

# WOMEN IN HYPERTENSION RESEARCH

## Perspectives on career disruptions

Having a diverse workforce within the cardiovascular research sector is a critical way to ensure an effective hypertension research field. There are many barriers disproportionately faced by women that can preclude them from maintaining a successful research career. While key strategies have been identified to support

cardiovascular researchers,<sup>1</sup> barriers still impact women globally. One such barrier is career disruptions, which can have a huge impact on women in research. Here we discuss perspectives from India, Australia and South Africa.

### An Indian perspective

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Women in India have achieved notable progress in education, constituting a significant proportion of degree holders. However, despite this educational advancement, their representation in the labor force remains disproportionately low. Remarkably, while women hold 53% of undergraduate degrees and 69% of master's degrees, they account for less than 20% of the labor force. This discrepancy is particularly concerning given the correlation between education and workforce participation observed in other emerging economies.

Statistics reveal a troubling trend: despite India's economic growth and increased educational opportunities, there has been a notable decline in female workforce participation. This decline is starkly different from the patterns observed in countries like Brazil, Russia, Indonesia, and China. Even more alarming is the fact that this trend is more pronounced among married women, with only around 31% of married women actively

engaged in the workforce according to a 2019 report by the Indian Ministry of Health and Family.

Marriage remains a significant obstacle to women's careers in India, despite advancements in education and societal changes. The cultural emphasis on marriage reinforces traditional gender roles, compelling women to prioritize family duties over professional ambitions. Consequently, marriage becomes a pivotal juncture, shaping women's priorities and decisions. Existing career theories have evolved to accommodate women's unique experiences but often fall short in explaining the career interruptions faced by married Indian women.

Over the past decade, India has witnessed a notable surge in research opportunities aimed at fostering the participation of women across diverse fields. Initiatives such as the SERB Women Excellence Award, administered by the Science and Engineering Research Board (SERB), commend and provide financial support to outstanding women scientists and engineers under the age of 40. Additionally, the Knowledge Involvement in Research Advancement through Nurturing (KIRAN) Division, established by the Department of Science and Technology (DST), offers fellowship schemes and grants to empower women in science, encouraging their active involvement in research. The Ramanujan Fellowship, although not exclusively targeting women, attracts brilliant researchers worldwide, including women,

to conduct independent research in India. Furthermore, the Women Scientists Scheme (WOS) by the DST facilitates the re-entry of women into research careers after career breaks due to family responsibilities, offering financial assistance for projects and capacity building. Collaborative efforts between India and the U.S. through initiatives like the Indo-U.S. Fellowship for Women in STEM provide opportunities for Indian women scientists to pursue research in leading U.S. institutions. Other programs, like the Biotechnology Career Advancement and Re-orientation Program (BioCARE) and the Uchatar Avishkar Yojana (UAY), also contribute to creating

a supportive environment for women in research by offering retraining, career development, and collaborative research opportunities, albeit not exclusively aimed at women.

In essence, while women in India have made significant strides in education, their participation in the labor force remains disproportionately low, particularly among married women. The above initiatives collectively demonstrate the government's commitment to promoting gender diversity and empowerment in India's research landscape.

## An Australian perspective

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In contrast to India, marriage is not generally considered a roadblock for women in Australia. However, fewer women are in senior leadership roles within research institutes and universities. Many women leave the research sector, and having children is considered a major factor in this trend.

In Australia, it is common for women to take 3-12 months of maternity leave, and many women return to work part-time. Fortunately, "relative to opportunity" is considered formally by Australia's major medical funding bodies and academic institutions. This means that time worked, or full-time equivalent (FTE), is used to determine career stage, instead of calendar years since PhD acceptance.

For example, I was considered an early career researcher until recently, even though I was

~9 calendar years since PhD completion. This means that during funding cycles, I have been competing against other early career researchers. If calendar years post-PhD were taken into account, I would have been defined as mid-career, and my productivity would have been evaluated accordingly, likely leading to decreased funding success. This system is not perfect and does not take into account other burdens that disproportionately fall on mothers or the impacts of stop-start disruptions on productivity, to name just a few. However, it does provide the framework for assessors to evaluate career disruptions.

Another initiative available in many Australia institutions are small grants available to women who have had a career disruption. The aim of these grants is to reduce the impact of career breaks and/or caring responsibilities on productivity and career advancement of academic women, to bridge the gap. This may include funding for things not generally considered within standard grants, such as childcare to facilitate conference attendance.

While these initiatives are beneficial, we still have a long way to go to reduce gender bias. Factors such as low funding rates, job insecurity and unconscious bias are still major drivers of the disproportionate lower number of women in senior academic roles.

## The South African perspective

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It is crucial to first acknowledge that this perspective does not capture the influence of diverse cultural and country-specific disparities around gender roles and women empowerment in Africa. In South Africa, significant strides have been made to support women in academic institutions by investing in undergraduate and postgraduate support structures through different government ministries. Employment opportunities for women are bolstered by recruitment strategies targeting historically disadvantaged individuals such as women and people of colour due to previous discriminatory laws against these groups.

Formal mentorship and leadership development structures play an essential role in supporting academic career growth and some of these initiatives are tailored for women. For example, funding support for international placement, independent of years after obtaining a doctoral degree. Pregnancy and childcare responsibilities remain one of the most common reasons for career interruptions for women. In Africa, parental leave laws vary between countries, and maternity leave allocation in the region is mostly around

12-14 weeks, paid versus unpaid and differences apply for child adoption as well as between private and public sectors.

In South Africa, most universities and research institutions provide four months of paid maternity leave. The benefits are not equally available for non-permanent and part-time employees. Returning to work after this limited period has a negative effect on productivity and work-life balance, which may be long-term, particularly for early and mid-career women. Currently, most funding instruments and other types of awards still put emphasis on years since completion of a doctoral degree and/or age without factoring in career disruptions.

Although career disruptions especially due to childbirth or illness are mostly provided for in the conditions of employment, their evident limiting effect on career progression is not always incorporated in processes for determining attainment of important career milestones. These include, among others, grant applications, merit awards, and promotions. There are funding bodies that consider time away from research. This is specific for national funding calls focused on the development and advancement of designated groups per race and/or gender. However, such practices are not yet a norm, not comprehensively defined nor applied across a wide spectrum of career-advancing opportunities.

### References

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