



2SLGBTQ+ STEM Professionals' Experience

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Diversity in STEM (Science, Technology, Engineering, and Math) drives innovation and creative ideas in the field, because people with different backgrounds and perspectives can find new ways to solve problems. Increasing representation and inclusion of marginalized groups in this field would increase opportunities for these groups and advance equity. Moreover, increasing participation of different groups in this field would grow the field overall, contributing to the economy and scientific advancement. However, STEM fields have historically been male-dominated and associated with masculinity in the minds of many. While there is a substantial body of literature on women's inclusion in science, LGBTQ+ representation in STEM is something we know less about.

A new study by Cech and Waidzunas (2021) details the disparity in STEM experiences between LGBTQ+ people and their straight counterparts in the US. In surveying a sample of 25,324 full-time STEM professionals, 1,006 of whom were LGBTQ+, they found LGBTQ+ individuals were having worse experiences in STEM across a number of dimensions. The factors they examined were career opportunities, harassment, professional devaluation (colleagues devaluing or discrediting their STEM expertise), social exclusion (not "fitting in" or being invited to things), health and wellness, and intentions to leave STEM.

LGBTQ+ individuals in the sample had fewer perceived career opportunities and less resources. They were also less comfortable "whistleblowing" (i.e. reporting harassment or discrimination without retaliation). Significantly more LGBTQ+ individuals in their sample were experiencing professional devaluation and social exclusion. LGBTQ+ respondents were more likely to experience harassment and

negative mental health effects, and significantly more LGBTQ+ respondents were considering leaving STEM than their non-LGBTQ+ counterparts.

These authors also did an intersectional analysis and found that transgender and gender non-binary respondents reported more health and wellness issues, and were more likely to consider leaving STEM than their cisgender sexual minority counterparts. Similarly, LGBTQ+ women and LGBTQ+ individuals of colour were more likely than LGBTQ+ men and LGBTQ+ white individuals, respectively, to experience harassment and professional devaluation at work.

Though North America has come a long way in terms of marriage equality and other LGBTQ+ rights, this evidence shows us there is still more work to be done to include LGBTQ+ individuals equally and equitably across all sectors of society. Moreover, more research needs to be done in Canada, as most of the current literature is based on US samples. **WISEatlantic is currently conducting research with Canadian LGBTQ+ postdocs in STEM, so stay tuned!**

There are several organizations focused on LGBTQ+ inclusion and visibility in STEM, which can be checked out at these links! There even is one in Atlantic Canada, QAtCanSTEM:

<https://qatcanstem.github.io/>

<https://Prideinstem.org>

<https://500queerscientists.com/>

<https://lgbtqplusstem.ca/>

References

Cech, E. A., & Waidzunas, T. J. (2021). Systemic inequalities for LGBTQ professionals in STEM. *Science Advances*, 7(3), eabe0933