Large gender imbalance in funding given for cancer research

May 14 2018

Male researchers receive far greater funding for cancer research than their female equivalents, suggests a study published in the journal *BMJ Open*.

Within the European Union (EU), women represent nearly half of the workforce and more than half of all university graduates, but they are under-represented in senior positions in the workplace.

In science, research and development, the attrition rate among women exceeds that of their male counterparts at every stage of career progression, with women representing 46% of Ph.D. graduates, 33% of career scientists and 22% of grade A researchers (the highest posts at which research is conducted).

Previous studies have explored gender imbalance and suggested that only a fifth of countries worldwide have achieved gender parity in scientific research.

A team of researchers from several institutions including Harvard University in the US, University of Oxford, University College London and Imperial College, led by Dr. Mahiben Maruthappu, Professor Henrietta O'Connor, Dr. Charlie Zhou, Dr. Michael Head and Professor Rifat Atun, decided to investigate the issue.

They used data from several sources on public and philanthropic cancer research funding bodies including the Medical Research Council,

Department of Health, Wellcome Trust, European Commission and medical research charities, awarded to UK institutions between 2000 and 2013.

They compared research investment totaling £2.3bn, award numbers, as well as the mean and median research award between male and female primary investigators (PIs).

Analysis showed that, of the studies included, 2,890 (69%) grants with a total value of £1.8bn (78%) were awarded to male primary investigators compared with 1,296 (31%) grants with a total value of £0.5 billion (22%) awarded to female PIs.

Grants to male PIs were 1.3 times greater than female counterparts and these apparent differences remained the same, regardless of cancer site, cancer type, stage of research, or by funder.

Similarly, the average grant value was around 38% greater for men than for women leading on cancer research.

For prostate cancer, male PIs received 13.8 and 3.5 times the investment of their female counterparts in total and average (mean) funding, respectively.

In cervical cancer research, men received 9.9 and 6.6 times the funding of women PIs in total and average funding, respectively, while in ovarian cancer research, there was a 4.6-fold and 5.7-fold difference between men and women in total and average funding, respectively.

The authors acknowledged that their study was dependent on the accuracy of original investment data from the funding bodies and that they could not openly access data of private sector research funding, nor obtain disaggregated data from Cancer Research UK, one of the largest

funders of cancer research.

However, they concluded: "While the gender discrepancies in cancer research funding observed over the 13-year study period are likely multifactorial, this study is fundamentally descriptive in nature and does not allow us to postulate the underlying mechanisms responsible for the observed gender differences.

"Nevertheless, this study demonstrates substantial gender imbalances in cancer research investment. We would strongly urge policy-makers, funders and the academic and scientific community to investigate the factors leading to our observed differences and seek to ensure that women are appropriately supported in scientific endeavour."

More information: Charlie D Zhou et al. A systematic analysis of UK cancer research funding by gender of primary investigator, *BMJ Open* (2018). DOI: 10.1136/bmjopen-2017-018625

Provided by British Medical Journal