

The challenge of communication: sex and gender differences explained to non-specialists or lay audience

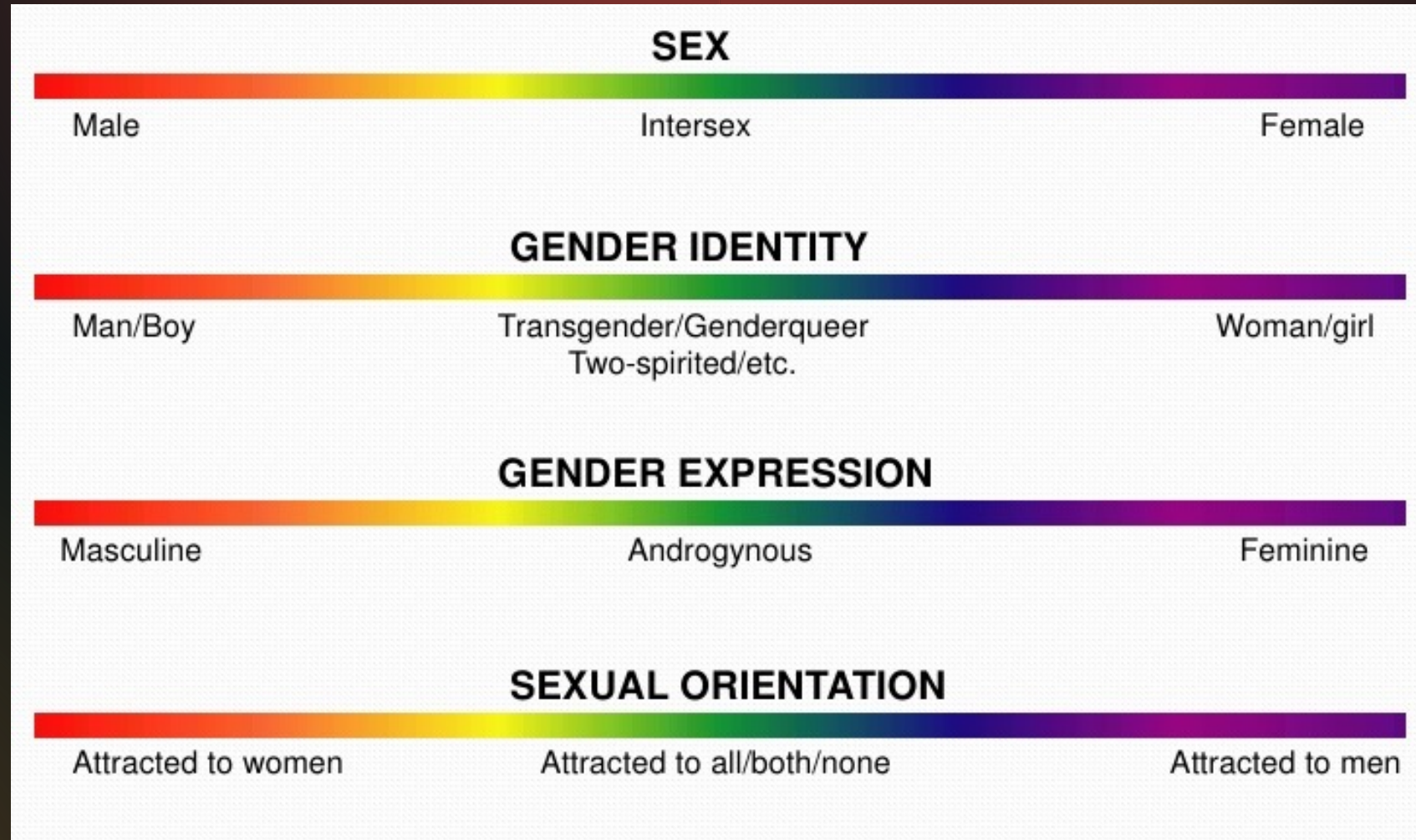
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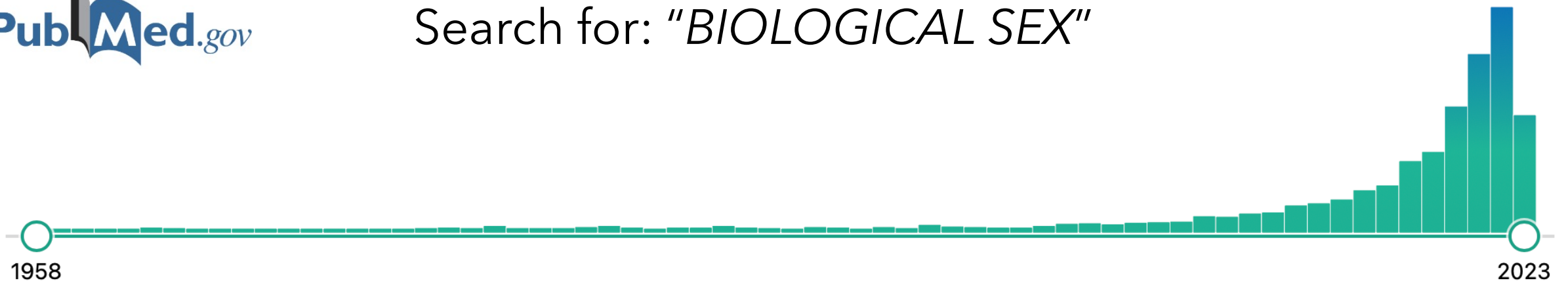
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It is very common to hear that differences follow a spectrum



This does not overcome binary interpretations of data



- 1) NIH mandate to include SABV \neq Studying sex differences
- 2) "BIOLOGICAL" raises the following concerns:
 - Are there sexes that are not biological?
 - Do chromosomes justify this term?
 - Do gonadal hormones justify this term?
 - Instead, the word is sometimes used to legitimize results
 - It is always based on a binary classification

RESEARCH

Open Access

Why the estrous cycle matters for neuroscience

Devin Rocks¹, Heining Cham² and Marija Kundakovic^{1*} 

Dialogues in
clinical
neuroscience

2016;18(4):373-383

Sex in the brain: hormones and sex differences

Jordan Marrocco, PhD; Bruce S. McEwen, PhD

Review article

Sex differences in the brain: Implications for behavioral and biomedical research

Elena Choleris^{a,*}, Liisa A.M. Galea^b, Farida Sohrabji^c, Karyn M. Frick^d

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nature
neuroscience

PERSPECTIVE

<https://doi.org/10.1038/s41593-021-00806-8>

Considering sex as a biological variable will require a global shift in science culture

Rebecca M. Shansky¹   and Anne Z. Murphy² 

PERSPECTIVES

NEUROSCIENCE

Are hormones a “female problem” for animal research?

Outdated gender stereotypes are influencing experimental design in laboratory animals

By Rebecca M. Shansky

Report

Mouse spontaneous behavior reflects individual variation rather than estrous state

Dana Rubi Levy,¹ Nigel Hunter,¹ Sherry Lin,¹ Emma Marie Robinson,¹ Winthrop Gillis,¹ Eli Benjamin Conlin,¹ Rockwell Anyoha,¹ Rebecca M. Shansky,^{2,*} and Sandeep Robert Datta^{1,3,*}

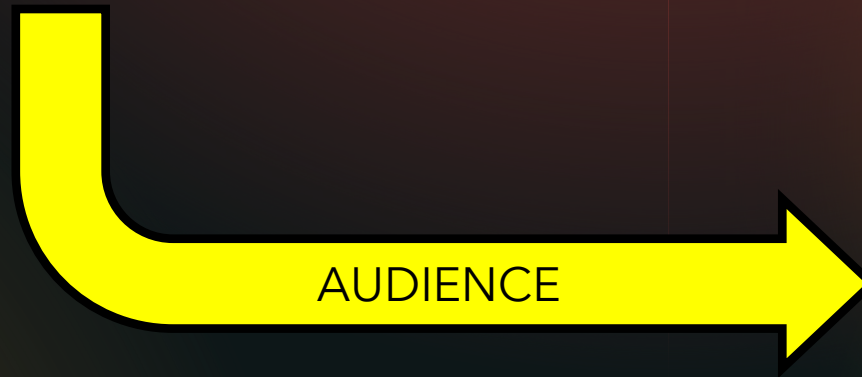
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<https://doi.org/10.1016/j.cub.2023.02.035>



The New York Times

Guess Which Sex Behaves More Erratically (at Least in Mice)

A new study finds male mice more unpredictable than females, challenging century-old assumptions used to exclude females from research because of their hormones.

This article has been retracted.

eNeuro

Theory/New Concepts

Cognition and Behavior

A New Theory of Gender Dysphoria Incorporating the Distress, Social Behavioral, and Body-Ownership Networks

 Stephen V. Gliske

<https://doi.org/10.1523/ENEURO.0183-19.2019>

Department of Neurology, University of Michigan, Ann Arbor, Michigan 48109

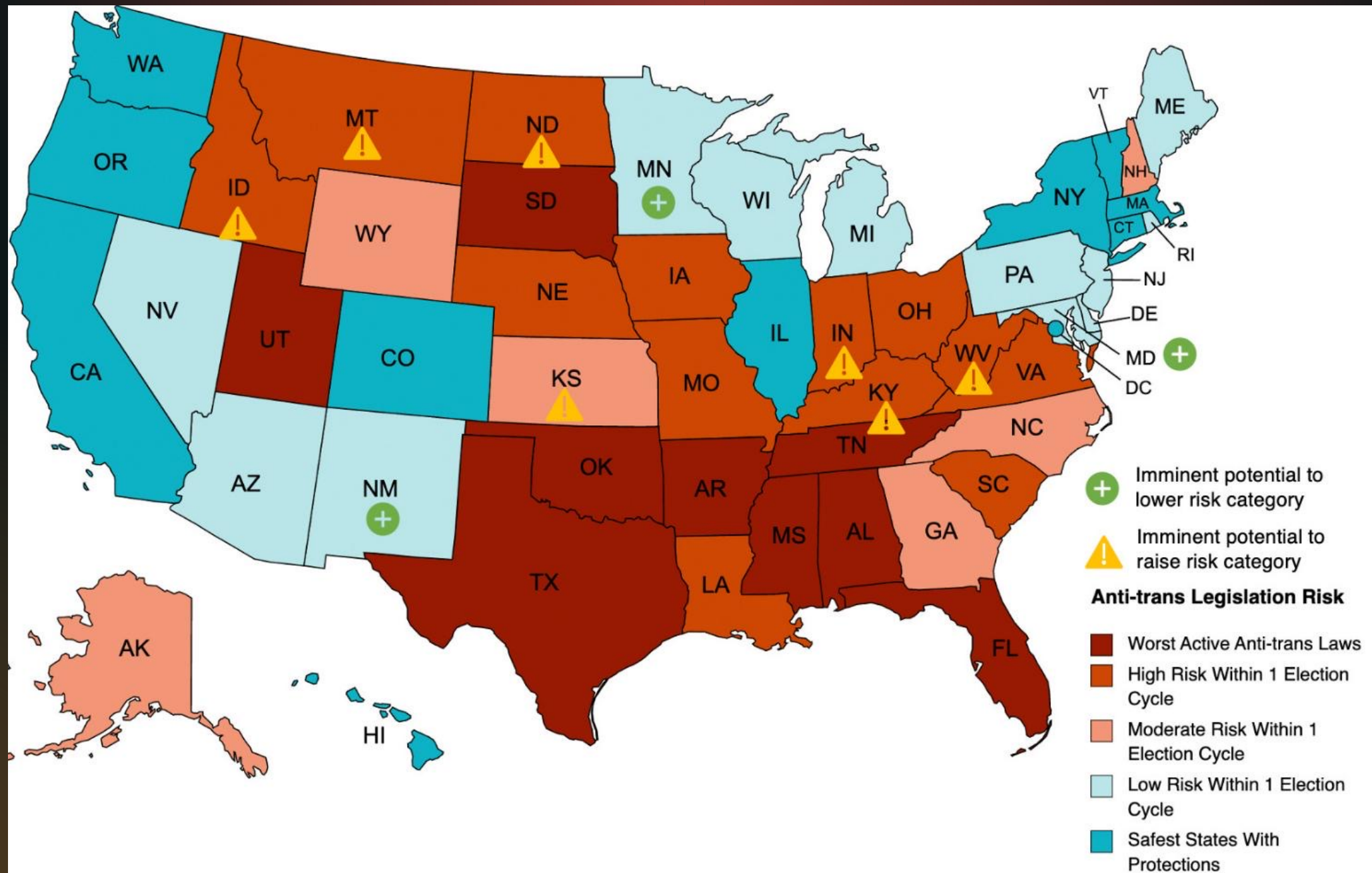
RETRACTED

AUDIENCE



Treatments based on our new theory could instead involve targeting the distress and/or body-ownership networks, perhaps specifically seeking to restore a sense of ownership over body parts perceived as incongruous. Such an approach could potentially have less risk, be less invasive, have fewer barriers to receiving care, and still be effective at reducing distress and improving quality of life. Given the high need to improve outcomes related to the distress, depression,

“This research design unapologetically aims to cause mental health distress to trigger ‘dysphoria’ to an already marginalized and vulnerable community,” stated Ezak Perez, Executive Director of Gender Justice LA.





PERSPECTIVE

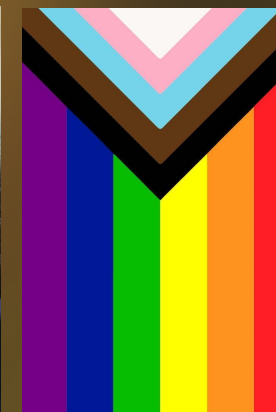
Perspective on equitable translational studies and clinical support for an unbiased inclusion of the LGBTQIA2S+ community

Teddy G. Goetz ¹, Krisha Aghi², Christoph Anacker ³, Diane Ehrensaft⁴, Neir Eshel ⁵, Jordan Marrocco ⁶, Jared W. Young ^{7,8,10} [✉] and Troy A. Roepke ^{9,10}

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Research regarding the mental health of the Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual, 2 Spirit (LGBTQIA2S+) community has been historically biased by individual and structural homophobia, biphobia, and transphobia, resulting in research that does not represent the best quality science. Furthermore, much of this research does not serve the best interests or priorities of LGBTQIA2S+ communities, despite significant mental health disparities and great need for quality mental health research and treatments in these populations. Here, we will highlight how bias has resulted in missed opportunities for advancing understanding of mental health within LGBTQIA2S+ communities. We cite up-to-date research on mental health disparities facing the LGBTQIA2S+ community and targeted treatment strategies, as well as guidance from health care professionals. Importantly, research is discussed from both preclinical and clinical perspectives, providing common language and research priorities from a translational perspective. Given the rising tide of anti-transgender sentiment among certain political factions, we further emphasize and discuss the impact of historical and present day ciscentrism and structural transphobia in transgender mental health research, from both clinical and translational perspectives, with suggestions for future directions to improve the quality of this field. Finally, we address current best practices for treatment of mental health issues in this community. This approach provides an opportunity to dispel myths regarding the LGBTQIA2S+ community as well as inform the scientific community of best practices to work with this community in an equitable manner. Thus, our approach ties preclinical and clinical research within the LGBTQIA2S+ community.

Neuropsychopharmacology (2023) 48:852–856; <https://doi.org/10.1038/s41386-023-01558-8>





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SEX

If sex assigned at birth is relevant (e.g., for medical reasons), this can be surveyed. However, you need to carefully consider what question to ask, as the wording may change the answer a person gives (e.g., a person's sex assigned at birth may be different from their legal sex). Often, we use sex as a shorthand for other relevant information. For example, you might be researching something related to people with a uterus and are considering using sex as an inclusion criterium. However, using sex to select your population would exclude trans men, and include trans women or women who have had hysterectomies, thus not accurately capturing the population of people with uteruses. Therefore, it is important to consider what information is relevant to your survey or questionnaire and decide what question would most accurately capture this.

<https://www.alba.network/GSDinclusiveforms>



GENDER

Gender identity describes the gender of an individual. Gender is separate from the sex assigned at birth, a person's gender expression, and their physical appearance. Although these often line up (when a person's sex assigned at birth and gender line up, they are cisgender), this is not always the case. People who do not have the same gender as their sex assigned at birth are transgender. However, 'transgender' itself is not a gender, but rather an adjective (someone may be a transgender woman for example). Therefore, one should not include 'transgender' in the gender options. It is recommended to include a question asking whether someone is transgender as a separate question, if this is something that is relevant to your survey. In addition, 'male' and 'female' are used for sex, but it is preferred to use 'man' or 'woman' for the gender options.



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SEXUALITY

Sexuality or sexual orientation describes the gender or genders a person is generally attracted to. Sexuality includes a wide spectrum, and distinctions can be made between romantic and sexual attraction (e.g., a biromantic asexual person describes a person who is romantically attracted to people of two or more genders, but not sexually attracted to anyone). It can therefore be hard to capture the full spectrum in a multiple-choice list but including an option to self-describe and allowing people to choose multiple options can mitigate this.

<https://www.alba.network/GSDinclusiveforms>