Signal49 RESEARCH

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Act Now or Fall Behind

Mobilizing STEM-Trained Women to Strengthen Critical Industries

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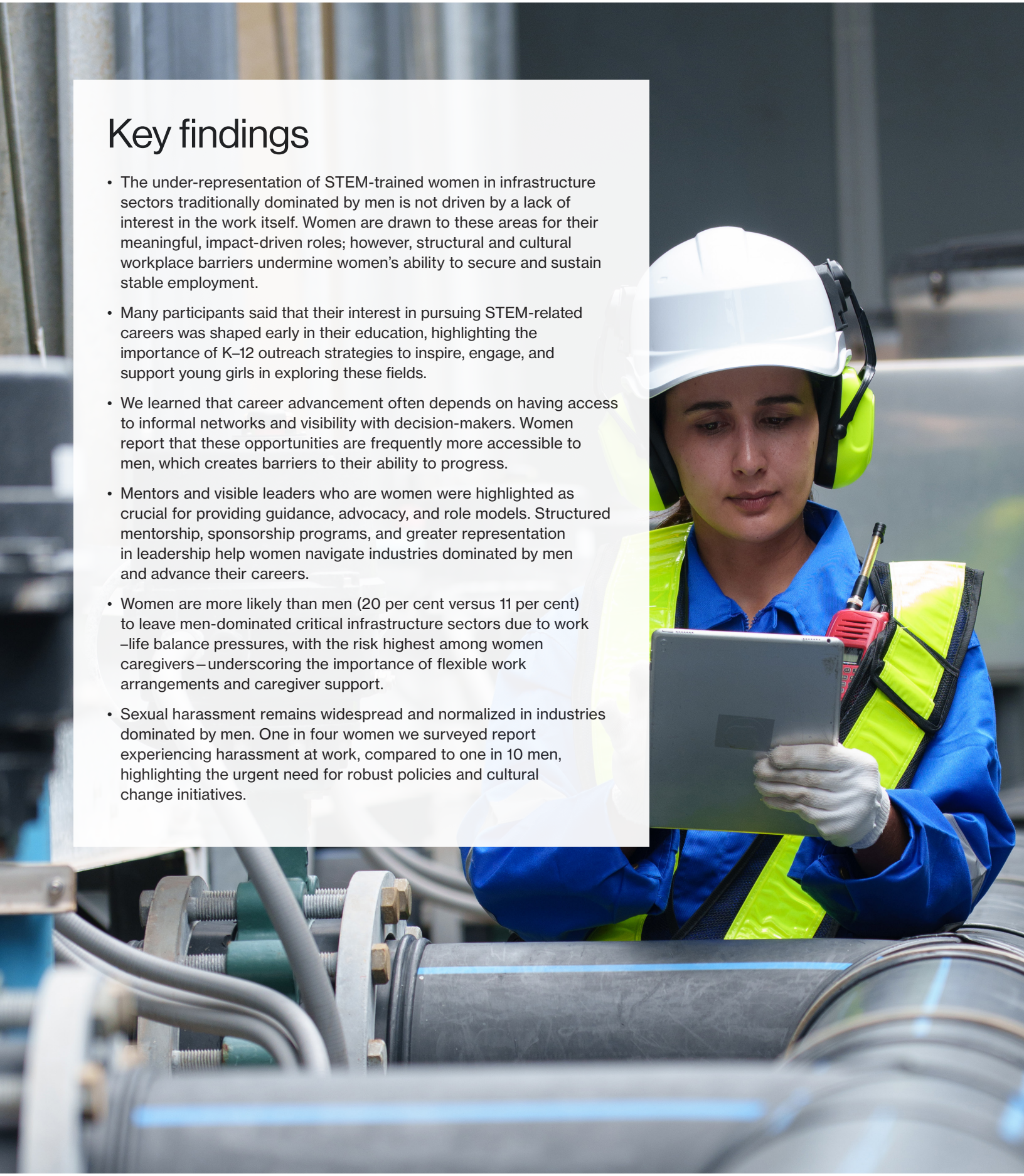


Key findings

- The under-representation of STEM-trained women in infrastructure sectors traditionally dominated by men is not driven by a lack of interest in the work itself. Women are drawn to these areas for their meaningful, impact-driven roles; however, structural and cultural workplace barriers undermine women's ability to secure and sustain stable employment.
- Many participants said that their interest in pursuing STEM-related careers was shaped early in their education, highlighting the importance of K–12 outreach strategies to inspire, engage, and support young girls in exploring these fields.
- We learned that career advancement often depends on having access to informal networks and visibility with decision-makers. Women report that these opportunities are frequently more accessible to men, which creates barriers to their ability to progress.
- Mentors and visible leaders who are women were highlighted as crucial for providing guidance, advocacy, and role models. Structured mentorship, sponsorship programs, and greater representation in leadership help women navigate industries dominated by men and advance their careers.
- Women are more likely than men (20 per cent versus 11 per cent) to leave men-dominated critical infrastructure sectors due to work –life balance pressures, with the risk highest among women caregivers—underscoring the importance of flexible work arrangements and caregiver support.
- Sexual harassment remains widespread and normalized in industries dominated by men. One in four women we surveyed report experiencing harassment at work, compared to one in 10 men, highlighting the urgent need for robust policies and cultural change initiatives.

Building inclusive talent pathways

Sectors underpinning Canada's critical infrastructure—food, housing, energy, and transportation—are experiencing rising demand fuelled by population growth, increased consumption, national priorities for modernization and expansion,[1] and geopolitical instability. At the same time, these sectors are grappling with persistent labour shortages, limiting capacity to meet demand, maintain workforce stability, and support economic growth.[2]

Many in-demand roles in these sectors rely on STEM skills, including engineering, data analysis, and technology development.[3] While women now make up nearly two-fifths of first-year post-secondary STEM students,[4] they account for less than 30 per cent of employees across several critical infrastructure sectors where their skills are needed.[5] Expanding the recruitment and retention of STEM-trained women in high-growth areas traditionally dominated by men offers a meaningful opportunity to address workforce shortages, improve productivity, and strengthen Canada's economy.

To better understand how women's participation in these sectors can be improved, we partnered with TGC (see "About TGC") on a research study that involved a survey of 499 STEM-trained women and men,[6] along with in-depth interviews and focus groups with 25 additional participants.

1 Stenger and others, "2025 Canadian Infrastructure Trends"; and Office of the Prime Minister, "Mandate Letter."
2 Conference Board of Canada The, *Canadian 20-Year Economic Outlook Update*.
3 Half, "2025 Canada Job Market."
4 Statistics Canada, "Postsecondary enrolments."
5 Statistics Canada, "Labour force characteristics."
6 Although the survey was open to participants of all gender identities, after data cleaning the final sample contained only responses from individuals who identified as men or women. See the Methodology for more details.

All participants were employed in one of five critical infrastructure sectors characterized by rising demand, a shrinking talent pool, and under-representation of women (herein referred to as “key sectors”):

- agriculture, forestry, fishing, and hunting;
- mining, quarrying, and oil and gas;
- construction;
- utilities;
- transportation and warehousing.

We examined what motivates STEM-trained women and men to pursue careers in the key sectors and the factors that influence their retention and exit. We conclude with suggestions for practical actions that employers can take to strengthen the recruitment, retention, and advancement of women with in-demand skills.

About TGC

TGC, formerly known as TechGirls Canada,[7] is a Canadian non-profit that helps women and gender-diverse individuals (women+):

- gain recognition, get promoted, and make more money;
- get jobs within strategic, high-growth sectors in Canada;
- continually learn, grow, and advance within their sectors.

TGC’s mission is to double the number of women+ in strategic, high-growth sectors within the next 10 years.

7 TGC, “Helping women+ advance.”

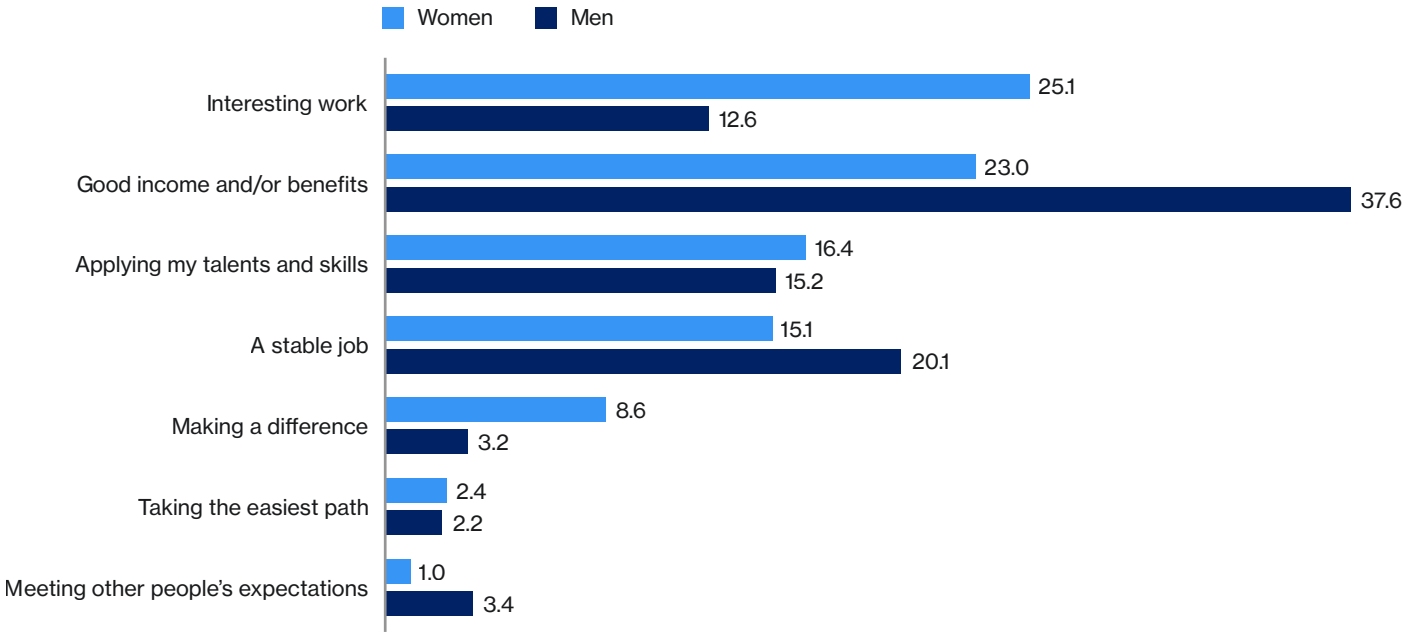
What draws women to the key sectors

We asked both men and women what attracts them to work in these sectors and observed a clear gender difference in motivations. Women most often cited interesting work; pay and benefits; job stability; opportunities to apply their skills; and making a difference as reasons for entering the sector. (See Chart 1.)

While many of these factors were important to both groups, men were more likely to prioritize pay and benefits, whereas women were more likely to emphasize intrinsic motivations, such as interesting work and making a difference. For employers, these findings underscore the value of emphasizing purposeful, engaging work as well as fair compensation in strategies to recruit and retain women.

We further explored the importance that women placed on meaningful work in our interviews and focus groups. In our discussions, women described how working in these sectors offers opportunities for work with visible, real-world impact. Whether powering neighbourhoods with sustainable energy, building homes for families, or enabling the movement of people and goods through transportation systems, women participants said they value being able to connect their day-to-day tasks to broader societal outcomes. Communicating that roles in these sectors are purposeful and meaningful may help employers attract more women to these sectors.

Chart 1
Career motivations vary for women and men
(n = 499; men = 281, women = 218; per cent)



Note: Gender differences for good income, interesting work, and making a difference are statistically significant at p < .05.
Source: Signal49 Research, 2026.

"As someone who's been trained in science and technology, I think I should use my expertise and my skill sets to help people out there. I should use my knowledge to research and build some useful products for society."
Woman, utilities sector

"I like being able to see the impact my work has done on the community, being able to see the building go up and see it being used. That's essentially what keeps me going."
Woman, construction sector

Despite the strong sense of purpose these roles can provide, women continue to enter these fields at lower rates than men;[8] women are also leaving at disproportionately higher rates. Our survey found that only one-quarter of women reported consistent, stable employment in the key sectors, compared with more than one-third of men (37.2 per cent).[9]

For employers seeking to attract and retain more women, this underscores the importance of understanding the barriers that are both pushing women out and discouraging them from entering altogether.

8 Statistics Canada, "Postsecondary enrolments."
9 Gender difference is statistically significant at p < .05.

Structural and cultural barriers limiting women's participation

When asked why they leave, women consistently pointed to factors beyond the work itself. Survey respondents highlighted structural and cultural barriers, such as work–life balance and caregiving responsibilities, limited opportunities for advancement, and experiences of sexual harassment in the workplace, as factors driving their decisions to exit. While these challenges are not new,[10] they persist and continue to influence women's career trajectories.

"I decided to pivot my career for better opportunities, better career growth, and a better work environment."
Woman, utilities sector

Work–life balance and caregiving responsibilities

Nearly 20 per cent of women survey respondents cited concerns related to work–life balance as a reason for leaving these sectors, compared with only 11 per cent of men.[11]

Many jobs in these sectors involve demanding schedules, strict project deadlines, and site -based work, which makes flexibility difficult and places additional strain on employees managing responsibilities outside of work, such as caregiving. This strain is not experienced equally: Among surveyed child caregivers in our sample, men (n = 58) were significantly more likely to maintain stable, uninterrupted employment (40.5 per cent) compared to women (n = 67 27.8 per cent). Women caregivers were also three times more likely than men to exit the labour force entirely (8.9 per cent versus 2.9 per cent).[12]

For many of the women we interviewed, these pressures have tangible career consequences, which they often described in stark and candid terms.

"Having a kid is a death sentence for a woman in STEM."
Woman, utilities sector

"A senior female manager told me, 'Kids are going to ruin your career.'"
Woman, utilities sector

We heard that without flexibility, supportive policies, and organizational cultures that accommodate caregiving responsibilities, women face difficult trade-offs between professional growth and family commitments. This persistent tension has disproportionately limited women's workforce participation for decades and continues to shape career trajectories in these sectors today.[13] Employers who offer flexible work arrangements, parental leave top-ups, and childcare support are better positioned to attract, retain, and advance women.

"The biggest reason for considering leaving right now is I have a beautiful little baby daughter and I want to give her the same life my parents gave me. My mom worked 80 per cent so she was there. My company said 'no, we will never consider anything less than 100 per cent 40-hour work weeks."
Woman, utilities sector

Opportunities for advancement

In our survey, men (18.1 per cent) and women (22.5 per cent) both reported that limited opportunities for career growth influenced their decision to leave their organization. Through interviews and focus groups, we explored how these limitations were experienced in practice.

10 Catalyst, "How to break barriers"; and Leaper and Starr, "Helping and Hindering."
11 Gender difference is statistically significant at $p < .05$.
12 Gender differences for uninterrupted employment and exiting the labour force are statistically significant at $p < .05$.
13 Statistics Canada, "More than half of women."

Both men and women emphasized that advancement within the key sectors often depends on access to informal networks and visibility with decision-makers, rather than formal and transparent procedures.

However, many women told us they had less access to these networks than the colleagues who were men, and consequently felt a need to invest more time, energy, and capital to gain visibility and sponsorship. Women interviewees described promotion pathways as unclear, told us they were often uncertain about whom to approach for guidance or advocacy within their organizations, and said they encountered implicit—and at times explicit—messages that their advancement would be constrained.

"I was advocating for myself and wanted to take on more responsibility. My manager said the cliché: 'you've hit a ceiling.' I didn't know who to go to. It felt so wrong."
Woman, mining sector

Some of the women we spoke with highlighted that receiving support from a woman mentor in men-dominated industries was crucial for their growth. They described women mentors as more likely to recognize gendered barriers, offer practical strategies for navigating informal workplace cultures, and provide validation in environments where women are under-represented and advancement pathways are unclear.

"I think honestly, having a female mentor has just been crucial to my development as a woman at this company."
Woman, mining sector

"If you're a woman entering the field, maybe they should have more onboarding and match you with a mentor. I really think having that perspective from another woman is important because some questions can only be answered by another woman."
Woman, mining sector

Women also stressed the importance of women's representation in leadership roles within men-dominated industries. They described how seeing women in senior positions reinforces that career progression is possible and helps counter perceptions that advancement is limited or unattainable.

"My supervisors have been women. It's been helpful to see people who are so far ahead of me in the field who are so successful."
Woman, forestry sector

However, women's under-representation in leadership roles across the key sectors makes access to this type of mentoring scarce and adds pressure to those few women who have risen to the top.[14] This reality was acknowledged by men we spoke with, who said they spent their entire career never reporting to a woman in a senior position.

"I've never worked with a female superintendent, and I don't think I've ever worked with a female project manager."
Man, utilities sector

14 McKinsey & Company and Lean In, *Women in the Workplace 2025 Report.*

Having few women in leadership positions can reinforce perceptions of constrained career pathways and restrict access to role models, sponsorship, and advocacy that support women's retention and advancement. For employers, these findings underscore the importance of ensuring leadership teams and key positions of authority include women. It also highlights the need for transparent, structured pathways for progression while actively addressing barriers that disproportionately impact women's careers—such as reliance on informal networks.

The visibility of women in leadership also impacts the number of women who choose to pursue STEM careers. Participants in our interviews and focus groups noted that exposure to STEM in Grades K–12 strongly influenced their career decisions. Employers can address long-term recruitment needs by promoting early STEM pathways, highlighting visible women role models, and offering hands-on experiences that spark interest and confidence among young girls.

"I think it really comes back to earlier education. You have to reach kids in high school, or even earlier, to get them excited and make STEM accessible. It's about helping them feel like they can be successful and that there's a clear path where they can see themselves."
Woman, forestry sector

"I plan on doing middle school and high school outreach. If I'd known in high school that earth science was an opportunity, I would have probably done it."
Woman, mining sector

Sexual harassment in the workplace

Sexual harassment has long been recognized as a persistent issue in industries dominated by men,[15] and our findings indicate that it remains a big problem in these sectors. Nearly one-quarter (24.3 per cent) of women we surveyed reported experiencing sexual harassment at work, compared to only 10.3 per cent of men.[16]

Given that research shows that women frequently under-report harassment and discrimination[17]—often minimizing incidents or dismissing them as "not serious enough" to report—our findings likely capture only a portion of women's actual experiences.

Instances of harassment within these sectors are sometimes so embedded in the workplace culture that they are perceived as the norm, according to the women we talked with. When such behaviours are not consistently prevented or addressed, women reported that some employers create an environment in which sexual harassment is not only tolerated but, as one participant put it, expected.

"You have to have a strong backbone. You need to just grin and bear it. My advice would be to be aware that this harassment is likely to happen"
Woman, construction and mining sectors

Too few organizations in these sectors are making the effort to dismantle harmful workplace cultures.[18] As an example of this laissez-faire approach, we heard from some male participants that women just need to wait out generational change. They told us instances of harassment would "fade" as older generations retire. However, previous research shows that this assumption is flawed, as harassment occurs among all generations and generational turnover alone does not dismantle systemic cultural noms.[19]

This tolerance for sexual harassment and lack of accountability for driving cultural change undermines other efforts being made to recruit and retain women to these sectors. The impact of a toxic culture was highlighted by both men and women.

"There's a lot of old-school-like mentalities, especially from a lot of older males that you'll just have to deal with. But I think that's changing as those people retire."
Man, forestry sector

"Simply hiring women isn't enough; retention requires dedicated support to navigate a male-dominated culture, and the most critical changes address the deep-rooted issues of harassment, discrimination, and lack of support."
Man, construction sector

15 Bekkai, "What Are the Impacts of Sexual Harassment?"
16 Gender difference is statistically significant at $p < .05$.
17 Jeffrey and Senn, "Gender Differences in Sexual Violence."
18 Woman ACT, "Supporting Safe STEM Workplaces."
19 Kratz, "How to Stop Generational Differences"; and Making DEI Stick, "Why Most DEI Initiatives."

The consequences of inaction

Employers in the key sectors are facing growing demand and a shrinking talent pool. Supporting the hiring and retention of STEM-trained women offers a promising avenue to address workforce needs. At the same time, the ongoing challenges that women encounter points to the need for employers to take meaningful action to create and maintain environments that enable women to thrive.

Women are more likely to consider working and staying in these sectors under the following circumstances:

- Their work is seen as meaningful and their contributions recognized.
- Work–life balance and caregiver support are sufficient.
- Career growth and advancement opportunities are clear and accessible.
- Women are well-represented in senior positions
- Workplaces are safe and equitable.

Actionable insights to advance women's participation

The following targeted actions set out a clear roadmap for executives, HR leaders, and senior staff in the key sectors to dismantle the barriers that women face and strengthen their recruitment, retention, and advancement.

Recruitment

Attracting women to a STEM field starts with creating visible career pathways, promoting early engagement, and highlighting the type of meaningful, impact-driven work that women value.

1. **Increase visibility of women in senior and leadership roles to make career pathways clear.** Feature women leaders and technical experts in internal communications, public-facing materials, recruitment content, and speaking opportunities to demonstrate that advancement is possible—and valued—within the organization.
2. **Position the company and its women leaders as champions of the future STEM workforce.** Integrate STEM advocacy into corporate strategy and employer branding and publicly communicate a clear commitment to supporting girls and young women who are considering STEM careers. Highlight initiatives, partnerships, and leadership engagement that demonstrate the company's active role in shaping a diverse and skilled talent ecosystem.
3. **Develop future talent pipelines through hands-on education and work-based learning programs.** Allocate resources to school partnerships, youth mentorship programs, internships, and co-op placements that give young girls and women practical STEM experience in the key sectors. Ensure women employees serve as mentors, supervisors, and role models so students can see clear, attainable career pathways in the sector.

4. **Adopt skills-based hiring practices to widen your talent pool of mid-career women.** Establish clear entry points and advancement pathways that recognize and leverage the unique transferable skills of mid-career professionals to strengthen innovation capacity and long-term resilience.
5. **Showcase the real-world impact of your company's work in recruitment and employer branding.** Clearly link open roles and projects to tangible societal outcomes—such as delivering sustainable energy, increasing housing supply, or strengthening transportation systems—across job postings, careers pages, recruitment campaigns, and public-facing corporate materials. Use concrete examples, project descriptions, and outcomes to help candidates see how their work would make a meaningful difference.

For an example of a company's talent pipeline approach, see "Mining Matters: Building an inclusive talent pipeline in STEM."

Mining Matters: Building an inclusive talent pipeline in STEM

Mining Matters is a national non-profit that builds youth awareness of Earth science, the minerals industry, and related careers through curriculum-linked resources and hands-on learning. Since 1994, it has reached an estimated 950,000 teachers, students, and members of the public, supporting a more inclusive talent pipeline for under-represented youth, including girls and young women.

Key features of Mining Matters' talent pipeline approach include:

- Curriculum-linked resources, developed by educators with Earth science expertise, aligned to provincial expectations and designed to keep under-represented students engaged in science learning.
- Hands-on student learning, including subsidized field trips, delivered through in-person and virtual programs that link Earth science to real-world applications and careers.
- Customized GEMS resource kits[20] designed as self-contained, hands-on learning tools that do not rely on digital access, expanding Earth science education in communities where internet or classroom resources may be limited.
- Teacher training and professional development, equipping educators to deliver Earth science and mineral resources content in ways that support sustained participation—especially for women and other under-represented groups.
- Partnership-based outreach, working with museums, universities, libraries, and STEM organizations, and participating in public events and career fairs to broaden reach and awareness of sector opportunities.

Source: Mining Matters.

20 Educational Earth science and minerals activity kits developed for intermediate students and distributed to schools, Indigenous communities, camps, and literacy centres across Canada, featuring hands-on geology, engineering, and mining activities with instructional videos and supplied materials.

Retention

Creating a workplace that is flexible, supportive, and safe is essential to retaining talent, keeping women engaged, and enabling them to fully contribute to the sector.

1. **Establish and communicate hiring and promotion policies that don't penalize people for career breaks due to caregiving.** Revise hiring and promotion policies to explicitly acknowledge non-linear career paths, including career breaks for caregiving, and communicate at the leadership level that such gaps will not hinder advancement opportunities.
2. **Provide flexible work arrangements and role design.** Offer core hours with flexible start/finish times, compressed schedules, and hybrid or remote options where operationally feasible. Embed flexibility into organizational values, leadership messaging, and performance frameworks so employees feel supported and confident that flexible arrangements are not career-limiting. Provide clear guidance on expectations, eligibility, and technology support to help employees balance professional and personal responsibilities. (For an example of a company that promotes hybrid and remote work options, see "BC Construction Association: Advancing remote work in construction.")
3. **Facilitate access to high-quality childcare and family support resources.** Establish partnerships with local providers, offer subsidies, or provide curated referral programs to reduce the burden of caregiving responsibilities. Clearly communicate available resources and how to access them, and consider additional supports, such as backup care or emergency childcare, to help employees stay productive and in their career.
4. **Establish comprehensive anti-harassment policies and reporting mechanisms.** Define unacceptable behaviours, outline step-by-step reporting procedures, set investigation timelines, and specify disciplinary consequences. Communicate anti-harassment policies widely through employee handbooks, onboarding, and regular refresher sessions. Provide multiple confidential reporting channels, such as online portals, hotlines, and designated HR contacts, and ensure employees understand how to report, including anonymously if that's their preference. Track and analyze reports, investigations, and outcomes over time to identify patterns or high-risk areas and use these insights to guide targeted interventions. (For an example of a company's confidential mechanism for reporting harassment, see "BC Hydro: Strengthening workplace safety through confidential reporting.")
5. **Drive cultural change through leadership accountability and ongoing initiatives.** Identify and clearly communicate behavioural expectations for all levels of leadership. Collect confidential feedback from multiple sources and staff surveys to monitor workplace experiences and guide ongoing improvements. Explicitly recognize and reward leaders who consistently exhibit desired behaviours and show commitment to desired outcomes. Consistently communicate zero tolerance for harassment and integrate anti-harassment objectives into performance reviews linked to rewards or promotions. Allocate resources for company-wide awareness campaigns and role-specific training for all employees.
6. **Create women-focused communities of practice and employee resource groups.** Offer regular professional development workshops, peer mentoring, leadership panels, networking events, and discussion forums to help women build skills, expand networks, and access guidance to help them grown and advance their career.

BC Construction Association: Advancing remote work in construction

The BC Construction Association introduced remote work guidelines in June 2023 to help employers in construction attract and retain talent by offering hybrid or remote work options where feasible.

The guidelines make the case for why more flexibility is required: “Ongoing labour shortages, skyrocketing operational costs, and high demand for construction services are putting employers in BC’s construction industry under a lot of pressure. On the HR side, intense competition for talent is driving the need to provide more benefits, higher wages, and even the option for full-time or hybrid remote work. While most construction jobs need to be done in-person and on a worksite, there can be an opportunity to offer more flexibility for some positions in order to attract and retain the talent you need.”

The guidelines encourage flexibility for administrative and planning roles, noting that remote arrangements can reduce operational costs and support employees with childcare responsibilities or long commutes.

The guidelines encourage employers to answer the following questions:

- Is remote work feasible for the job?
- What level of support will be possible for managers and team members?
- How strong is the company connectivity, collaboration, and communication infrastructure?
- Are you confident in the productivity and performance of your employees?
- Are the necessary resources in place?
- Can your current company health and safety policies accommodate working virtually?
- Can you guarantee fairness?
- Will a work-from-home policy help your company attract and retain talent?

The guidelines provide a remote work policy template, working from home checklist for occupational health and safety, a hybrid work approval form, and a sample remote work agreement.

Source: British Columbia Construction Association.

BC Hydro: Strengthening workplace safety through confidential reporting

BC Hydro uses a third-party service to support confidential ethics and wrongdoing reporting, and thus strengthen workplace safety, accountability, and trust.

Accessible reporting mechanisms can support women's participation by reducing barriers to reporting harassment, safety, or misconduct concerns. The third-party platform Mitra Ethics Hotline (formerly ClearView Connects) provides access to a secure channel for employees, contractors, and stakeholders to report issues anonymously.[21] Information and instructions for accessing this service are outlined in the organization's Code of Conduct,[22] reinforcing awareness and consistent use across the workforce.

Key features of BC Hydro's reporting approach include:

- A fully anonymous, third-party reporting platform available 24/7, enabling employees and contractors to raise concerns without revealing their identity unless they choose to, and reducing fear of reprisal or negative workplace consequences.
- External system design, which increases trust and credibility by separating reporting mechanisms from internal management structures, especially important for sensitive or high-risk disclosures.
- Coverage of both employees and contractors, broadening access to reporting mechanisms across the workforce and supply chain.
- Legislated whistleblower protections under B.C.'s *Public Interest Disclosure Act*, allowing serious or unresolved issues to be escalated beyond the organization to the BC Ombudsperson.
- Alignment with the Code of Conduct, which outline protections against retaliation and reinforce the organization's expectations on ethical behaviour and psychological safety.

21 Mitratech, "Ethics Hotline."
22 BC Hydro, *Code of Conduct Policy*.

Advancement

Providing transparent advancement pathways, visible leadership opportunities, and active sponsorship empowers women to progress in their career, influence decision-making, and shape the sector's future.

1. **Formalize advancement processes and make them clear to all employees.** Define role-specific promotion requirements, including skills, certifications, experience, and performance metrics, and communicate them through job descriptions, internal guides, and team meetings.
2. **Standardize the assignment of high-value, career-building projects to ensure women have equal access to participating in, and leading, them.** Apply transparent criteria, consistent scoring rubrics, and structured review panels to guide decisions and track opportunities across teams.
3. **Monitor and audit promotion decisions and high-value project assignments regularly to identify gender disparities.** Track participation and outcomes by gender, review assignment and promotion criteria for fairness, and implement corrective actions—such as targeted mentorship, sponsorship, or development programs—to ensure women have equal access to career-building opportunities and advancement. (See "VIA Rail: Taking action to advance gender equity.")
4. **Set representational targets and showcase female leadership.** Define targets for recruiting, promoting, and retaining women in senior and leadership roles, track progress quarterly, and integrate accountability into leadership performance evaluations. Highlight women in senior roles through company-wide communications, town halls, and leadership meetings to challenge biased perceptions and provide visible role models for career growth. (See "Trucking HR Canada: Advancing women in leadership.")
5. **Establish structured sponsorship or mentorship programs.** Pair women employees with senior leaders who can actively advocate for their advancement. Set clear goals for career progression, schedule regular check-ins, and define measurable outcomes such as nomination for high-profile projects, stretch assignments, or readiness for promotion. Share sponsorship responsibilities across all leaders to ensure this work does not fall disproportionately on the small number of women currently in leadership roles. If suitable sponsors are not available internally, leverage external programs like the Women in Food & Agriculture Mentorship Program to provide additional guidance and support. (See "Women in Food & Agriculture Mentorship Program: Connecting women for growth and leadership.").

VIA Rail: Taking action to advance gender equity

In March 2023, VIA Rail Canada earned the Gold Parity Certification from Women in Governance,[23] a recognition awarded to organizations that demonstrate measurable progress toward gender parity through policies, practices, and results that support women's participation and leadership.

VIA Rail's approach includes the following:

- Embedding diversity and inclusion objectives into governance, policies, and workplace practices to create accountability across the organization.[24]
- Monitoring gender representation, with women comprising about 32 per cent of managers and 37 per cent of non-managers and achieving gender parity on the board of directors. VIA Rail collects workforce data through a self-identification survey to better understand employee representation and to inform programs.[25]
- Supporting employee resource groups that provide visibility, networking, and guidance for women pursuing technical and leadership roles.[26]
- Providing leaders and employers with access to diversity, equity, and inclusion learning resources and workshops to build awareness, share best practices, and foster an inclusive workplace.[27]

23 VIA Rail Canada, "Via Rail Receives Gold Parity."
24 VIA Rail Canada, "Our people."
25 VIA Rail Canada, "Via Rail Receives Gold Parity."
26 VIA Rail Canada, "Our people."
27 VIA Rail Canada.

Trucking HR Canada: Advancing women in leadership

In 2025, Trucking HR Canada launched the Women's Leadership Accord to help employers in the trucking and logistics sector increase women's representation and advancement in leadership, technical, and operational roles.[28]

The Accord establishes a voluntary, sector-wide commitment to gender equity and inclusion, while providing employers with a practical framework to translate values into action. As of October 2025, the Accord included 49 signatory organizations, reflecting growing employer engagement and demonstrated leadership in advancing workplace equity.[29]

Key features of the Women's Leadership Accord include:[30]

- A pillar-based framework that provides a shared foundation for employer action across four areas: gender equity, inclusivity, safety, and empowerment.
- Measurable commitments by signatory organizations, focused on concrete actions to recruit, retain, and support women, encourage their success, and better showcase sectoral opportunities.
- A focus on practice and policy change, including strengthening mentorship and sponsorship pathways and reviewing policies on flexibility and family-friendly work arrangements to reduce barriers to attraction and retention.
- An accountability and recognition mechanism, with employers able to pursue a certificate of excellence awarded through a formal assessment of gender equity practices, establishing a clear benchmark for progress.
- Tools and resources intended for immediate use, with Trucking HR Canada positioning the Accord as both a recognition program and a practical support for organizations seeking to advance workplace equity objectives.

28 Trucking HR Canada, "Women's Leadership Accord."
29 Trucking HR Canada, "18 industry leaders."
30 Trucking HR Canada.

Women in Food & Agriculture Mentorship Program: Connecting women for growth and leadership

In 2019, Rural Roots Canada began delivering and promoting the Women in Food & Agriculture Mentorship Program.[31] This year-long initiative was developed in response to member surveys that identified limited access to mentorship as a key barrier for women entering and advancing in the agri-food sector.

By March 2024, the program had facilitated 562 mentor–mentee matches from more than 3,000 applications and 17,000 prospective mentors, underscoring both a strong demand for and the value placed on mentorship across the sector.[32]

Key features of the mentorship program include the following:[33]

- Mentor–mentee pairings that range from CEOs of agribusinesses to small-scale farmers, academics, and ag-tech professionals allow for well-aligned matches based on industry and role—and strengthen the fit between participants.
- Mentees can indicate a gender preference for their mentor (where desired), supporting greater accessibility, psychological safety, and participation in professional development by enabling women to opt into mentoring relationships that reflect shared lived experience within a men-dominated sector.
- Mentor–mentee matching that considers areas of expertise, language, and industry sector strengthens relevance and fit, and supports sustained participation and progression within the agri-food workforce.
- The time commitment is designed to be manageable and flexible, with recommended monthly 30-minute to 60-minute mentor–mentee meetings and quarterly one-hour check-ins—supporting participation among senior leaders with limited availability.

31 Lester, “Global Food and Agriculture Mentorship Program”
32 Lester.
33 Women in Food & Agriculture, “WFA Mentorship Program.”

Appendix A

Methodology

About the research

For this research, we conducted a mixed-method study using surveys, interviews, and focus groups to understand the challenges and opportunities for women working in sectors typically dominated by men. We wanted to explore the factors that attract women to and keep them working in these sectors. The project focused specifically on those with an education or training background in STEM and were employed in professional, knowledge-based roles in the following sectors:

- agriculture, forestry, fishing, and hunting;
- mining, quarrying, and oil and gas;
- construction;
- utilities;
- transportation and warehousing.

We used the following questions to guide this research:

- What factors motivate women and men to pursue careers in the sectors of interest?
- What factors keep men and women working in the sectors of interest?
- What actions can employers and industry leaders take to increase the representation of women in the sectors of interest?

This report includes a literature review that supplements the findings of our primary research.

Included studies:

- Focused on women who have worked in at least one of the following five sectors: transportation and warehousing; agriculture, forestry, fishing, and hunting; mining, quarrying, and oil and gas; construction; or utilities.
- Focused on the workplace barriers that STEM-trained women experience in sectors typically dominated by men and explore multiple mechanisms aimed at tackling discrimination and stigma to increase the representation of highly skilled women and gender-diverse individuals in these sectors.
- Were relevant to Canadian workplaces (i.e., are composed entirely or partially of a Canadian sample) or offer transferable insights to the Canadian context, such as a study within a country with comparable human rights frameworks.
- Explored the concepts of workplace-related stigma or bias around gender (e.g., physical, procedural, or attitudinal barriers) to help inform the theoretical understanding of this paper.
- Included academic articles (mainly open-source peer-reviewed articles) and publicly available grey literature (white papers, policy, consultancies, advocacy briefs, reports).
- Were available in English.
- Had full text accessible for review.
- Were published within the last four years, unless seminal to our topic.

Excluded studies:

- Did not address our study population or do so in a superficial manner (as part of other equity-deserving groups).
- Were conducted outside a workplace setting (e.g., education, healthcare) unless the study is specifically linking back to employment outcomes.
- Were conducted using non-Canadian samples or in countries with vastly different human rights frameworks or workplace norms.
- Were non-empirical sources, such as news articles, blog posts, opinion pieces, or social media commentary. We also excluded book chapters as they were usually not publicly available.

Detailed methods

Phase 1

Employee survey

Our survey was developed based on findings from the literature review (described above) to help:

- Identify what drives attraction and retention of all employees in STEM-related occupations in five key sectors typically dominated by men;
- Explore barriers facing STEM-trained women and gender-diverse individuals working in these industries;
- Outline actions that industry leaders can take to increase the representation and retention of women and gender-diverse individuals in STEM-related occupations.

Both TGC and the Research Advisory Board reviewed the questions.

The online survey was open from September 17 to September 26, 2025. The survey was administered to a nationally representative sample of 823 working-age adults in one of the five key sectors. Quotas were established based on a representative segmentation of age, region and gender. Participants were recruited by the panel research company Leger.

The research team conducted, in partnership with Leger, a pre-test of the survey with 89 participants before launching the survey to ensure its external validity, identifying any language or accessibility issues.

After data collection, responses were reviewed for completeness and validity. Twenty-nine participants with incomplete or invalid responses were excluded, and additional respondents were recruited to reach the target sample size.

For the purposes of this analysis, the sample was further refined to include only respondents who had a STEM education background and had work experience in one of the five key sectors. After applying these criteria and completing data cleaning, the final analytic sample consisted of 499 STEM-trained individuals, including 218 women and 281 men. There were no gender-diverse individuals in the final analytic sample.

The survey captured detailed career-event histories across four types of activities:

- working for an employer;
- operating a business;
- studying;
- spending more than four months outside the workforce.

Respondents who engaged in multiple activities as part of their job were asked to answer based on the activity that occupied most of their time. Participants could describe up to four career events or events going back 15 years. After reaching either limit, they were not asked to provide more career history. Each event type was analyzed separately to reflect distinct career dynamics.

Because the survey was administered through a panel provider using a non-random sample, the data cannot be treated as a probability sample, and a margin of error cannot be calculated. As a result, findings should not be interpreted as representative of all workers in the five key sectors.

To make sure our results reflect the age profile of people working in these sectors, we applied age-based weights to the survey data based on Statistics Canada data on the age and gender distributions for each sector.[1] This helped correct for having too many or too few respondents in an age group. We weighted within each gender group, giving men and women close to equal representation in our survey findings. All results in the report are based on these weighted data.

We are not able to provide meaningful analysis of how gender intersects with other marginalized identities. Although our sample included respondents who identified as LGBTQ+ (less than 6 per cent), Indigenous (about 10 per cent), and living with a disability (about 25 per cent), the numbers in each group became too small to interpret reliably once their gender was also considered. While 37 per cent of the sample identified as immigrants, because we did not collect information on their countries of origin, we could not draw meaningful conclusions about differences within immigrant groups.

Analyses were conducted iteratively across SPSS (for recoding, descriptive analyses, chi-square tests) and R (for event-based reconstruction, sequencing, and verification of sector-transition logic).

Descriptive statistics

- Used to examine overall patterns in attraction, retention, promotion, support networks, and exit motivations.
- Reported as weighted percentages, means, and distributions.

Crosstabulations and chi-square tests

Used to compare men and women on key outcomes such as:

- Exit pressures and cumulative exit burden;
- Receipt and provision of mentorship or sponsorship;
- Workplace experiences and barriers;
- Sector retention patterns.

These tests identify whether gender differences were statistically significant at $p < .05$.

Event-based analyses (R)

- Used to reconstruct multi-event career histories, including sector switching, staying, leaving, entering, and tenure patterns over time.
- Enabled analysis of attraction, retention, and mobility across career stages.

Together, this mixed analytic approach provides a detailed understanding of how STEM-trained workers move into, through, and out of the five key sectors—and how these patterns differ for women and gender diverse individuals.

Phase 2

Focus group and interviews

To answer the research questions, the qualitative phase of this research comprised interviews and focus groups that were focused on understanding career pathways (e.g., “What led you to this sector?”), perceptions of success (e.g., “What makes you feel successful at work?”), and opportunities for improvement (e.g., “What changes, if any, would enhance the experience of women and gender-diverse individuals in these sectors?”).

The interview and focus group guides underwent an ethics review by Veritas.[2] Free and informed consent was obtained and interviewees and focus group participants were assured their responses would be anonymized and confidential.

1 Statistics Canada, “Class of worker.”

2 Veritas IRB, “Veritas Independent Review Board.”

Qualitative data collection

We conducted homogeneous focus groups and interviews with 25 participants—12 men and 13 women—drawn from survey respondents who had current or past work experience in one of the following sectors:

- agriculture, forestry, fishing, and hunting;
- mining, quarrying, and oil and gas;
- construction;
- utilities;
- transportation and warehousing.

Participants were selected for their industry experience and engaged through a semi-structured interview process.

Within one week of receiving the survey data, we created a list of participants who had consented to be contacted for future research. Participants were emailed and asked to schedule virtual interviews with a member of the research team through an Outlook booking link that was attached within the outreach email. Consent forms were sent to participants once they scheduled an interview or expressed interest in providing a written response. Of the 50 participants who were approached, 13 participants accepted invitations to be interviewed or participate in a focus group. The response rate was 26 per cent.

The final 12 participants were recruited through our internal networks. This sample was collected from October 10 to November 13, 2025, using Microsoft Teams and Outlook for written responses.

A total of 361 pages of cleaned transcripts were collected (190 pages from women and 171 pages from men).

Responses were analyzed using NVivo software and organized by gender to identify differences in perspectives and experiences. Each transcript was coded and refined through an iterative process until overarching themes emerged. Categories were reviewed and consolidated to ensure clarity and consistency.

Appendix B

Respondent profile

Region of residence	Percentage of participants n = 499
Newfoundland and Labrador	1.0
Prince Edward Island	0.8
Nova Scotia	2.2
New Brunswick	1.2
Quebec	18.2
Ontario	42.9
Manitoba	3.6
Saskatchewan	2.8
Alberta	10.8
British Columbia	15.8
Yukon	0.2
Northwest Territories	0.0
Nunavut	0.4

Urban residence	Percentage of participants n = 499
Urban (metro area of at least 10,000 people)	81.2
Rural (outside a metro area)	16.6
Remote (sparsely populated area, typically in the North)	0.6
Other/not sure	1.6

Age	Percentage of participants n = 499
18–24	6.2
25–34	24.2
35–44	17.8
45–54	17.6
55–64	16.2
65+	17.6

Gender	Percentage of participants n = 499
Man	56.3
Woman	43.7

Specific care responsibilities	Percentage of participants n = 499
Child care	53.5
Elder care	21.4
Caring for an ill or ailing loved one (not related to age or disability)	14.0
Other significant care responsibility	25.1

(continued ...)

Highest level of education attained	Percentage of participants n = 499
Doctorate	4.2
Master's degree	25.1
Degree in medicine, dentistry, veterinary medicine, or optometry	0.6
Legal degree, such as a Bachelor of Laws or Juris Doctor	0.2
Other university certificate or diploma above bachelor level	5.6
Bachelor's degree	61.7
Associate's degree or other university degree less than three years	1.0
College or CEGEP certificate or diploma	1.6

Race	Percentage of participants n = 499
White	62.1
South Asian (e.g., East Indian, Pakistani, Sri Lankan)	14.0
Chinese	8.2
Black	4.6
Filipino	1.6
Arab	1.6
Latin American	1.2
Southeast Asian (e.g., Vietnamese, Cambodian, Laotian, Thai)	1.2
West Asian (e.g., Iranian, Afghan)	1.8
Korean	0.6
Japanese	0.4
Other group	2.8
Prefer not to say	2.0

Equity-deserving group membership	Percentage of participants n = 499
Immigrant	37.1
Indigenous persons	10.4
Persons with a disability	24.8
2SLGBTQI+ community	5.6

Source: Signal49 Research, 2026.

Appendix C

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