



How an IJES Working Group Grappled with the Complexities of Three Letters—DEI—With the Goal to Broaden Inclusion and Representation in Exercise Science Research

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THE IJES WORKING GROUP FOR OPPORTUNITY, REPRESENTATION, AND DIVERSE PERSPECTIVES

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ABSTRACT

International Journal of Exercise Science 17(8): 852-860, 2024. A self-study of *International Journal of Exercise Science* (IJES) publications from 2008 through 2021 revealed a sex-data gap in participant and corresponding author representation. This finding prompted the creation of the IJES Working Group for Opportunity, Representation, and Diverse Perspectives. We are a collaborative team of authors, reviewers, and editors, spanning both rural and urban teaching- and research-focused institutions, who assembled regularly starting in September 2023. The goal was to contemplate potential challenges and opportunities around diversity, equity, and inclusion (DEI), elicit discourse, and broaden inclusion and representation in exercise science research. Our group identified six main challenges/opportunities: 1) Mixed Definitions and Applications of DEI Principles; 2) Competing Lifeviews and Worldviews; 3) Oversight and Enforcement of DEI Principles in IJES; 4) Oversight and Enforcement of DEI Principles in the Broader Field; 5) IJES is a Home for Developing Scholars; and 6) Lag Time for Creating Change in IJES. As a growing international journal, we depend on a diverse group of authors, reviewers, editors, and readers to achieve our mission. Accordingly, the Working Group encourages impactful, inclusive research that broadens representation within exercise science.

KEY WORDS: Underrepresentation, inclusive research practices, mentorship, inequity, scholarly publishing, editorial board, kinesiology, methodology, academic journals, marginalized groups

INTRODUCTION

We have likely all seen or read diversity, equity, and inclusion (DEI) statements in job listings, institutional policies, press releases, or mass media. However, in discussion and quick glances into the literature, the meaning and application of each principle (D, E, and I) did not seem clear or consistent.

Given the high regard in exercise science programs for the research and publication guidelines of the American Psychological Association (APA), we sought the APA's guidance on DEI principles. The APA's definition of DEI (i.e., its EDI Framework) might be quite familiar to readers. The APA defines DEI as practices or perspectives "that promotes the fair treatment and full participation of all people, especially populations that have historically been underrepresented or subject to discrimination because of their background, identity, disability, etc." (5). The APA specifically defines equity, diversity, and inclusion in the following ways:

- "Equity involves providing resources according to the need to help diverse populations achieve their highest state of health and other functioning."
- "Diversity refers to the representation or composition of various social identity groups in a work group, organization, or community."
- "Inclusion strives for an environment that offers affirmation, celebration, and appreciation of different approaches, styles, perspectives, and experiences."

The APA is just one example of an influential organization with a published stance on DEI principles. In exercise science, a premier organization is the American College of Sports Medicine (ACSM). The DEI movement within ACSM began in earnest with the 46th President, W. Larry Kenney, PhD, FACSM (8). Dr. Kenney's tenure marked a pivotal moment, as he and others championed a platform centered on diversity, driven by his recognition of the profound disparities in opportunity not only within our field, but especially ACSM leadership (8).

Since Dr. Kenney's 2004–2005 term, the ACSM has issued an official statement (4) and a newsletter (18) on DEI principles to clarify its stance and terminology, provide recommendations for kinesiology professionals, and encourage self-reflection among its members. The ACSM has also implemented initiatives to promote DEI principles within its membership, leadership, and educational programs. This includes electing leaders to the Board of Trustees to center DEI principles in decision-making, and creating committees like Diversity Action and Strategic Health Initiative on Health Equity to focus on DEI principles inside the ACSM, domestically, and internationally (1, 4). The ACSM has also created the Diversity, Leadership & Training Awards to recognize and support members from diverse backgrounds in becoming the next leaders in exercise science and the ACSM (2, 4). As of this writing, only 18.6% of ACSM Fellows identify as belonging to a racial or ethnic minority group that is underrepresented in science (2). Moreover, of the ACSM's 64 presidents, only nine have been females, and only one has been from an underrepresented racial group (Dr. NiCole R. Keith, ACSM's 64th president) (3). The recent history underscores fundamental change toward DEI, but we know we must make more progress on broadening inclusion and representation in exercise science, especially to include a multitude of identity characteristics.

A focal area in exercise science research specific to DEI has been the underrepresentation of female research participants—a phenomenon called the sex-data gap, which has been highlighted in research within and outside of the field. Costello et al. helped to draw attention to the sex-data gap within exercise science research, revealing that only 39% of the over six million participants in their analysis were females (9). Subsequently, Cowley et al. confirmed this trend by showing that only 34% of the over 12.5 million participants in their analysis were females (10). The authors noted another significant disparity, a significantly higher number of studies focusing solely on males than those focusing solely on females (10).

The sex-data gap is a persistent issue we recently found in our journal (12), the *International Journal of Exercise Science* (IJES). In a recent analysis of research articles published in IJES between 2008 and 2021, we discovered a stark disparity in participant sex (12). Out of a total of 151,043 participants, 96,890 were male (64.1%), while only 54,153 were female (35.9%). The data further revealed that there were 215 articles focused solely on male participants, compared to just 132 publications focused solely on females. Remarkably, only three publications (0.4%) included data on sex beyond the female-male binary classification. When we sought feedback from corresponding authors, we received 168 usable responses, with a minority (36.9%) identifying as females (12). These findings underscore the underrepresentation of females as both participants and potentially as corresponding authors in the field. This gap does not even account for gender identity, and there appears to be no routine mechanism to collect this data in many exercise science studies (15).

Given the ACSM's and our field's history, as well as the findings of our self-study, we at IJES have committed to addressing research disparities in the discipline, including the sex-data gap. To this end, we assembled the IJES Working Group for Opportunity, Representation, and Diverse Perspectives. Our group met regularly from September 2023 onward to discuss personal and professional experiences, trends, initiatives, and publications in the field, including those from journals, grant-funding agencies, the APA, the ACSM, and various other government and non-government departments and organizations. Our primary goal was to develop effective strategies to address systemic underrepresentation within IJES across diverse identity characteristics such as age, disability status, gender identity and sexual orientation, race, and ethnicity, belonging to an Indigenous Community, religion, socioeconomic status, and neurodiversity. A great challenge emerged: the complexity of reconciling different types and levels of knowledge, language, definitions, biases, and perspectives around DEI principles.

This editorial serves as a synthesis of our discussions, aiming to distill key insights, spark discussion among collaborators, and encourage broader inclusion and representation across the future landscape of exercise science research. The next section of this editorial presents and explains the six challenges/opportunities to broadening representation and inclusion in exercise science research, which the Working Group identified. Specifically, the six challenges/opportunities are: 1) Mixed Definitions and Applications of DEI Principles; 2) Competing Lifeviews and Worldviews; 3) Oversight and Enforcement of DEI Principles in IJES; 4) Oversight and Enforcement of DEI Principles in the Broader Field; 5) IJES is a Home for Developing Scholars; and 6) Lag Time for Creating Change in IJES.

CHALLENGES/OPPORTUNITIES

Challenge/Opportunity #1: Mixed Definitions and Applications of DEI Principles

As our Working Group considered the broader conversations and applications of DEI principles, we recognized that not everyone agrees on which DEI-related or marginalized groups to prioritize or how to prioritize them (19). The totality of our conversations led us to one epiphany: ideas of what constitutes DEI are not uniform, simple, or standard. This was the first great challenge from which all others arose.

Challenge/Opportunity #2: Competing Lifeviews and Worldviews

The second challenge we faced was understanding how country of origin, location within any given country, or setting of data collection might influence the definition and application of DEI principles. We also recognized how moral, religious, political, and cultural attitudes and experiences shape the population studied, methods used to collect data, and terminology used.

We are dedicated to promoting DEI principles to improve access to, engagement with, and understanding of exercise science research. Authors who publish in IJES have diverse backgrounds, lifeviews, and worldviews, which can lead to conflicts among journal initiatives, policies, author resources, populations studied, data collection methods, and the terminology used. We value these differences and are engaged in ongoing internal discussions to ensure that IJES continues to welcome research from diverse perspectives within the international community.

With that said, in our recent 2024 *International Journal of Exercise Science Position Stand on Inclusion* (16), we have outlined our growing understanding of DEI principles and our commitment to broaden representation and inclusion in all aspects of exercise science research: on research teams and within the study design and population, in the recruitment strategy, during data collection and analysis, and within reporting. The Position Stand will be a living document, refined periodically to incorporate new insights. Older versions of the Position Stand will remain available and be linked to the latest iteration, creating a chain of continuity.

Challenge/Opportunity #3: Oversight and Enforcement of DEI Principles in IJES

It became evident that IJES authors, reviewers, and editors serve inter-related but distinct roles in ensuring ethical research and quality publications. Authors desire journal readership to find their work sufficient and suitable for publication, guidance, and citing. Reviewers promote quality through critical analysis, while editors oversee quality and the matching of the manuscript to journal standards. Integrating these steps allows IJES editors to drive quality publications into the literature. Therein lies a problem: What are the responsibilities and obligations of the respective contributors and at which of these steps is there fair and uniform oversight and enforcement of DEI principles?

Challenge/Opportunity #4: Oversight and Enforcement of DEI Principles in the Broader Field

Given IJES's size, we turned to the *British Journal of Sports Medicine* (BJSM), a larger, prominent journal in the field, to see if its author guidelines covered DEI principles. The guidelines state (6):

“BJSM is committed to the values of equity, diversity, and inclusion (EDI) in research and publications. To this end, we encourage researchers to consider how EDI principles are integrated into their study design, data collection and interpretation, constraints on generalizability, and formation of investigative and author teams. To support EDI in research, authors must include an EDI statement in the methods section of their papers, under the subheading ‘Equity, diversity, and inclusion statement’.”

Glancing beyond BJSM, not all journals include such language in their author guidelines. Even when journals specify language, compliance and uniformity appear to be lacking. This finding underscores the importance of addressing Challenges/Opportunities #1 and #3.

A potentially fruitful area of research is how journals communicate their DEI expectations to authors submitting manuscripts. In this regard, the Working Group is developing an evaluation tool. Currently in its pilot phase, the tool examines various criteria, including the presence of a DEI statement and if written guidance is provided on each principle separately (i.e., diversity, equity, inclusion), among other characteristics. We hope to publish preliminary findings and the tool for others to use by late 2024.

Until then, we leave you with our current sticky questions: who, what, when, where, and how? By whom and in what stage of conducting and publishing research should incorporating DEI principles be enforced? When and where in the process should this happen? Are the authors, reviewers, or editors responsible at pre-review, during peer review, or after acceptance? How do the parties involved fulfill their responsibilities fairly and uniformly?

Challenge/Opportunity #5: IJES is a Home for Developing Scholars

As a student-centric journal, we embrace the notion that many mentors and developing scholars find IJES a suitable and favorable outlet for dissemination. All seven members of this Working Group have published within IJES. We acknowledge that we and our mentees have published data from convenience samples with only one sex or where participants did not have the opportunity to select their sex or a category beyond the binary designation. Our reasons have been, without excusing the behavior, a desire for expediency, the lack of awareness about inclusive practices, and visually labeling participant sex. Thus, we were challenged to consider, in retrospect, how our own past research has been inadvertently marginalizing.

Some communities are non-diverse, or funding, resources, or participant interest is limited. We also recognize that research often runs within the academic calendar and must align with institutional values that may limit the focus or training on DEI principles, topics, and practices. In studies constrained by such factors, is it justifiable to recruit homogeneous samples? Moreover, would IJES prohibit submissions arising from scholars who face such limitations?

We have found research to be an impactful pedagogical experience. Consequently, the Working Group posits that numerous mentor-mentee relationships and student research endeavors have resulted in valuable learning experiences, with some leading to publications in IJES. However, it is likely that not all these publications have incorporated DEI principles into the design of their study or discussion of their results. Future research could benefit if scholars at all career-levels apply DEI principles to the whole research process from conception to publication, rather than as a mere checkbox (14).

Challenge/Opportunity #6: Lag Time of Creating Change in IJES

Research is often conducted years before publication. Many research projects were conducted when there may have been far less emphasis on DEI principles, topics, and issues within and outside exercise science research practices, instruction, and mentorship. The Working Group does not look down upon such research. We are only likely to gather related data effectively when we incorporate DEI principles as intrinsic components of our research. As articles appear in near-future issues, we may need to consider the era in which data were collected.

The Working Group has decided that a starting point within IJES is to encourage authors to: 1) explicitly align their methods with and cite the latest version of the *International Journal of Exercise Science* Position Stand on Inclusion—the 2024 version at the time of this writing (16)—and 2) acknowledge their study’s challenges/opportunities related to DEI (considering timing, context, or other limiting factors) and cite this editorial. Authors who embrace this opportunity will produce stronger manuscripts, offering readers better context and understanding. Additionally, these authors’ published articles will feature the refreshed IJES masthead with a vibrant splash of color across the globe (Figure 1).



Figure 1. Authors can earn the refreshed IJES masthead by explicitly aligning their methods with the latest version of the *International Journal of Exercise Science* Position Stand on Inclusion—the 2024 version at the time of this writing (16)—and 2) acknowledge their study’s challenges/opportunities related to DEI, such as those highlighted in this editorial.

TAKEAWAYS

IJES welcomes a diverse group of authors, reviewers, editors, and readers, whom we desire to feel respected, valued, safe, and empowered to take part in our international scientific community. Our Working Group urges all who engage with IJES to consider the six challenges/opportunities we presented, discuss them with your colleagues and mentees, and consider interweaving DEI principles into exercise science research and education.

For an expanded discussion of challenges/opportunities to promote DEI in exercise science and related fields, we provide readers with the following resources (7, 11, 13, 17).

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The University of Nevada, Las Vegas is situated on the traditional homelands of Indigenous groups, including the Nuwu or Nuwuvi, Southern Paiute People, descendants of the Tudinu, or Desert People.

The University of Central Missouri is located on the ancestral land of the Osage People.

Cal Poly sits on the traditional lands of the Yak tiṭu tiṭu yak tilhini Northern Chumash Tribe of San Luis Obispo County and Region. The Yak tiṭu tiṭu yak tilhini have a documented presence for over 10,000 years. The Tilhini Peoples have stewarded their ancestral and unceded homelands which include all of the cities, communities, federal and state open spaces within the San Luis Obispo County region. These homelands extend East into the Carrizo Plains toward Kern County, South to the Santa Maria River, North to Ragged Point, and West beyond the ocean's shoreline in an unbroken chain of lineage, kinship, and culture.

The University of San Francisco is located on the unceded ancestral homeland of the Ramaytush Ohlone Peoples who are the original inhabitants of the San Francisco Peninsula.

The 'āina on which Brigham Young University-Hawaii is located is part of the larger territory recognized by Indigenous Hawaiians as their ancestral home.

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