Advancing global equity, diversity, and inclusion in sport and exercise medicine consensus and research: deliberate, thoughtful steps from the FAIR consensus

Brooke Patterson[#]
La Trobe Sport and Exercise Medicine Research Centre, La Trobe University, Melbourne, Victoria, Australia
Australian IOC Research Centre, La Trobe University, Melbourne, Victoria, Australia

Nana Akua Achiaa Adom-Aboagye[#]
La Trobe Sport and Exercise Medicine Research Centre, La Trobe University, Melbourne, Victoria, Australia

Naama W. Constantini[#]
Sport Medicine, Shaare Zedek Medical Center, Hebrew University, Jerusalem, Israel

Carole Okoth[#]
National Spinal Injury Referral Hospital, Nairobi, KenyaMinistry of Health, Nairobi, Kenya

Yuka Tsukahara[#]
Waseda Institute for Sport Sciences, Waseda University, Tokorozawa, JapanFamily and Community Medicine, Sports Medicine, University of Iowa Health Care, Iowa City, Iowa, USA

Dina Christa Janse van Rensburg[#]
Section Sports Medicine and SEMLI, Faculty of Health Sciences, University of Pretoria, Pretoria, South AfricaMedical Advisory Panel, World Netball, Manchester, UK

Oluwatoyosi B A Owoeye
Translational Injury Prevention Lab, Physical Therapy and Athletic Training, Saint Louis University, Saint Louis, Missouri, USA

Libby Gracias
La Trobe Sport and Exercise Medicine Research Centre, La Trobe University, Melbourne, Victoria, AustraliaAustralian IOC Research Centre, La Trobe University, Melbourne, Victoria, Australia

Melissa Haberfield
La Trobe Sport and Exercise Medicine Research Centre, La Trobe University, Melbourne, Victoria, AustraliaAustralian IOC Research Centre, La Trobe University, Melbourne, Victoria, Australia

Jackie Whittaker
Department of Physical Therapy, Faculty of Medicine, The University of British Columbia, Vancouver, British Columbia, CanadaArthritis Research Canada, Vancouver, British Columbia, Canada

Paul Dijkstra
Department of Medical Education, Aspetar Qatar Orthopaedic and Sports Medicine Hospital, Doha, QatarMedicine, Weill Cornell Medicine, Doha, Qatar

Tara Leigh McHugh
University of Calgary, Calgary, Alberta, Canada

Carolyn Emery*
Sport Injury Prevention Research Centre, Faculty of Kinesiology, University of Calgary, Calgary, Alberta, Canada

Kay Crossley*
La Trobe Sport and Exercise Medicine Research Centre, La Trobe University, Melbourne, Victoria, AustraliaAustralian IOC Research Centre, La Trobe University, Melbourne, Victoria, Australia

[#]Co-first author
[*]Co-senior author

As sport and exercise medicine (SEM) researchers and practitioners strive to enhance athlete health and safety, they must include globally diverse perspectives in research too—this is essential for integrity, international relevance and impact. Yet, the voices of globally underrepresented athletes and communities that support them (e.g. diverse racial, socio-cultural, religious, socio-economic, language and ethnic groups) are scarce.[1 2] Without intentional global inclusion, especially from Global South Territories (including Africa, Asia, and South America) and underrepresented countries across all continents, we risk reinforcing systemic inequities and missing critical insights that could transform and advance SEM research and practice. This is particularly important for meta-research (e.g. reviews, consensus, and guidelines) which aims for global impact.

This editorial arises from reflections on the Female, Woman and/or Girl Athlete Injury pRevention (FAIR) Consensus 2025.[3] While we focus here on global inclusion, we acknowledge the broad ranges of equity-deserving groups who are absent from SEM research.[4–6] Female/women/girl athletes with multiple identities that cut across other under-represented groups (eg, female First Nations athletes and non-English speaking Para sport athletes) may face compounded barriers that affect their capability, opportunity and motivation to participate in research and access evidence-based injury prevention recommendations.

WHAT DID WE DO?

Despite our deliberate efforts and aims, the FAIR Consensus Steering Committee lacked global diversity[3]. The leadership group included 17/24 (70%) individuals from current International Olympic Committee (IOC) Research Centres; only 2 of 11 Centres are from the Global South. Knowing this, we aimed for greater global representation of author groups (n=109) who undertook and reported evidence syntheses (**Supplementary File 1**). FAIR paper co-leads met and identified researchers from sports injury prevention publications, aiming for ≥1 from each continent and ≥50% female/woman, while considering balance of other identity axes (e.g. physical ability, race, ethnicity), career stage and research expertise. We committed to reporting authors' gender, sex, ability, indigeneity, ethnicity, continent of residence and birth (and estimated income-level of birth and residing country; **Supplementary File 1**). Across the author groups, we met our targets for proportion of female/woman (74/109, 68%), and representing Africa, Asia, or South America (15/109 [14%] residing; 20/109 [18%] birth). The effort towards incorporating diverse viewpoints was extended during recruitment of participants for our original research concept mapping project,[7] where we achieved 27% authors AND participants from Africa, Asia, or South America (**Supplementary File 1**). The small gains towards inclusivity and diversity achieved, highlight the need for greater intentional and inclusive recruitment. One key barrier to greater global recruitment for FAIR Consensus was lower number of published authors from the Global South —reflected in the low number of included papers on from Africa, Asia or South America in the FAIR reviews (<15%)[8]. Females/women are more likely to conduct research in female/women athletes[1], therefore the lack of female/women practitioners in Global South amplifies the underrepresentation.

WHAT WE LEARNED FROM DIVERSE VOICES

The FAIR External Advisory Committee (EAC) was diverse (63% White, 50% from low- or middle-income countries). The EAC provided critical insights to the consensus, including the use of accessible and inclusive language (e.g. the term "co-create" was not familiar and required better definitions, avoiding terms like "intersectionality" and "cisgender", which were difficult to interpret). The more globally diverse concept mapping project authors[7] provided valuable feedback on how we asked about participant demographics (e.g. gender, sex, ethnicity) – teaching us to involve representative voices throughout research planning. They highlighted concerns about feasibility of some recommendations

in low-resource settings, facilitating discussion at the in-person meeting. When leadership teams set out to include voices of globally underrepresented communities, they must create a safe, welcoming, and inclusive environment, where authors and advisory members are comfortable to request changes to the aims, methods, interpretation, and dissemination.

HOW TO DO BETTER?

A recent editorial by Mkumbuzi, Chibhabha, and Zondi[2] highlights how poor access to resources and funding, creates barriers for globally diverse research. Strategies to foster capacity building may include funding, mentoring and collaborative opportunities for researchers in underrepresented regions to increase research skills and publications (**Figure 1**). Recent exemplars include the BJSM global mentoring/grant programs, UEFA and IOC funded project grants in underrepresented regions, and OARSI conference travel grants. These global initiatives and conferences should have leadership from Global South and North to balance perspectives, increase knowledge sharing, and reach. While funding, mentoring, and collaboration has potential to build research capacity in low- and middle-income countries, it requires structure and strategies for adaptation (e.g. language translation, inclusive communication training) and accessibility (e.g. support to attend/be invited to conferences, infrastructure such as database access and software).[9]

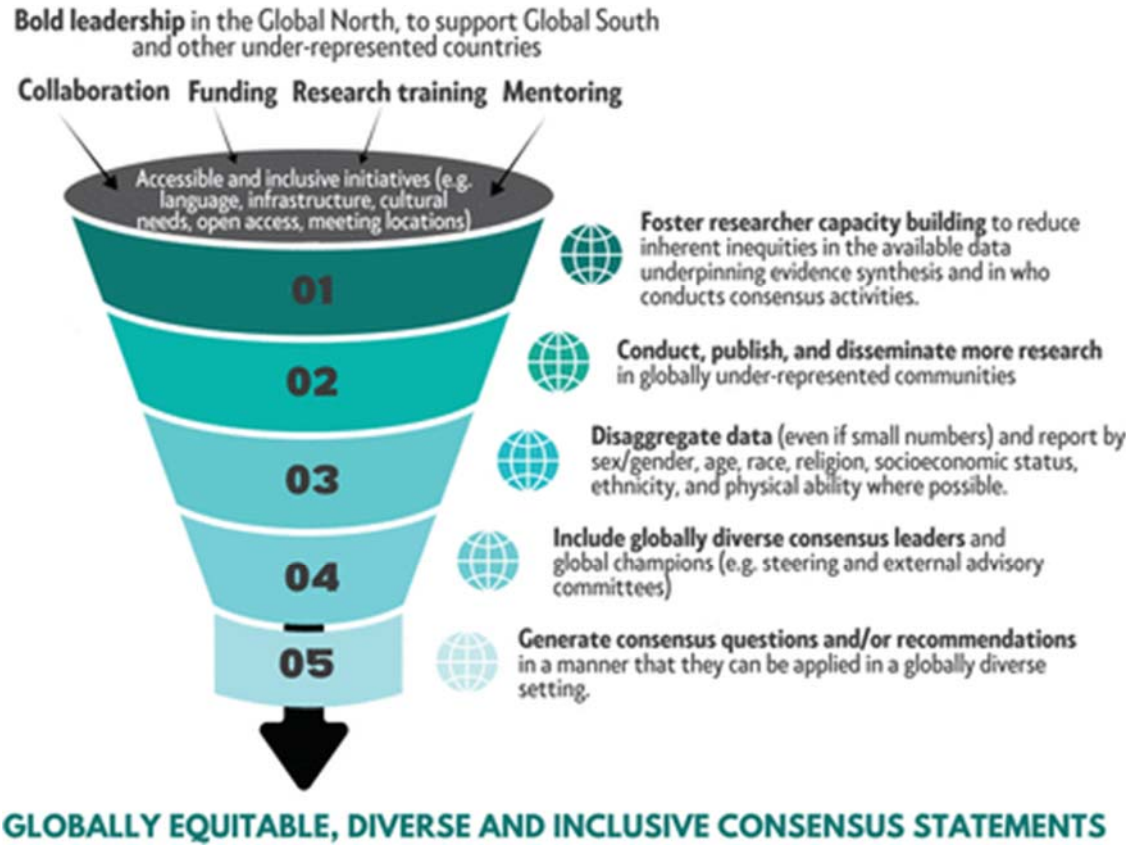

Figure 1. Steps toward global equity, diversity, and inclusion in sports and exercise medicine consensus and research

Future consensus exercises need to apply a diversity inclusion and equity lens throughout consensus activities—from team development, evidence synthesis, consensus methodology, recommendations to knowledge mobilisation. For example, accessible research materials and communication (e.g. translated materials[10] leveraging artificial intelligence, apps/software that all countries can access), or

practical adaptions of the recommendations for resource-limited settings (e.g. alternative measurement tools, lower-cost options, phased implementation) will increase global reach.

Steps forward

Recognising and prioritising the need for global diversity is important, but knowing 'how to' is challenging. We call on established SEM practitioners, researchers, international institutions and sport federations in the Global North, to consider how they could realise the recommendations (**Figure 1)**. These initiatives may require strategic collaborations with industry and philanthropic funders whose investment frameworks align with sustainable and measurable commitments to global diversity, inclusion and equity.

CONCLUSION

Global diversity, inclusion and equity in SEM research requires more than goodwill – it demands deliberate action and bold leadership. To move forward, diversity must become a measurable, measured, and expected standard – not an optional add-on. We call on the entire SEM community to take concrete steps, towards fairer representation across multiple identity axes, in funding for research and initiatives that promote athlete health, authorship and research participants. These steps will pave the road to a stronger evidence base, and ensure that the science reflects, and serves, the full spectrum of those it aims to support.

Contributions

KMC and CAE conceived the editorial. BEP led manuscript drafting and revisions and KMC is the guarantor. All authors contributed to conceptual development, content refinement, and critical review of all drafts. BP developed the accompanying figure with input from all authors. All authors approved the final version of the manuscript and agree to be accountable for the accuracy and integrity of the work.

Acknowledgements

We would like to thank all the FAIR authors, the External Advisory Committee, and the concept mapping participants who contributed to the consensus.

Funding

None.

Provenance and peer review

Not commissioned; externally peer reviewed.

Competing Interests

BEP, CAO, YT, OBAO, JLW, HPD, CAE, and KMC all hold editorial roles with the BJSM. BEP is supported by an Australian Research Council Early Career Industry Fellowship (IE230100135). CAO is a member of the ITA Health & Clinical Expert Advisory Group. NAAAA, NWC, CJVR, LG, and MJH have no competing interests. OBOA is supported by IOC funding (RBU/rftr2024-2027). LG, MJH and TLM have no competing interests. JLW is supported by a Michael Smith Health Research British Columbia Scholar Award (SCH-2020). and holds peer-reviewed funding from the Canadian Institutes of Health Research (CIHR) and Arthritis Society. PD has no other competing interests. CAE is supported by a Tier 1 Canada Research Chair and holds peer-reviewed research funding from the CIHR, Canada Foundation for Innovation, and National Football League Scientific Advisory Board Play Smart Play Safe Program. KMC holds research funding from the Australian National Health and Medical Research Council and Medical Research Future Fund.

REFERENCES

1. Cowan SM, Kemp JL, Ardern CL, et al. Sport and exercise medicine/physiotherapy publishing has a gender/sex equity problem: we need action now! *Br J Sports Med* 2023 doi: 10.1136/bjsports-2022-106055 [published Online First: 2023/01/12]
2. Mkumbuzi NS, Chibhabha F, Zondi PC. Out of sight, out of mind: The invisibility of female African athletes in sports and exercise medicine research. *British Journal of Sports Medicine* 2021;55(21) doi: 10.1136/bjsports-2021-104202
3. Crossley KM, Whittaker JL, Patterson B, et al. Female, Woman, and/or Girl Athlete Injury pRevention (FAIR) Practical Recommendations: International Olympic Committee (IOC) Consensus Meeting Held in Lausanne, Switzerland 2025. *Br J Sports Med (in press bjsports-2025-111060)* 2025
4. Grimes AC, Harrington (Quinn) N, Blauwet C, et al. Toward an Evidence-Informed Future in Injury Prevention: A Call to Action for Female, Women, and Girls in Para Sport. *Br J Sports Med **(in press)*** 2025
5. Heming EE, West SW, Patterson BE, et al. Raising girls in sport: Unique considerations for injury prevention. *Br J Sports Med (in press bjsports-2025-111034)* 2025
6. Whittaker JL, Emery CA, Møller M, et al. Road to FAIR: Where are all the female, woman and girl athletes? . *Br J Sports Med **(in press)*** 2025
7. Crossley KM, Haberfield MJ, Ross AG, et al. Gender- and/or sex-specific considerations for sport-related injury: a concept mapping approach for the Female, woman and/or girl Athlete Injury pRevention (FAIR) consensus. *British Journal of Sports Medicine* 2025:bjsports-2025-109946. doi: 10.1136/bjsports-2025-109946
8. Patterson BE, McKay C, Critchley ML, et al. Dissemination and implementation of injury prevention interventions. A scoping review for the Female, woman and girl Athlete Injury pRevention (FAIR) consensus. *Br J Sports Med (in press bjsports-2025-10990)* 2025
9. Ssemata AS, Gladding S, John CC, et al. Developing mentorship in a resource-limited context: a qualitative research study of the experiences and perceptions of the makerere university student and faculty mentorship programme. *BMC Medical Education* 2017;17(1):123. doi: 10.1186/s12909-017-0962-8
10. Marín Fermín T, Hantouly AT, Al-Dolaymi AA, et al. Patient-oriented educational Sports Medicine YouTube videos in Arabic have higher view counts in the Middle East and North Africa than their English versions. *International Orthopaedics* 2023;47(12):3007-11. doi: 10.1007/s00264-023-05970-z