We must tackle female ageism in sports and exercise science, urge researchers

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Action is urgently needed to address the dearth of older women in sports and exercise science, not only for the sake of the growing numbers of female athletes, but women's health in general, urge a group of

international researchers in an editorial, published online in the *British Journal of Sports Medicine*.

There are already far too few sports and exercise science studies that include women, point out the authors, citing their own 2021 report on the sex data gap.

This showed that out of 5,261 studies, from across six popular sports and exercise science journals, women and girls made up just over a third of the total number of participants, a figure that is likely to be even lower for women from midlife onwards, they suggest

The hormonal changes that women experience—throughout the transition between regular periods and the last one (known as the perimenopause) can generate particular physical and psychological symptoms, they note.

On average, women will live a third of their lives postmenopausally, and so will be at heightened risk of osteoporosis, muscle loss (sarcopenia), cardiovascular disease and dementia, as a result of depleted hormone levels. The impact of hormone replacement therapy (HRT) is another factor to throw into the mix, the authors explain.

These hormonal changes potentially not only affect women's quality of life, but also their willingness to take part in physical activity, their athletic prowess, and their response to training.

"However, the full consequences of these reproductive hormonal profiles on participation rates as well as health and performance outcomes, alongside strategies to overcome any negative effects, are relatively under-researched in comparison with other reproductive hormonal milieus experienced by females (e.g., the menstrual cycle)," write the authors.

Based on their 2021 data, and updating it to 2022, the authors estimate that women in midlife and beyond account for only 9% of total study participants, with only 16% of female-only studies focusing exclusively on older women.

They set out key research priorities to redress the imbalance: the influence of perimenopause and postmenopause on participation in sports, exercise and physical activity; the role of exercise and dietary changes to manage symptoms and optimize health and well-being outcomes during perimenopause and beyond; and the influence of perimenopause and postmenopause (as well as HRT) on performance and training responses.

They emphasize that much of the existing body of relevant research has used "poor methodological practices (i.e., inconsistencies in the terminology used to describe menopausal status, pooling of premenopausal, perimenopausal, and postmenopausal participants, and failure to report other criteria, such as HRT use), which further limits the translational reach and impact of the current data available on women in midlife and beyond."

Just as the "typical 70 kg male" is commonly considered the default universal representative in sports and exercise science studies, in those that do focus on women, "it appears that naturally menstruating women, between the ages of 18 and 40 years, have been considered as an adequate proxy to represent all females," the authors point out.

"We hope that this commentary will act as a call to action for the sport and exercise science research community to bridge the current data and knowledge gap for perimenopausal and postmenopausal women," they conclude. "Ultimately, this will enable practitioners and researchers to better support female athletes and patients across the lifespan."

More information: Invisibility of female participants in midlife and beyond in sport and exercise science research: a call to action, *British Journal of Sports Medicine* (2024). DOI: 10.1136/bjsports-2023-107165