BMJ Global Health

Sex and gender reporting in global health: new editorial policies

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To cite: Peters SAE, Norton R. Sex and gender reporting in global health: new editorial policies. *BMJ Glob Health* 2018;**3**:e001038. doi:10.1136/bmjgh-2018-001038

Handling editor Seye Abimbola

Received 3 July 2018
Accepted 5 July 2018

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Sex and gender are fundamental drivers of health.[1–3] While not mutually exclusive, the terms sex and gender are often (incorrectly) used interchangeably.[4] Sex is a biological variable that defines humans (and other species) as male and female (or intersex) according to their reproductive organs and functions, based on chromosomal assignment. The term sex differences should be used to describe sex-related biological or physiological differences between males and females. By comparison, gender is a socially constructed variable that refers to the roles, behaviours, activities and attributes that a given society, at a given time, considers appropriate for men and women. At present, there is no consensus on the measurement of gender, as gender identity, roles and norms vary considerably across settings and over time.[5 6] Nevertheless, methods to measure gender are in development and recognise that gender both operates on a continuum and can change over time. In light of the above, it could be argued that knowledge of both sex at birth and gender identity should be reported in health research.[5]

Historically, there has been a tendency to understate or misunderstand the role of sex and especially gender in health and medicine.[1 3] Sex and gender dimensions of health were often considered as solely being relevant to the health needs specific to women and men, such as sexual and reproductive (including maternal) health issues. For many years, therefore, women were not included in research studies of diseases affecting both sexes, as it was assumed that any research findings, although based on studies of men only, would be relevant for both women and men.[1–3 7] This has led to a failure to identify and address sex-specific and gender-specific determinants of health, including those that drive the greatest burden of ill health affecting both women and men across the life course, namely non-communicable diseases.[8]

Nevertheless, in the last few decades, a growing body of research has established the presence of sex and gender differences in virtually all areas of health and well-being.[1 3 6] For example, sex differences have been observed in relation to the structure and physical function of many organ systems, diagnosis and prognosis, response to treatment and health outcomes.[2 3 8] Moreover, gender norms and gender inequality, whether enforced or continued by individuals and communities, or underpinned by legislation and policy, have been identified as contributing to disparities in health behaviours, access to healthcare, adherence to medications and other treatments, and health system responses, thus contributing further to the differential burden of disease in women and men.[9]

Consequently, efforts have been made to emphasise the importance of recognising sex and gender at all stages of medical research, healthcare, global and public health, and health policy.[1 5 6 10–13] Yet, women are still under-represented in research and many studies still do not conduct, report and/or discuss sex-based and gender-based analyses.[1 5 7] However, research findings that are based on a predominantly male population or presented, and interpreted, as the (weighted) average between male and female participants may mask important differences by sex and gender, or both. Such omission could lead to spurious research findings and the inability to reproduce results, which, in turn, could translate into incorrect conclusions and inadequate or inefficient, potentially harmful, healthcare practices and policies for women or men.

Cardiovascular researchers have been leaders in recognising and investigating differences between men and women.[2 7] Nevertheless, only small improvements in female representation in cardiology trials have occurred over the past decades and considerable gaps between female enrolment and the actual population burden of cardiovascular disease in women persist.[7] It has been estimated that, based on current trends, it will take several decades to achieve female enrolment representative and to ensure the provision of sex-appropriate and gender-appropriate, evidence-based care.

It can be difficult to quantify the exact contributions of sex and gender to health, as biological and social factors often operate together and vary over time and between settings.[9] However, the identification of sex and gender differences is an essential first step in determining why these differences occur and, most importantly, whether and how they might be mitigated. Preventive and treatment strategies have the potential to benefit from such knowledge, resulting in the development and implementation of safer and more cost-effective, targeted strategies and ultimately, greater reductions in the burden of disease, for both women and men.

Identifying and addressing sex and gender differences is as important, if not more important, in global health for several reasons.[8 9] First, in low-income and middle-income countries, there is an even greater need than in high-income countries to ensure that limited resources are used most efficiently. Policies and interventions, whether aimed at the individual, group, or community, should therefore be tailored to the specific needs of end-users, which may differ by sex and gender, and also by a wide range of sociodemographic, cultural and environmental characteristics.

Second, gender inequality has been shown to be greatest in many resource-poor environments and, through disparities in allocation of household resources, medical care and education, often disempowers and deprioritises the health of women.[14] While addressing the fundamental drivers of gender inequality, including poverty, social hierarchy, and a strong patriarchal structure, are paramount, the development and implementation of gender-specific preventive and treatment strategies may mitigate some of the effects of the latter.

Third, much of the research undertaken in the global health arena is focused on understanding how best to develop and improve healthcare delivery systems, rather than generating new knowledge about causes of disease. Understanding and addressing the unique and diverse impact of gender identities (ie, how individuals and groups perceive and present themselves), gender norms (ie, the implicit rules in the family or community that influence individual attitudes and behaviours) and gender relations (ie, the power relations between individuals of different gender identities) across different settings are paramount to optimise healthcare delivery systems.[6]

Finally, in the past 20 years and more, women's sexual and reproductive health and maternal issues have been an important focus for global health research, especially given the unacceptably high burden of maternal mortality. Significant reductions in the burden of sexual, reproductive and maternal health issues, in large part as a result of the efforts stemming from the focus on the Millennium Development Goals, has meant that the burden of disease and the leading causes of death and disability have changed for women.[15] For both women and men, non-communicable diseases are now the leading causes of death and disability in almost all regions of the world, and so an understanding of the role of sex and gender differences is now, much more than previously, essential in terms of addressing the increasing pressures on already overstrained healthcare systems.[8]

Given the clear importance of sex and gender in health and medicine, a growing number of funding agencies and journal publishers are now explicitly calling for and requiring that sex and gender are taken into consideration in research in funding applications and in the presentation of research findings.[10 13] It is timely, therefore, that *BMJ Global Health* takes this approach also. With immediate effect, authors of *BMJ Global Health* are therefore encouraged to use the Sex and Gender Equity in Research guidelines for reporting of sex and gender information in study design, data analyses, results and interpretation.[12]

While it is recognised that sex and gender analyses may not be relevant or possible in all research reports, where this is not undertaken, the reason should be justified. Sex-disaggregated and gender-disaggregated analyses should be presented and the findings should be discussed. To monitor the implementation of this policy, reviewers will be asked to comment on the sex and gender aspects of each paper, and this requirement will also be overseen by the *BMJ Global Health* editors. Finally, the journal issues an open call for new submissions that specifically address the diverse and unique contributions of sex and gender to different aspects of global health. With a stronger focus on sex and gender, *BMJ Global Health* takes another step forward in addressing global health inequalities and inequities, potentially improving the health and well-being of millions of individuals worldwide.

Contributors SAEP drafted the first version and RN provided critical intellectual input.

Funding SPis supported by a UK Medical Research Council Skills Development Fellowship(MR/P014550/1).

Competing interests None declared.

Patient consent Not required.

Provenance and peer review Commissioned; internally peer reviewed.

Data sharing statement No additional data are available.

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