

COMMENTARY

Gender inclusivity in women's health research

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More attention is being paid to health inequities worldwide, which is welcome given long-standing health disparities across under-represented communities, including those based on sex and gender.¹⁻⁴ The widespread under-representation of females and women in basic and clinical studies contributes directly to the health disparities seen between the sexes and genders that continues to this day.⁴⁻⁶ Sex refers to biological and physiological differences between sexes including chromosomes and hormones. Gender is a psychosocial construct which includes gender identity, and how a given society (home, workplace, educational institution), including the support within that society (parents, employers, teachers), may have different expectations based on a person's gender. Neither sex nor gender are binary.

There are numerous examples of sex differences in disease risk and health outcomes. Sex differences exist in disease prevalence.⁷⁻⁹ However, perhaps not widely understood, there are also sex differences in disease manifestation, which likely contribute to the disparities seen in the longer duration to diagnosis in females, with females diagnosed on average 2 years later for the same disease than males.¹⁰ Furthermore, females present with more adverse effects from new pharmacological drugs than males.¹¹ One of the reasons for these sex-based disparities is our fundamental lack of knowledge of female health leading to a generic sex-agnostic approach to treatment. Indeed, male-only studies outnumber female-only studies in basic and clinical research by 7 to 1.⁶ Even 15 years after the National Institutes of Health (NIH) mandated incorporation of women into clinical trials in 1993, only 26% of the published clinical trial data are analysed by sex.^{5,12}

Gender is also not consistently disaggregated in research, and the consequence is immense for women's health. For example, feminine traits, independent of female sex, increase one's risk for recurrent acute coronary syndrome.¹³ However, even when gender is included in analyses it tends to take on a binary categorisation of women and men and

ignores the range of persons who identify as transgender, gender diverse and non-binary. Thus, how can we ensure that women's health is researched alongside health research of those persons who align minimally (or not at all) with sex and gender labels of female and woman, respectively?

The erasure of gender-diverse persons further perpetuates the gap in appropriate gender-disaggregated research. The tension that exists in women's health research is that a focus on 'women' may result in the exclusion of trans women who are assigned male at birth, or the exclusion of nonbinary individuals who may be birth-assigned female but who do not align with the gendered label of woman. For example, what are the unique experiences of transmen with endometrial cancer? What are the unintended consequences of online health resources written for women without mention of diverse gender identities? One cost of gender-exclusive language is that scientific discoveries risk being generalisable only to cis-gender women and are not relevant to the larger group of people who identify as women but who may not be assigned female at birth. Yet, as outlined above, women (cis and transgender) have been largely ignored in health research over the years and it's important to recognise that more, not less, women's health and non-binary health research is sorely needed.

One popular alternative is the use of gender-neutral language to reference individuals, and people. Over the course of the COVID-19 pandemic, an inclusive approach has been taken to understanding the impact of the virus and the vaccine on pregnant and lactating individuals (regardless of their gender) where the term 'women' is not used at all (e.g. pregnant and lactating individuals).¹⁴ There has also been a move away from 'women's cancers' to referring to cancer anatomy (e.g. individuals with cervical cancer). As the call for more inclusive gender language grows, we must recognise that there are consequences to the adoption of this language including reducing people to being categorised by body parts that may render women and their histories invisible.¹⁵

There are inconsistent practices and recommendations in the academic community on the standards for gender-inclusive women's health research. For example, the *Journal of Midwifery & Women's Health*¹⁶ issued a statement declaring a preference for being 'intentionally inconsistent' (p. 155) with regard to gendered language to support authors' own positions towards gender-equitable language, as long as authors worked to avoid reducing people 'to their biologic parts and physiologic processes'. In contrast, a Commentary in *Obstetrics and Gynaecology* noted the imperative of recognising the association between gender-affirming health care and research and the harms that result from centring the experiences of cis-gender women.¹⁷ The crux of the issue is that if women's health (research) is defined by sex-specific conditions, then all people assigned female sex at birth should be included. If, however, women's health is defined more broadly, then transgender women should be included. It is likely the case that health issues and treatments are understandably varied depending on both sex and gender^{13,18} and unfortunately there are inconsistencies on how researchers report on sex and gender, often conflating the terms.¹⁹

1 | RECOMMENDATIONS

We would argue that clear, consistent and precise language when describing research participants is a starting-point for gender-inclusive research in women's health. Grouping diverse peoples together can risk diluting group differences in the quest for promoting inclusion which has unintended consequences.¹⁵ For example, terms such as 'people with uteruses' and 'people who menstruate' are used in the quest for inclusivity, but inevitably exclude women who have had their uteruses removed, postmenopausal women or women who are taking contraceptives to block menstruation. An example of a preferred phrase is 'women and individuals with uteruses'.

Clinical trials should be conducted with appropriate questions to probe sex and gender. When it is aligned with the main research question, every study should attempt to be inclusive of trans/non-cis women, as this is the only way to begin to build knowledge about the potentially unique (or similar) experiences of different gender groups. For each research scenario, a justification for the chosen female population should be provided in the Methods section of the manuscript. We recommend that the published data include a demographic table that includes the main outcome variable disaggregated by both sex and gender. Inferential statistics can be used to determine effect sizes of interventions by sex and gender. Although many believe that power is compromised with more groups, depending on the outcomes, the use of sex in analyses may actually improve power.²⁰ Although some gendered groups will certainly have a smaller sample size, we believe progress can be made by indicating those inferential statistics and also encouraging open science initiatives to improve future ability to conduct further analyses on

larger samples of gender minority groups. If a clinical trial has been conducted exclusively in cis-gendered women, then it is appropriate to report on the findings solely using the term 'women'. Lastly, future research articles should be explicit in providing information on whether the study female population is exclusively cis, or trans-women or a combination of both.

By excluding 'women' from descriptions of research participants, in favour of broad classifications such as 'individuals' or 'people', we risk perpetuating health inequalities that disproportionately impact women and also subgroups of women. For example, black women²¹ and immigrant women²² experience worse health outcomes due to the intersections of their race and being women; to continue the important work of combating health inequities experienced by these and other groups, it is imperative that their experiences as racialised women be at the centre.

Adopting a gender additive approach may be the answer. This promotes inclusion while also not erasing women. For example, in their Mission Statement and Rationale, the Brighton and Sussex University Hospitals document on *Gender Inclusive Language in Perinatal Services*²³ describes gender additive language as 'using gender-neutral language alongside the language of womanhood, in order to ensure that everyone is represented and included' (pp. 13–14).

To be able to discover and remedy health disparities across the rich diversity of sex and gender, we fully endorse this suggestion for gender-additive language throughout women's health research. Change is challenging but difficulty should not prohibit change, because a failure to do so will continue to marginalise not only gender-diverse persons but women as well. There is a vital need for more health research on gender-diverse individuals. And there is an equally vital need for more health research on women. The two groups are not synonymous and have unique health needs and therefore should not be treated as a homogeneous group.

AUTHOR CONTRIBUTIONS

LAB and LAMG contributed equally to the planning, ideas, and writing of this Commentary.

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CONFLICT OF INTEREST

None declared. Completed disclosure of interest forms are available to view online as supporting information.

DATA AVAILABILITY STATEMENT

No data available with this commentary.

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