

# Interference Experienced by Environmental Researchers based on Identity Factors



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## Research Question and Hypothesis

**Research Question:**  
Do identity factors play a role in the amount of interference experienced by Canadian researchers?

**Hypothesis:**  
Marginalized groups will experience higher rates of interference in their work compared to the typically dominant group in Canada.

## Background

**What is Interference?**  
Interference is defined as any and all actions that may inhibit or limit the abilities of environmental scientist to freely conduct and disseminate their works.

### Why does interference and demographics matter?

- Interference in environmental studies and sciences matter because science informs policy, which can help to protect the environment<sup>1</sup>.
- Previous evidence of interference in environmental studies and sciences<sup>1,2</sup>.
- Marginalized groups in Canada have historically experienced higher levels of discrimination and barriers<sup>4,5</sup>.
- Marginalized groups are more likely to be impacted by the effects of climate change and environmental deterioration<sup>3</sup>.

## Methods

**Population**

People living in, and employed in Canada, who are working in environmental studies or sciences in any sector. This broad population helps to paint a more holistic perspective of interference in science.

**Data Collection**

Anonymous online survey that included 20 quantitative and qualitative questions. A survey was used because it can reach the highest number of possible participants<sup>1,6</sup>.

**Data Analysis**

Quantitative tests included descriptive statistics, Kruskal Wallace (significance testing), and post-hoc Dunn Tests. Compared identity factors (independent variables) to 12 questions regarding experienced interference (dependent variables).

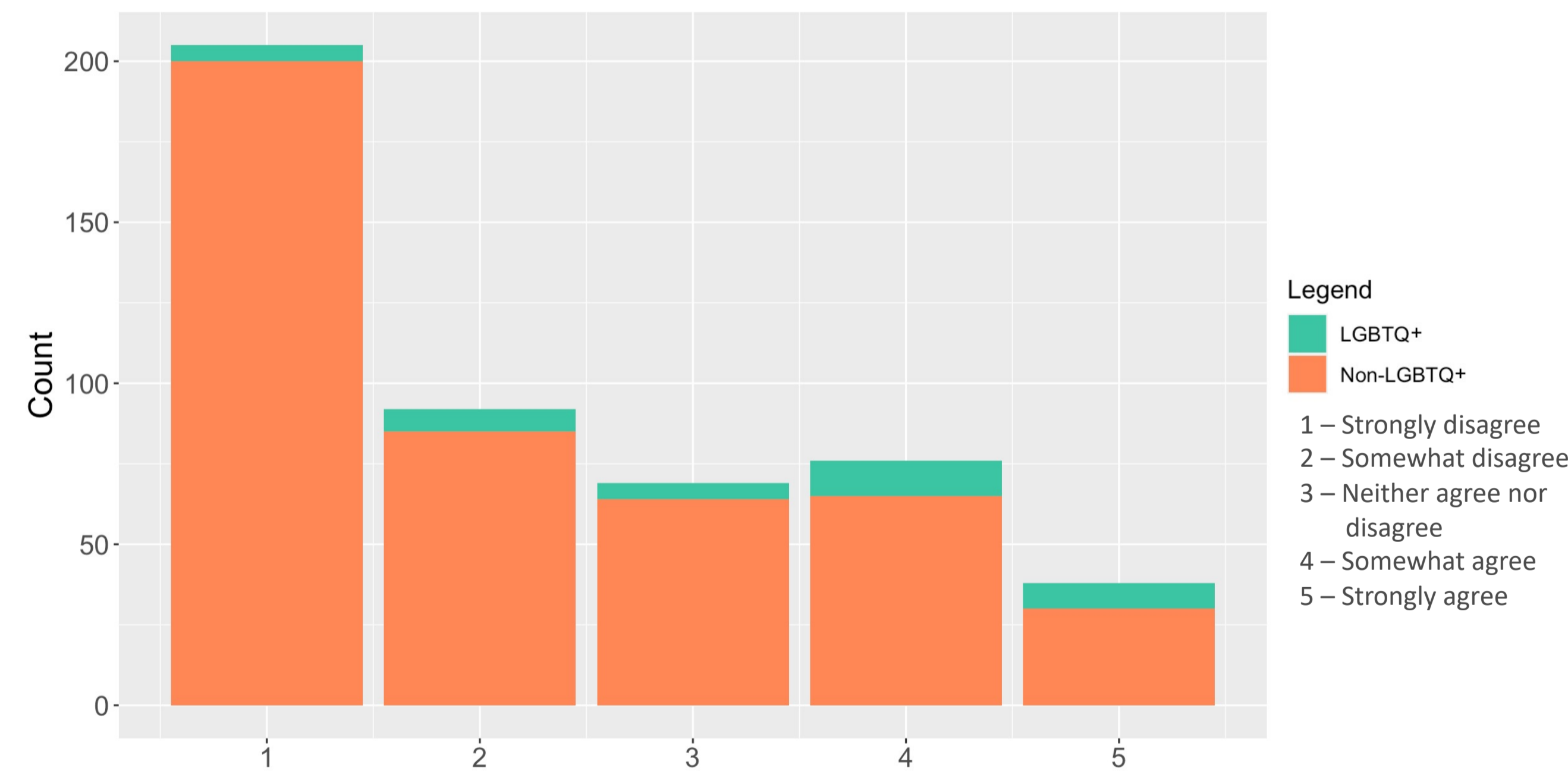
## Results and Conclusion

Respondents' demographics are not representative of Canadian demographics and most marginalized groups were generally underrepresented.

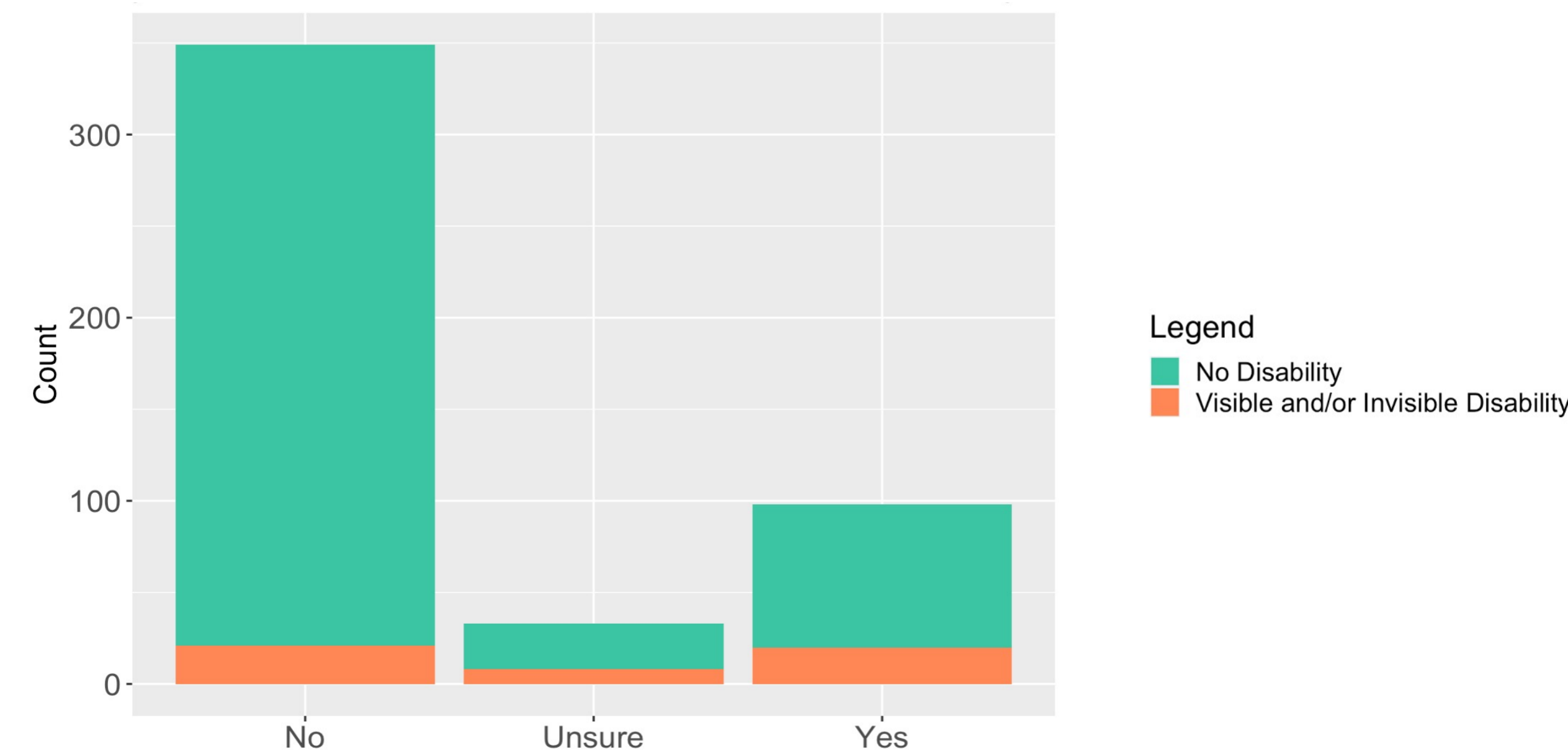
Gender	Religious Signifier	Race	Perceived Race
Man 61%	Religious Signifier 2%	Arab 2%	1%
Women 38%	No Religious Signifier 98%	Asian 9%	8%
Non-binary IS*		Black 2%	2%
<b>LGBTQ+</b>	<b>Disability</b>	Indigenous IS*	IS*
LGBTQ+ 8%	Visible/Invisible Disability 12%	Latin American 1%	2%
Non-LGBTQ+ 92%	No Disability 88%	Multiple ethnicities 4%	3%
		White 82%	83%

\*IS = Insufficient Sample

Constrained due to fear of risk to funding opportunities



Job Satisfaction been affected by restraints on communication



### Gender

- Internal sources of constraint (self-censorship) were highest among women.
- 6/12 comparisons showed significance (all p-values less than <0.01).

### LGBTQ+

- LGBTQ+ people were found to experience higher internal sources of constraint concerning funding and workplace advancements opportunities.
- 2/12 comparisons showed significance (all p-values less than <0.01).

### Race and Perceived Race

- Visible minority groups were found to experience higher levels of external sources of constraint.
- 6/12 comparisons showed significance (3/5 p-values less than <0.01).

### Visible and/or Invisible Disability

- People with disability experienced lower levels of job satisfaction due to constraints on communication and higher levels of undue modification.
- 3/12 comparisons showed significance (all p-values less than <0.01).

### Religious Signifier

- People who wore a religious signifier were found to experience a greater fear of risk to funding opportunities.
- 1/12 comparisons showed significance.

### Conclusion

Interference in environmental sciences and studies is still occurring. Marginalized groups often experience more interference than dominant groups. Internal forms of constraints showed statistical significance across all independent variables and external constraints showed statistical significance among different race and perceived race groups.

### Acknowledge

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