

Inclusion and Advancement of **LGBTQ+** People in **STEM** Fields

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Northwestern



Institute for Sexual
and Gender Minority
Health and Wellbeing

EXECUTIVE SUMMARY

Research shows LGBTQ+ people in science, technology, engineering, and mathematics (STEM) fields face substantial barriers to participation and inclusion ([Cech & Waidzunus, 2011](#))¹. Although there is growing understanding of the barriers at each stage of the STEM education pathway, LGBTQ+ people have not yet been incorporated into federal and academic definitions of underrepresented and marginalized groups in the sciences. As a result, researchers concerned about the experiences of LGBTQ+ scientists have collected their own data, without the support of federal agencies, which have the resources to fund and support large-scale efforts. This report calls for a comprehensive effort for collecting these data at all levels of research, and for policies and programs to remediate barriers to inclusion.

The Biden administration issued an Executive Order in 2022 which calls for workforce data on LGBTQ+ people as part of a [Federal Evidence Agenda on Lesbian, Gay, Bisexual, Transgender, Queer, and Intersex \(LGBTQI+\) Equity](#). This Executive Order provides a “roadmap that federal agencies will use to ensure they are collecting the data and evidence they need to improve the lives of LGBTQI+ Americans.” The priority now is to make sure these changes are transparent and fully implemented and that these efforts are actually reflected in research on STEM participation.

Numerous studies cited in this report evidence that LGBTQ+ people experience higher rates of discrimination and harassment than the general population. These experiences vary based on people’s specific, individual identities as well as their multiplicatively oppressed identities. Discrimination happens to LGBTQ+ people across academic, federal, and private industry workplace environments, including in STEM fields. Additional barriers that LGBTQ+ people face in achieving scientific degrees and

persisting in STEM careers include anti-LGBTQ+ bias, bullying, higher rates of homelessness and poverty, and lack of school and parental support. As many states are [proposing and passing anti-LGBTQ+ legislation](#), there are increasingly limited options for students to attend graduate and post-doctoral programs in areas of the US that feel safe. Although there are some programs and organizations providing supportive services, including school and workplace alliances, they lack sufficient resources to meet the high levels of need.

Countering the effects of discrimination is important on its own. The additional benefit of addressing LGBTQ+-specific discrimination in STEM and research, as the evidence below indicates, is that a more diverse STEM workforce will lead to greater advancement of science, technology, and health, and potentially better outcomes for society as a whole. These outcomes will be beneficial for the US broadly, as the nation is falling behind in STEM fields compared to other leading countries, according to [Athanasia and Cota \(2024\)](#)².

Further, we need to challenge the concept that there are perfect descriptors for LGBTQ+ people on which everyone will agree. Evidence suggests sexual orientation and gender identity (SOGI) data collection does not perform any worse than other demographic data collection, and people are willing to provide SOGI data. There are years and years of recommendations—and actual data based on best practices—that provide guidance for what works. We can do better, and there is solid science to work from to identify and measure SOGI.

In addition to the inclusion of SOGI data collection in federal research, this report includes a wide range of policy and practice recommendations for all educational levels, workplaces, scientific societies, funding entities, advocacy organizations, and more.

ABOUT ISGMH

The Institute for Sexual and Gender Minority Health and Wellbeing (ISGMH) at Northwestern University is the first and largest university-wide institute in the United States focused exclusively on research to improve the health of the sexual and gender minority community. Our work aims to create a world where sexual and gender minorities have equitable opportunities to live healthy and fulfilling lives. We share our expert knowledge with the wider public, practitioners, scientists, and policymakers.

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