Development of new metrics to assess markers of achievement for women in translational settings: National Institute for Health Research Oxford Biomedical Research Centre

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Background

Translational Research organisations (TROs) are a core component of the UK’s expanding research base. Equity of career opportunity is key to ensuring a diverse and internationally competitive workforce. The UK now requires TROs to demonstrate how they are supporting gender equity. Yet, the evidence base for documenting such efforts is sparse. This study is designed to inform the acceleration of women’s advancement and leadership in two of the UK’s leading TROs—the National Institute for Health Research (NIHR) Biomedical Research Centres (BRCs) in Oxford through the development, application and dissemination of a conceptual framework and measurement tool. We have proposed a set of metrics that will monitor and identify gaps in women’s career entry and progression within the UK and possibly to translational medicine organisations generally, where gender equity can be tracked more widely. We present preliminary analysis from a retrospective analysis of our publications database re: authorship and Gender.

Methods and analysis

The project was reviewed and provided with an ethics exemption by the Medical Sciences inter-divisional research Ethics Committee at the University of Oxford. Researchers funded by the Oxford BRC (block grant BRC2: from April 1st 2012 to March 31st 2017) were requested to submit all their research publications. The methodology followed is described in Figure 2. Afterwards, each publication was searched, and the full text examined. Nine categorical variables were analysed per publication and one further if they were in relation to female or male research. Although the list of gender identities is larger, for methodological limitations, gender was defined as a binomial variable: male and female. The gender of the first author, the corresponding author, and the senior author was identified. First author was defined as the first name written in the list of authors. When the article mentioned that more than one person contributed equally in the publication, only the first name was considered. The author whose contact details such as address or email address were provided for correspondence was defined as the corresponding author. When more than one author was mentioned, just the first and the second name on the list were analysed. Senior author was defined as the last person named in the list of authors. Most publications had more than one author but when this was not the case, the senior author was also identified as a senior single author. The determination of gender to the names was a straightforward task in most cases. However, some author’s names were difficult to associate with a gender, thus further information was sought such as their institutional affiliation, and new searchers were made. Institutional web sites and social networks such as LinkedIn and ResearchGate were consulted. If after this secondary search, the named was not assigned to a gender, Gender API (gender-api.com) was used as a last resource. Only names that were above 90% accurate to be linked with a specific gender were considered. Otherwise, it was classified as ‘unidentified’. After the analysis was finished, 10% of the data was checked independently by a second researcher and compared and a consensus was achieved on those that did not match.

Results

The study provides a description and analysis of researchers publications funded by the Oxford BRC (block grant BRC2: from April 1st 2012 to March 31st 2017). Analysis by first, corresponding and senior author and gender (Figure 2). The results highlight that there were more first male authors (58.4%) when compared to first female authors (41.3%). Similarly regarding corresponding authors there were more male authors (64.7%) compared to female (35.3%). The results highlight that there were less female senior authors compared to male (77%, compared to 22.9%).

Conclusions

• The fundamental rationale for this study stems from the desire of the participating NIHR BRCs to make their own measurable contribution to accelerating women’s advancement and leadership in translational research programmes.
• Our intention is to develop a new multidimensional conceptual framework for gender equity performance assessment in order to use it both for retrospective evaluation and prospective planning and monitoring with a view to accelerating women’s advancement and leadership.
• We believe that measuring the impact of TROs on gender equity should become an important dimension of their research impact assessment.
• Publications analysis highlights inequity in gender representation of peer reviewed articles.
• Publications analysis highlights methodological challenges of identifying gender of authors and a range of sources may be required (Figure 4).
• Analysing authorship of gender is time consuming and complex.
• STARBIOS2 catalysed an overview of gender and publications in the Oxford BRC for the first time that will be useful a marker to monitor progress towards gender equity.
• Oxford BRC will now track the authorship of gender in future BRC data in collaboration with the Bodleian library to track trends over time.
• Publications are an important marker of achievement in academic careers and further work is required in analysing Gender and authorship in this area.