



International Journal of **EXERCISE SCIENCE**

Position Stand

The 2024 *International Journal of Exercise Science* Position Stand on Inclusion

JAMES W. NAVALTA^{#1}, DUSTIN W. DAVIS^{#1}, JAFRÁ D. THOMAS^{#2}, MATTHEW J. GARVER^{#3}, SHANNON R. SIEGEL^{#4}, JOEL D. REECE^{#5}, and JILL M. MAPLES^{#6}

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

¹Department of Kinesiology and Nutrition Sciences, University of Nevada, Las Vegas, Las Vegas, NV, USA; ²Department of Kinesiology and Public Health, California Polytechnic State University-San Luis Obispo, San Luis Obispo, CA, USA; ³Department of Nutrition, Kinesiology, and Health, University of Central Missouri, Warrensburg, MO, USA; ⁴Department of Kinesiology, University of San Francisco, San Francisco, CA, USA; ⁵Faculty of Science, Brigham Young University-Hawaii, La'ie, HI, USA; ⁶Department of Obstetrics and Gynecology, University of Tennessee Graduate School of Medicine, Knoxville, TN, USA

[#]Denotes professional author

ABSTRACT

International Journal of Exercise Science 17(8): 730-749, 2024. The *International Journal of Exercise Science* (IJES) Working Group for Opportunity, Representation, and Diverse Perspectives was tasked with developing a position stand to provide guidance in critical areas of inclusion. We present to authors, reviewers, and all readership IJES ideals to utilize in practice. Key points are presented, followed by a deeper look with greater explanation into the areas of inclusive language, diversity and inclusion in research, and accessibility. The same approach is presented for the areas of age, disability status, gender identity and sexual orientation, race, and ethnicity with attention to Indigenous Communities, religion, socioeconomic status, and neurodiversity. Person-first language is encouraged, with the acknowledgment that the preference of different community members may vary. IJES is committed to maintaining an environment that is welcoming to all identities so that they feel valued, respected, and included.

KEY WORDS: Kinesiology, equity, ethics, research recruitment and study design considerations, writing and reporting guidelines, best practices

Introduction

The *International Journal of Exercise Science* (IJES) was founded in 2007 with the primary aim of providing students and professionals a focused outlet for dissemination of their scholarly works as they develop professionally. From the outset, IJES has been broad in scope and growth-oriented in action. The totality of all IJES engagements is grounded in a permanence for professionalism, quality, and meaningfulness for readership. Therein is the impetus for this 2024 IJES Position Stand on Inclusion.

This position stand is intended to be a guiding and dynamic document, reflecting journal values relating to aspects of inclusion. These ideals can be utilized in our teaching, research design, data-collection practices, and mentor-mentee relationships to enhance application for future scholars. Below are ways to enhance inclusive language, diversity and inclusion in research, and accessibility in categories that are protected in the United States and elsewhere: age, disability status, gender identity and sexual orientation, race and ethnicity, member of an Indigenous Community, status, religion, and socioeconomic status. We encourage authors, researchers, reviewers, and readers to consider the items below and incorporate elements into the various stages of the research process, from inception to dissemination.

IJES Ideals in Practice

- IJES embraces all submissions and evaluates each work based solely on its inherent quality, without regard to the age, disability status, gender identity and sexual orientation, race and ethnicity, Indigenous Community membership, neurodiversity, religion, or socioeconomic status of the research team, authors, or participants.
- IJES acknowledges that workplaces, laboratory groups, and research environments should strive to be free from discrimination based on any aspect of identity.
- IJES and associated editorial boards/entities aim for diversity and inclusion in their composition, reflecting a range of expertise, perspectives, and backgrounds.

Key Points

- **Inclusive Language (40):** The use of inclusive language is encouraged, by practicing person-first or gender-neutral language if gender or sex is not studied directly. Gendered language may be appropriate, such as when identities of participants are known at the time of data collection and are the focus of the study. In this case, gendered language, when explicitly collected, addresses the sex-data gap recently acknowledged in IJES (11). Caution should be taken, given inappropriate uses of gendered language in scientific writing (e.g., assuming gender identity, conflating sex and gender) (4, 21). Preferences of different community members may vary.
- **Diversity and Inclusion in Research (25):** Consider diversity and inclusion in the study design, recruitment, data collection, data analysis, and interpretation.
- **Accessibility:** Consider accessibility features in design, recruitment, and dissemination of research, emphasizing the importance of identifying and addressing accessibility challenges to ensure optimal and inclusive experiences (33).
- **Age:** Consider age as a variable in study design and recruitment plans and justify any age-based exclusion criteria (24).
- **Disability Status:** Consult with individuals with disabilities during the planning phase to identify specific needs for inclusion in research design and investigations (32).
- **Gender Identity and Sexual Orientation:** Collect data in a respectful and inclusive manner, allowing participants to self-identify and ensure that specific questions about gender identity and sexual orientation are relevant to the study's objectives (15).

- Race and Ethnicity: Recognize that race and ethnicity are social constructs without scientific or biological meaning. Report race and ethnicity data alongside other sociodemographic factors, by considering disparities using an intersectionality framework (10).
- Indigenous Communities: Foster cultural sensitivity and respect in all research practices by engaging with Indigenous Communities in culturally appropriate ways (9).
- Religion: Promote religious diversity as an asset in research environments by implementing inclusive practices that respect religious identities while ensuring equal treatment across diverse groups (12).
- Socioeconomic Status: Design studies with resources that promote inclusion and representation, and collect and report socioeconomic status data to understand intervention impacts across diverse socioeconomic groups (38).

Consider in your manuscript:

In addition to these key ideas, more direct guidance can be found within the section titled, “A Deeper Look.”

- Organization: Use an accessible heading structure that identifies the beginning of important sections, and incorporate alternative (alt) text into tables, figures, and images (16). Ensure there is a logical reading order for screen readers.
- Title and Abstract: Clearly specify the population used in the title and abstract.
- Introduction: A clear rationale for the study population should be presented, referencing previous studies regarding differences or similarities.
- Methods: Detail how adequate representation was considered in the study design. Provide evidence effort was made to power the investigation sufficiently to observe potential differences (1, 26, 29) or reliably discern themes/trends from qualitative analysis (28). Methodological choices should be justified.
- Results: Still protecting identity, consider reporting disaggregated data, which is encouraged for future meta-analyses. Physiological and sociocultural variables should be considered when presenting data and results.
- Data Presentation: Maintain a high color contrast (black text on white background preferred). Use a color contrast checker on the manuscript’s body, tables, figures, and images. Keep tables simple, avoiding merging cells and nesting tables. Add headers to each table row and column. Explain table abbreviations in a legend or footnote. Give short text summaries of complex tables.
- Discussion: The generalizability of findings to all people should be considered. Past research should be evaluated for methodological rigor and bias, and complex explanations for phenomena should be considered.

Conclusion

IJES will continue to accept and publish high-quality manuscripts across representative subdisciplines spanning the exercise science domain. With a renewed and focused vision for inclusive language, diversity and inclusion in research, and accessibility, we acknowledge future manuscripts might valuably explore the intricacies and nuances representing the

complexity that is the human race. The permanence for professionalism, quality, and meaningfulness for readership will remain the pillars of our work, and this 2024 Position Stand on Inclusion can be updated in the future to gainfully provide guidance in our ever-advancing efforts to be more inclusive.

A Deeper Look

Inclusive Language

- It is acknowledged that the preference of different community members may vary. Readers and authors are encouraged to ask individuals for their preferred address.
- IJES encourages authors to use inclusive language that respects diversity and promotes equality (40). Authors' language should avoid implying the superiority of one group over another or suggesting that a certain group is an ideal to which people are held.
- IJES encourages authors to use person-first language and, unless gender and sex are the focus of the study, gender-neutral language. Authors should also avoid bias, stereotypes, ableist language, and culturally insensitive terms.
 - Use the specific age group tested, such as "people 65 years and older," or phrases like "older adults" or "older people." Avoid using terms such as "senior citizen," "senior," or "elderly."
 - Use person-first language such as "person who is visually impaired" or "people with cognitive/developmental disabilities." Avoid using terms and phrases like "handicapped," "crippled by," "blind to," "afflicted by disability," or "suffering from mental illness."
 - Use gender-neutral language such as "they" or "their" instead of "he" or "his" as the generic pronouns, except when the identities of the participants are known at the time of data collection and are the focus of the study
 - Use specific race or ethnicity descriptors such as "Chinese American" instead of "Asian American"; "Nigerian" instead of "African"; "from the United States" instead of "American."
 - Use "a person who practices Buddhism" rather than "a Buddhist," or "a person who practices Christianity" rather than Christian. Instead of writing "Jewish people," use "individuals who practice Judaism."
 - Use specific language such as "low socioeconomic status" or "people whose self-reported incomes were in the lowest income bracket" and avoid outdated terms like "developing/developed" or "first/third world" countries when describing socioeconomic status or global regions.
 - Use the neurodivergent identity such as "Autism" or "Attention Deficit/Hyperactivity Disorder" and avoid stigmatizing language such as "high/low functioning" or "suffers from". Ask whether to use person-first language such as "a person with Autism" or identity-first language such as "an Autistic person". Support needs for Autistic people can be categorized across domains such as behavioral and emotional regulation, communication, sensory sensitivities, or social interaction.

Diversity and Inclusion in Research

- Articles highlighting the experiences of historically marginalized or underrepresented groups in sport and exercise science are encouraged (3). Historically marginalized groups include, but are not limited to people with complex or chronic illnesses; people with disabilities; people from stateless communities; people displaced from or living in conflict zones; Black, Indigenous, and People of Color (BIPOC); people from the LGBTQIA2S+ (Lesbian, Gay, Bisexual, Transgender, Queer or Questioning, Intersex, Asexual or Agender, and Two-Spirit, plus other identities) community; or people from low- or middle-income countries or contexts.
- In studies with at least one sample that is homogeneous or excludes certain groups of people, authors should justify their choice.
- Authors are encouraged to consider diversity and inclusion in their study design, recruitment, data collection, data analysis, and interpretation (25). Consider providing this information in the article title and throughout the manuscript.
- Authors are encouraged to consider including information that addresses diversity, equity, and inclusion in the study population, author team, data collection methods, and analysis and interpretation of results.

Accessibility

- Accessibility is an important component of inclusion, ensuring that broad perspectives are considered and accommodated. *IJES* encourages that accessibility challenges are addressed in the design of research projects and participant experiences, emphasizing the importance of identifying and addressing potential barriers (33), particularly in sport and exercise settings.
- A critical analysis of accessibility standards and practices may reveal opportunities to mitigate and overcome barriers.
- Technological advancements are expected to continue to improve accessibility for individuals with disabilities, promoting inclusion. Ethical principles and legal directives highlight the necessity of accessibility compliance.
- Promoting awareness of barriers to accessibility among students and future scientists is essential for fostering full social inclusion and participation for all.

Consider in your manuscript:

- Use a heading structure that identifies the beginning of important sections, rather than creating normal text that appears visually as a heading. Ensure there is a logical reading order for screen readers.
- Incorporate alternative (alt) text into figures. Alt text is a short piece of text that describes and is embedded within a table, figure, or image. Assistive technology, such as a screen reader, reads the alt text, making the content accessible to people who have a visual disability and cannot read or see it. The publisher, Taylor and Francis, has provided an author's guide to writing good alt text (16).

- For color figures, consider the contrast between elements. The ideal contrast is at least 70% difference between color values. Consider using a color contrast analyzer to evaluate whether the color scheme meets accessibility guidelines (19).
- Keep tables simple, avoiding merging cells and nesting tables. Add headers to each table row and column. Explain table abbreviations in a legend or footnote. Give short text summaries of complex tables.
- Use the accessibility checker in Microsoft Word or another word processor used for the writing to identify items that can be improved in the document.

Guidance on Specific Categories

Detailed guidance is provided below in the protected categories of age, disability status, gender identity and sexual orientation, race and ethnicity, Indigenous Community membership, religion, and socioeconomic status.

Age

Researchers can create a more inclusive and equitable research environment that recognizes the diversity and complexity of aging experiences and promotes positive change by considering the following:

- *Challenge Ageism*: Become educated about ageism and its impact on individuals and society (27). Actively challenge ageist stereotypes and discriminatory behaviors in research. Advocate for policies and practices that promote age diversity and inclusion in academic and professional communities.
- *Promote Inclusive Language*: Review and revise manuscripts, presentations, and other communication materials to ensure they use inclusive language (39). Promote age-positive phrases like "older adults" or "older people" in writing. Be mindful of stereotypes and biases associated with age and strive to portray older adults in diverse and respectful ways.
- *Enhance Diversity and Equity in Research*: Consider age as a variable in study design and recruitment plans and justify any age-based exclusion criteria (43). Ensure that research samples are representative and inclusive of diverse age groups, including underrepresented populations. Advocate for policies and initiatives that prioritize diversity and inclusion in research on aging, including efforts to address structural inequality and promote equitable access to research opportunities.
- *Address Systemic Barriers*: Collaborate with interdisciplinary teams and community collaborators to identify and address systemic barriers to equitable representation in aging research. Incorporate measures of structural inequality and historical context into research analyses to better understand the social determinants of health and aging outcomes. Advocate for the development of inclusive research methodologies and measurement tools that capture the complexity and diversity of aging experiences across different populations and contexts.
- *Promote Collaboration and Advocacy*: Engage in dialogue and collaboration with researchers, policymakers, and community organizations to promote diversity, equity, and inclusion in research on aging. Advocate for the adoption of best practices and

standards for inclusive research methodologies and reporting guidelines. Support initiatives and funding opportunities that prioritize diversity, equity, and inclusion in research on aging and promote the voices and perspectives of underrepresented groups.

Consider in your manuscript:

- If the study involves an age-based population, then clearly specify in the title and abstract.
- Introduction: If an aim of the study is to observe whether a difference is present in an age-based population, the rationale should be presented. Authors should reference previous studies regarding differences or similarities in the age-based population. If such studies are absent, authors should explain the potential importance of age as a variable.
- Methods: Authors should detail how age was considered in the study design, ensuring adequate representation. If an aim was to perform an age-based comparison, authors should provide evidence effort was made to power the investigation sufficiently to observe potential differences (1, 26, 29) or reliably discern themes/trends from qualitative analysis (28). Authors should describe how the variable of age was obtained from participants. Methodological choices regarding age should be justified.
- Results: Consider reporting disaggregated data by age and differences or similarities by age where applicable. Disaggregated reporting of raw data by age is encouraged for future meta-analyses. Physiological and sociocultural variables should be considered when presenting data and analyzing results.
- Discussion: Authors should discuss the implications of age for interpreting the study results. The generalizability of findings to all ages should be considered. Past research should be evaluated for methodological rigor and age bias, and complex explanations for age-related phenomena should be considered.

Disability Status

Implementing the following considerations will foster inclusion, accessibility, and sensitivity in research processes, facilitating meaningful participation and representation of individuals with disabilities:

- *Consult with Individuals with Disabilities:* Prioritize consultation with individuals with disabilities during the planning phase to identify specific needs for inclusion in research design and investigations.
- *Ensure Accessibility of Research Processes:* Ensure venues, communication methods, information, and transport options are accessible to participants with disabilities. Obtain comprehensive guidelines on accessibility to accommodate various disabilities effectively (31). Identify and address specific communication requirements, such as sign language interpretation, pre-meeting contact for mental health concerns, and simplified language for those with learning difficulties. Produce research materials in various formats suited to different disabilities, such as large print, Braille, audio, or electronic formats compatible with assistive technology.

- *Plan for Accessible Transport and Time Flexibility:* Ensure participants have access to appropriate transport options and schedule meetings in ways that would accommodate potential mobility or assistance needs.
- *Adhere to Disability Etiquette and Language Guidelines:* Use appropriate, respectful language and terminology when referring to individuals with disabilities, employing person-first language and avoiding outdated or stigmatizing terms (40). For example, instead of using the term "blind" to refer to someone with a vision impairment, use "low vision" or name a specific condition because not all people with a vision impairment are completely blind. Additionally, avoid terms like "crazy," "crippled," "handicapped," "disabled," "confined to a wheelchair," "suffers from," "is afflicted by," or "is a victim of." Equip researchers and staff with a sufficient level of disability awareness through training and education on disability-related issues, rights, and language.
- *Ensure Inclusion in Research Studies:* Screen participants for accessibility needs during recruitment and intake processes, offering accommodations and modifications as necessary. Emphasize abilities over limitations and prioritize inclusion and perspectives of communities with disabilities in research efforts.

Consider in your manuscript:

- If the study involves a population with a disability, then clearly specify in the title and abstract.
- *Introduction:* If an aim of the study is to observe whether a difference is present in a group with a disability, the rationale should be presented. Authors should reference previous studies regarding differences or similarities. If such studies are absent, authors should explain the potential importance of investigating disability as a variable.
- *Methods:* Authors should detail how disability was considered in the study design, ensuring adequate representation. If an aim was to perform a comparison, authors should provide evidence effort was made to power the investigation sufficiently to observe potential differences (1, 26, 29) or reliably discern themes/trends from qualitative analysis (28). Authors should describe how the variable of disability was evaluated and obtained from participants. Methodological choices regarding disability should be justified.
- *Results:* Consider reporting disaggregated data by disability status, and where applicable, consider reporting differences or similarities by disability status. Disaggregated reporting of raw data by disability status is encouraged for future meta-analyses. Physiological and sociocultural variables should be considered when presenting data and analyzing results.
- *Discussion:* Authors should discuss the implications of disability status for interpreting the study results. The generalizability of findings should be considered. Past research should be evaluated for methodological rigor and disability bias, and complex explanations for disability-related phenomena should be considered.

Gender Identity and Sexual Orientation

Sex refers to sets of biological attributes in humans and animals associated with physical and physiological features, including chromosomes, gene expression, hormone function and reproductive or sexual anatomy (6). Gender refers to the socially constructed roles, behaviors and identities of feminine, masculine, and gender-diverse people (6).

The guidelines below aim to create an inclusive research environment that respects the dignity and diversity of all participants, particularly those from historically marginalized communities like those under the umbrella of LGBTQIA2S+.

- Authors are encouraged to integrate sex and gender-based analyses into their research design and report on the dimensions of sex and gender identity in their manuscripts. Authors should provide clear definitions of sex and gender identity. The Sex and Gender Equity in Research (SAGER) Guidelines for incorporating sex and gender identity information into research are encouraged to be used as a resource (14).
- *Inclusive Research Practices:* It is advisable to involve team members whose identities align with historically marginalized groups when conducting research (15). This helps participants feel more comfortable and less like subjects under scrutiny. For instance, having a member of an LGBTQIA2S+ community review research materials for LGBTQIA2S+ participants may assist with empathetic and non-offensive language.
- *Use of Pronouns:* Employing correct pronouns fosters a welcoming and respectful environment (21). Individuals are encouraged to share their pronouns during meetings and in various settings to normalize this practice. Using inclusive language reduces the likelihood of misgendering and enhances inclusion.
- *Accommodating LGBTQIA2S+ Participants:* LGBTQIA2S+ individuals may have experienced trauma (2) and may appreciate additional support during research. Consider offering flexible timelines, robust technical support, and options for participant safety and comfort. Efforts to recruit LGBTQIA2S+ participants should be thoughtful and respectful (30), avoiding exploitation or tokenism.
- *Respecting Gender Identity and Sexual Orientation:* Research protocols should acknowledge and respect individuals' identities, chosen names, and pronouns. Participants should never feel obligated to disclose personal information about their gender identity or sexual orientation. Avoid assumptions about heterosexuality and use inclusive language in study materials, ensuring that they represent diverse gender identities and sexual orientations accurately.
- *Bias-Free Language and Data Collection:* Use non-gendered terms and avoid problematic language that may reinforce negative stereotypes or assumptions. Instead, prioritize participants' self-identification and use terms that respect their identities. Respect privacy and confidentiality regarding sensitive information such as gender identity and sexual orientation, and allow participants to choose safe locations for research activities.
- *Guidelines for Inclusive Data Collection:* Collect data in a respectful and inclusive manner, allowing participants to self-identify and ensuring that questions about gender identity and sexual orientation apply to the study's objectives. Explain to participants and in any disseminated work why the data are being or were collected, precisely how they will be

or were used, and how they will or do benefit the community in ways important to that community. Prioritize participants' comfort and well-being, and maintain the principles of respect, beneficence, and justice outlined in research ethics guidelines like The Belmont Report (42).

Consider in your manuscript:

- If the study involves one sex or gender identity, the title and abstract should specify the sex of animals, cells, and tissues, and the sex or gender of human participants, human cells or tissues. For example, authors should indicate if the study model or application is sex- or gender-specific. For non-sex-specific studies with animals of only one sex, or with people of only one sex or gender identity, the title should specify the sex category or gender identity (for example: "in females," "in males," "in intersex individuals," "in non-binary athletes").
- Introduction: If an aim of the study is to observe whether a sex or gender difference is present, the rationale should be presented. Authors should reference previous studies regarding sex or gender differences or similarities. If such studies are absent, authors should explain the potential importance of sex or gender identity as variables.
- Methods: Authors should detail how sex or gender identity were considered in the study design, ensuring adequate representation. If an aim was to perform sex or gender comparisons, authors should provide evidence effort was made to power the investigation sufficiently to observe potential differences (1, 26, 29) or reliably discern themes/trends from qualitative analysis (28). Authors should describe how sex or gender identity were defined and how data were obtained from participants (including citations of tools used). Methodological choices regarding sex or gender identity should be justified. The sex of subjects in both *in vivo* and *in vitro* studies, primary cell cultures, and tissue sources should be indicated. For example: (*n* females = X, *n* males = Y, no one specified otherwise).
- Results: Consider reporting disaggregated data by sex or gender identity and an analysis of sex or gender differences or similarities where applicable. Disaggregated reporting of raw data by sex or gender identity is encouraged for future meta-analyses; however, the data should not be reported if doing so would endanger confidentiality (for example, if a single participant from a sexual or gender minority group is represented). Physiological and sociocultural variables should be considered when presenting data and analyzing results. In epidemiological studies, the impact of socioeconomic variables on health issues should be examined for all gender identities from a gender perspective (i.e., gender refers to the socially constructed roles, behaviors and identities of feminine, masculine, and gender-diverse people) (6).
- Discussion: Authors should discuss the implications of sex or gender identity for interpreting the study results. The generalizability of findings to all sexes and gender identities should be considered. Past research should be evaluated for methodological rigor and sex bias, and complex explanations for sex- and gender-related phenomena should be considered.

Race, Ethnicity, and Indigenous Communities

Race typically refers to an attempt to categorize people based on physical characteristics such as facial features, hair texture, and skin color. Historically, race has been used to classify people into broad groups; however, race is a social and political construct and does not have a genetic basis in biology (13). Because race is a multidimensional construct and is a predictor of exposures to environmental, social, and behavioral factors that impact health risks and outcomes, its function as a social-psychological and social political construct is real. However, race has been historically and erroneously believed to be a biological construct, and readers should be aware that older sources may have inappropriately characterized race as a biological construct, rather than a phenotypic genetic expression (10).

Ethnicity is a socially constructed concept typically defined as a collective with a common background that shares cultural symbols and practices, including customs, diet, language, norms, religion, and values (7).

Implementing the following items will help prevent the conflation of race with ethnicity and promote respectful, inclusive, and equitable research practices:

- *Mindful Language and Terminology Use:* Avoid using biased language when describing people, especially when discussing race and ethnicity. Use inclusive language that respects diversity and avoids imparting bias toward or against individuals or groups based on characteristics or demographics.
- *Reporting of Race and Ethnicity:* Recognize race and ethnicity as social constructs without scientific or biological meaning (13). Ensure accuracy, clarity, and fairness in the use and reporting of race and ethnicity in medical and science journals. Report race and ethnicity data alongside other sociodemographic factors, considering concerns about racism and its systemic intersection with various disparities.
- *Inclusive Data Collection and Reporting:* Collect comprehensive demographic data, including on race and ethnicity, to understand participant backgrounds and potential generalizability of study results (34). Provide clear explanations of how participant race and ethnicity were identified and categorized, along with the reasons for collecting such data. Use specific racial and ethnic categories over collective terms whenever possible and avoid using vague terms like "other." Capitalize racial and ethnic names, use adjectival forms over noun forms (for example: use Hispanic patients, rather than Hispanics; or Asian youth, rather than Asians), avoid outdated terminology, and avoid hyphenating racial or ethnic descriptors unless necessary.
- *Community Engagement and Equity Promotion:* Engage communities as partners in research, respecting values, culture, and historical context. Ensure racially and ethnically diverse research teams to incorporate multiple perspectives and avoid groupthink. Consider the impact of researchers' backgrounds and biases on the research process and outcomes. Promote equity in research systems, including the dissemination of findings and engagement with decision-makers and communities. Use a racial and ethnic equity perspective in data analysis by disaggregating data, exploring facets of identity, and considering structural and social determinants.

- *Responsible Representation and Dissemination*: Avoid stereotypes and ensure fair and responsible depiction of People of Color and members of Indigenous Communities in research titles and figures. Prioritize reaching diverse audiences with research findings, including participants, decision-makers, and community leaders. Consider the multiracial lens and recognize all communities of color and Indigenous communities in research and dissemination efforts.

Indigenous Communities

Because many researchers have been perceived as performing research on, and not with, Indigenous Communities, Fitzpatrick et al. (9) conducted a systematic review to evaluate issues surrounding the informed consent process. Guidelines for ethical research with people from Indigenous Communities were identified from 38 sources (local, national, and international), and we have attempted a summary of those guidelines below. Readers and researchers are encouraged to download and review the report for a full list of the individual resources available (9). Readers and researchers are encouraged to also consider other resources (20, 41).

Researchers conducting investigations with Indigenous Communities should prioritize the following actions:

- *Honor Tribal Names and Identities*: Avoid using the inaccurate and outdated term "American Indian" when referring to people who are members of Indigenous Communities. While "Native American" is commonly used, it simplifies the rich diversity of tribal nations, each with unique names and identities. The U.S. government's use of the term "Native American" was employed in the 1960's for ease of categorization, but broadly included Indigenous Communities that did not have specific treaty agreements, which became problematic in the allocation of limited federal resources (44). It is best to use specific tribal names. If unsure, "Indigenous peoples" or "Indigenous Communities" are broader and more inclusive alternatives. Always prioritize how individuals and tribes prefer to be identified, and ask when in doubt.
- *Engage Indigenous Communities*: Actively involve Indigenous Communities in decision-making processes related to research design, access to resources, and benefit sharing (9). Respect Indigenous customary laws, address issues of representation, and empower communities to assert control over research activities affecting their interests and territories.
- *Cultural Sensitivity and Respect*: Foster cultural sensitivity and respect in all research practices by engaging with Indigenous Communities in culturally appropriate ways (22). Involve family members and community leaders in the consent process, address individual information needs, and build mutual understanding and trust between researchers and Indigenous Communities.
- *Prioritize Voluntary, Prior, and Informed Consent*: Ensure that all research activities involving genetic resources and variables (36), traditional knowledge, and territories of Indigenous Communities are preceded by obtaining voluntary, prior, and informed consent which details data ownership and how long researchers can use data. This

includes engaging in culturally sensitive communication and providing information in languages and formats accessible to people who are members of Indigenous Communities.

- *Flexibility and Equitable Benefit Sharing:* Adopt flexible consent processes that accommodate diverse cultural and linguistic contexts, including options for oral consent and periodic reaffirmation. Work towards equitable benefit-sharing arrangements that acknowledge Indigenous rights and contribute to community well-being.
- *Adhere to Ethical Standards:* Uphold robust ethical standards to safeguard against exploitation and coercion of peoples who are members of Indigenous Communities in research contexts. Ensure that consent processes are meaningful, informed, and respectful of community values, interests, and vulnerabilities.

Authors are encouraged to provide a land acknowledgement as a way of showing respect for the Indigenous Communities with whom the work was performed, or whose historic land was taken, now being used by academic institutions and its employees. The National Environmental Education Foundation provides guidance on creating a land acknowledgement (18). The process involves first identifying the traditional inhabitants of the land at <https://native-land.ca> (17). Next, while there is no precise language recommendation, an articulation of acknowledgement is appropriate (see the example below). Finally, once the statement has been created, include the acknowledgement in the manuscript.

Example land acknowledgement: “We respectfully acknowledge that the *International Journal of Exercise Science*, and Western Kentucky University, are headquartered and located on the ancestral land of the ᏄᎿᎾᎿ Tsalaguwetiyi (Cherokee, East) people.”

Consider in your manuscript:

- If the study involves a specific race, ethnicity, or Indigenous Community, clearly specify in the title and abstract.
- **Introduction:** The rationale for investigating a specific race, ethnicity, or Indigenous Community should be presented. Authors should reference previous studies regarding differences or similarities in the group of interest and justify studying the specific group.
- **Methods:** Authors should detail how race, ethnicity, or membership in an Indigenous Community was considered in the study design, ensuring adequate representation. If an aim was to perform a comparison, authors should provide evidence effort was made to power the investigation sufficiently to observe potential differences (1, 26, 29) or reliably discern themes/trends from qualitative analysis (28). Authors should describe how the variable of race, ethnicity, or membership in an Indigenous Community was defined, and how this information was obtained from participants. Methodological choices regarding race, ethnicity, or membership in an Indigenous Community should be justified.
- **Results:** Consider reporting disaggregated data by race, ethnicity, or membership in an Indigenous Community and differences or similarities where applicable. Disaggregated reporting of raw data by race and ethnicity and membership in an Indigenous Community is encouraged for future meta-analyses. Physiological and sociocultural

variables should be considered when presenting data and analyzing results. In epidemiological studies, the impact of socioeconomic variables on health issues should be examined from a race, ethnicity, or membership in an Indigenous Community perspective.

- **Discussion:** Authors should discuss the implications of race, ethnicity, or membership in an Indigenous Community for interpreting the study results. The generalizability of findings should be considered. Past research should be evaluated for methodological rigor and race- or ethnicity-related bias, and complex explanations of phenomena should be considered.

Religion

Researchers engaging in studies involving religious diversity should prioritize the following actions:

- *Embrace Inclusive Language and Communication:* Commit to using inclusive language that respects diverse religious and philosophical beliefs (23), avoiding specific references to religion in the manuscript unless directly relevant to the context. Foster respectful communication that recognizes and acknowledges the diversity within religious and non-religious identities. Provide training and resources to researchers to promote sensitivity and awareness regarding religious diversity in research communication. For example, write “a person who practices Buddhism” rather than “a Buddhist,” or a person who practices Christianity” rather than “a Christian.” Instead of writing “Jewish people,” use “individuals who practice Judaism.” When writing about countries or regions with a majority religion, use “Muslim-majority country” rather than “Muslim country.”
- *Promote Religious Diversity in Research Settings:* Actively promote religious diversity as an asset in research environments (12). Implement inclusive practices such as providing religious literacy training, supporting inclusive holiday policies, and establishing principles that respect religious identities while ensuring equal treatment across diverse groups. Researchers should consider implications of conducting research with people whose clothing or other attire requires data collection adaptations (e.g., measuring aerobic capacity with a person who practices Islam and wears a hijab, or with a person who practices Sikhism and wears a dastār).
- *Engage in Pluralistic Dialogue and Understanding:* Embrace pluralism as an ethic of respect for diversity, fostering active engagement and seeking understanding across religious and secular lines (35). Encourage dialogue and mutual respect among diverse religious communities and belief systems to promote inclusive research environments.
- *Challenge Religious Discrimination:* Take proactive steps to challenge religious discrimination, prejudice, and biased actions in research settings. Create inclusive research environments that promote respect, dignity, and equal treatment for all individuals, regardless of their religious affiliations.
- *Cultivate Sensitivity and Awareness:* Foster sensitivity and awareness regarding religious diversity, encouraging researchers to avoid making assumptions based on names, appearance, or ethnicity. Promote respectful communication by capitalizing the names of

religions and religious groups and using respectful language when referring to religious practices, figures, and holidays.

Consider in your manuscript:

- If the study involves a specific religious population, clearly specify in the title and abstract.
- Introduction: If an aim of the study is to observe whether a difference is present in a religious community, the rationale should be presented. Authors should reference previous studies regarding differences or similarities and explain the importance of the religious population as a variable.
- Methods: Authors should detail how religion was considered in study design, ensuring adequate representation. If an aim was to perform a comparison, authors should provide evidence effort was made to power the investigation sufficiently to observe potential differences (1, 26, 29) or reliably discern themes/trends from qualitative analysis (28). Authors should describe how the variable of religion was obtained from participants. Methodological choices regarding religion should be justified.
- Results: Consider reporting disaggregated data by religious status, and where applicable, reporting differences or similarities by religious status. Disaggregated reporting of raw data by religious status is encouraged for future meta-analyses. Physiological and sociocultural variables should be considered when presenting data and analyzing results.
- Discussion: Authors should discuss the implications of religion for interpreting the study results. The generalizability of findings should be considered. Past research should be evaluated for methodological rigor and religious bias, and complex explanations for phenomena should be considered.

Socioeconomic Status

Researchers can contribute to more accurate and respectful representations of socioeconomic status in research, promote inclusion, and advance understanding of the complex dynamics of socioeconomic factors and class in society (8) by considering:

- *Comprehensive Reporting:* Include detailed socioeconomic status information in research reports, covering income, education, occupation, and contextual factors (5). Use precise terminology and person-first language to describe socioeconomic status accurately without stigmatizing individuals (40).
- *Avoid Pejorative Language and Stereotypes:* Refrain from using broad, pejorative terms like "the homeless" or "poverty-stricken," and instead use specific, respectful language (e.g., "people who experience homelessness" or "people who experience poverty." Include racial and ethnic descriptors within socioeconomic status categories to acknowledge intersectionality and avoid implicit biases (34).
- *Acknowledge Systemic Factors and Bias:* Provide context that considers systemic factors influencing socioeconomic status, avoiding assigning morality to socioeconomic circumstances. Use language that recognizes broader societal contexts and barriers faced by individuals with lower socioeconomic status, reframing from deficit-based perspectives.

- *Ensure Inclusion in Research and Clinical Trials:* Collect and report socioeconomic status data in clinical trials to understand intervention impacts across diverse socioeconomic groups (37). Design studies with resources that facilitate participation from lower socioeconomic status backgrounds, promoting inclusion and representation.
- *Avoid Outdated and Generalizing Terminology:* Use specific language and avoid outdated terms like "developing/developed" or "first/third world" countries when describing socioeconomic status or global regions. Identify countries or regions by name to prevent generalizations and inaccuracies in classification.

Consider in your manuscript:

- If the study involves a population of a specific socioeconomic status, clearly specify in the title and abstract.
- **Introduction:** If an aim of the study is to observe whether a difference is present regarding socioeconomic status, the rationale should be presented. Authors should reference previous studies regarding differences or similarities and explain the importance of socioeconomic status as a variable.
- **Methods:** Authors should detail how socioeconomic status was considered in the study design, ensuring adequate representation. If an aim was to perform a comparison, authors should provide evidence effort was made to power the investigation sufficiently to observe potential differences (1, 26, 29) or reliably discern themes/trends from qualitative analysis (28). Authors should describe how the variable of socioeconomic status was obtained from participants. Methodological choices regarding socioeconomic status should be justified.
- **Results:** Consider reporting disaggregated data by socioeconomic status and, where applicable, consider reporting differences or similarities by socioeconomic status. Disaggregated reporting of raw data by socioeconomic status is encouraged for future meta-analyses. Physiological and sociocultural variables should be considered when analyzing and presenting data as results.
- **Discussion:** Authors should discuss the implications of socioeconomic status for interpreting the study results. The generalizability of findings should be considered. Past research should be evaluated for methodological rigor and bias pertaining to socioeconomic status, and complex explanations for phenomena should be considered.

Neurodiversity

While neurodiversity is not currently a recognized category protected in the United States and elsewhere, we feel inclusion and consideration to be important. Research teams and authors should consider the following positions by IJES:

- *Embrace Neurodiversity as a Strength:* We define neurodiversity from a strength-based paradigm, viewing conditions like Autism, Attention Deficit Disorder, Attention Deficit/Hyperactivity Disorder, Dyslexia, and Dyspraxia as differences in brain function within normal human variation. This perspective values and leverages the unique contributions of neurodivergent individuals.

- *Intersectionality with Other Identities:* We acknowledge that neurodiversity often intersects with disabilities, race, ethnicity, gender, sexual orientation, and class. We encourage participatory research that represents diverse experiences, leading to more inclusive and representative scientific outcomes. Additionally, we encourage researchers to consider how sensory experiences and accommodations can impact mental health, quality of life, and testing situations for neurodivergent individuals like those with autism or ADHD.
- *Acknowledge Stigma and Barriers:* We recognize and acknowledge the stigma neurodiverse individuals face. We encourage researchers to work to understand and remove barriers that hinder neurodiverse individuals' full participation and inclusion in educational, professional, and research settings. Some neurodiverse individuals attempt to mask identity-stereotypical behaviors due to the pressure to assimilate with perceived norms. Encourage research teams to reduce the need for masking, prioritize the well-being of neurodivergent individuals, and include neurodivergent individuals in research processes to amplify their representation.
- *Advocate for Respectful Representation:* We advocate for open, transparent dialogue among diverse voices leading to impactful scientific research and educational opportunities for neurodivergent individuals. Avoid stigmatizing language like "high/low functioning" and promote respectful terminology that values the lived experiences and expertise of neurodivergent individuals. Authors should strive to learn about assumptions that cast the ways neurodivergent individuals process information, communicate, and interact in social situations as "abnormal, unusual, problematic, strange, etc." , and research should be designed and interpreted without solely relying on neurotypical assumptions.

Acknowledgements

Below are published land acknowledgements for institutions where each author is affiliated. Others might use similar text to give recognition to ways that Indigenous Communities are connected to the land.

We respectfully acknowledge that the *International Journal of Exercise Science*, and Western Kentucky University, are headquartered and located on the ancestral land of the ᏄᏍᏏᏉᏍᏏ Tsalaguwetiyi (Cherokee, East) People.

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 titʷu titʷu yak tilhini Northern Chumash Tribe of San Luis Obispo County and Region. The Yak titʷu titʷu 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.

The land on which the University of Tennessee sits is part of the traditional territory of the Tsalagi Peoples (now Eastern Band of Cherokee Indians, Cherokee Nation of Oklahoma, and United Keetoowah Band of Cherokee Indians) and Tsoyaha Peoples (Yuchi, Muscogee Creek).

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