample opportunities that would help trainees identify their research potential. • Increase awareness of equality, diversity and inclusivity grant funding (dedicated for underrepresented groups and those with career breaks or caring responsibilities).
Bullying and negative perceptions in cardiology	• Accountability of bullies and periodic feedback strategies	• Encouraging an environment of safety reporting system.

Possible barriers for women in cardiology

A lack of flexibility in the working hours of this demanding field may prevent some women from pursuing a career in cardiology. Additionally, the misconceptions of the harmful effects of radiation exposure deter others from joining subspecialties like interventional cardiology (5). Despite the option of less than full-time training (LTFT) in the United Kingdom, a significant proportion of LTFT trainees (4% in cardiology of which 69% are females) report a lack of satisfaction with the training opportunities as well as an apparent stigma associated with LTFT (5). The demanding requirements of the field appear to pose a barrier to women pursuing their professional and personal goals simultaneously. A survey based in the United States demonstrated that fewer women in cardiology reported being married and having children as opposed to their male counterparts (marriage: 71% vs 90%, children: 63% vs 88%) (6).

Jagsi *et al.* reported the findings of their survey of 2679 cardiologists, of which 8.55% were females, in the Journal of American College of Cardiology in 2016 (7). Women were more likely than men to be general cardiologists (53.1% vs 28.2%) and fewer worked full-time (79.9% vs 90.9%, $p<0.001$). Even after adjusting for personal, job, and practice characteristics, substantial sex-based salary differences existed.

Women in academia

The under-representation of women in national and international cardiology societies, editorial boards of cardiology journals, or senior academic positions is particularly a setback for junior women looking for role models in cardiology (8). Data demonstrates that women have fewer high-impact publications and are awarded fewer funding grants but the median number of citations is higher which does not support that publications by women are less worthy of being accepted (9). Likewise, it showed a significant gender association between mentees and mentors and depicted that 77% of female researchers work under male rather than female mentors (9). However, there has been recent progress. Dr. Sarah Clarke, ex-president of the BCS from 2015-8, played a key role in developing numerous educational and research strategies in the form of British Junior Cardiologists Association Council that allows trainees to remain updated with upcoming conferences and training events in addition to having access to several learning resources. Despite having some examples of women in cardiology at high positions, there are comparatively fewer role models in practical or clinical settings (10).

Bullying in Cardiology

Camm *et al.* recently published a survey of UK cardiology trainees which found that 11% reported experience of bullying, of which a significantly high proportion were females (OR 1.55, 95% CI 1.08 to 2.21, p=0.016) (**Figure 1**). In their survey, fourteen percent of the female trainees also experienced sexist language in the workplace. Moreover, the percentage of bullying was much higher among trainees who were international medical graduates (11).

Gender discrimination and sexual harassment

Gender discrimination is faced by both men and women, however, in one study, 65% of female cardiologists as opposed to only 23% of males reported being affected by this (2). A survey of 174 consultant cardiologists in the UK demonstrated that many more female cardiologists experienced gender discrimination compared to males (61.9% vs 19.7%) and unwanted sexual comments (35.7% vs. 6.1%) which negatively influenced workplace confidence of many more female cardiologists (42.9% vs. 3.0%) and hindered their professional development (33.3% vs. 2.3%) (12). Kurdi *et al.* explored this further in a recent survey of 227 non-cardiology higher trainees. When asked about their experiences

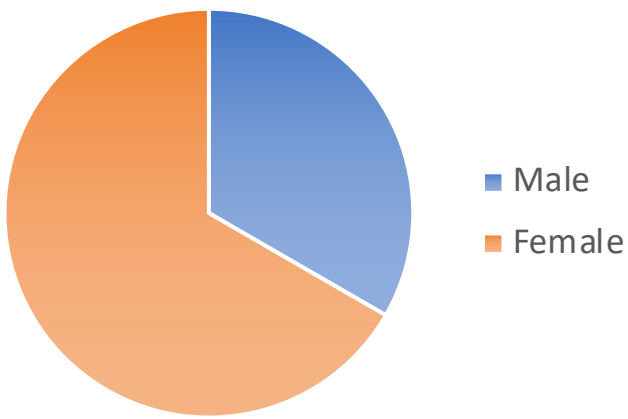


Figure 1. Bullying experienced by cardiology trainees (Adapted from Camm *et al.*) (11)

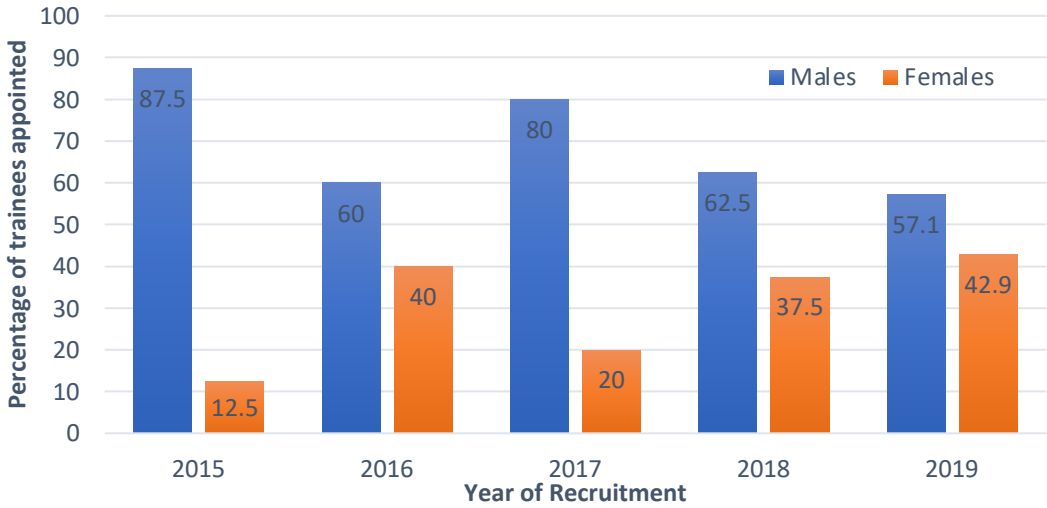


Figure 2. Bar chart showing the percentage of new Cardiology ST3 trainees by gender in Wales, 2015-2019 (Adapted from Kurdi *et al*.) (13)

with cardiologists compared to non-cardiologists, females reportedly witnessed and experienced sexism much more than males (24% and 13% vs 14% and 0%). Furthermore, 62% of respondents also felt cardiologists and registrars were unapproachable and their negative attitude dissuaded many from pursuing a career in cardiology (13). Nonetheless, the number of female cardiology trainees is rising (**Figure 2**) (13), however, it is projected that gender parity in cardiology won't be achieved until another 50 years (14). In 2016-2019 a greater proportion of females were recruited into ST3 Cardiology when compared to 2015 ST specialist training.

Impact of BCS Women in Cardiology

The basic objective of BCS Women in Cardiology (WiC) is to provide a platform for female cardiologists and trainees, giving them incentives and to help them collaborate with other like-minded cardiovascular societies that address the challenges of gender discrimination. They run a mentorship program and organize numerous educational activities such as webinars which aim to provide guidance on how to overcome professional barriers and manage careers with childcare by availing the options of flexibility in working hours (15). These webinars give subspecialty 'showcases' to encourage female trainees to consider historically male-dominated subspecialties, for example, interventional cardiology. The British Cardiovascular Interventional Society (BCIS) also conducts specific women in cardiology webinars. Furthermore, a recent BCS publication sought to provide resources for pregnant cardiologists, their partners and supervisors (16, 17). The resources were compiled by a working group involving representatives from the BCS, British Heart Rhythm Society, radiology, occupation health and human resources (16,17).

Conclusion

Cardiology is in need of professional women to help advance cardiovascular care and provide a balanced workforce. However, they continue to face gender bias, bullying and apparent discrimination in terms of recruitment, pay, and respect in different aspects of the cardiology career. It is the need of the hour to facilitate them in the workplace, diminish bullying and sexism at work, and actively promote their presence in both clinical and academic settings. Empowering more women cardiologists will enrich the workforce as well as the cardiovascular health of our patients.

Useful Links

- https://www.womenincardiology.uk/about
- https://www.millbrook-medical-conferences.co.uk/Conferences/July-2022/BCIS-Women-In-Interventional-Cardiology---Research-Essential-or-Otherwise.aspx
- https://www.womenincardiology.uk/events#
- https://scts.org/events/190/inaugural_wic_wicts_conference_refresh_and_inspire_2022
- https://www.britishcardiovascularsociety.org/__data/assets/pdf_file/0020/37703/BCS-2021-Resources-for-pregnant-cardiologists-their-partners-and-supervisors-Aug21.pdf
- https://www.britishcardiovascularsociety.org/resources/publications-reports

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