Biases in the Research Ecosystem: Transcript

Title

Welcome to Module 1: Biases in the Research Ecosystem. The goal of these modules is to provide members of peer and merit review committees, including academics, community members, knowledge users, and traditional knowledge holders, with an understanding of biases and how they can occur in the research ecosystem.

A Few Notes Before You Begin

For the best experience, use Google Chrome or Microsoft Edge on a Mac or PC. Some accessibility features may not work in other browsers. Most narrations in this module match the on-screen text, and closed captions are provided when they differ. Terminology in this field continually evolves. Content may be updated periodically, as appropriate.

Navigating this Module

Use the playbar to pause and resume playback, navigate between slides, or mute and unmute audio. You can also toggle closed captions, browse the full table of contents, and collapse or move the playbar.

Objectives

The learning objectives of this module are to:

1. Distinguish between individual and systemic biases.
2. Describe intersectionality and bias.
3. Describe how biases are experienced by underrepresented groups.
4. Explain how biases can affect research and the research community.

A Word on Self-Care

Everyone understands bias from a unique position based on their own lived experience. For some people, the topic of bias in peer review may be relatively new. Others may experience bias, microaggressions and discrimination every day. As you proceed through the modules, take time to reflect on your physical and emotional state as you react to the information provided. Press pause or take breaks as often as you need to. The playback will start again where you left off. If you feel unable to complete the course due to the impact of its content, use the button on your screen to access supportive resources.

Mental Health Support – Canada.ca

Objective 1

References

What Are Biases?

What Are Biases 1

Biases are mental shortcuts formed from the stories, images, and values we encounter every day. They shape how we see the world and can give unfair advantages to people in dominant groups.

What Are Biases 2

Have you ever felt drawn to someone who seems like you? Ever noticed how seeing certain groups in the media affects how we treat them, whether we are like them or not? That's bias at work, and these biases can provide advantages or disadvantages to others.

What Are Biases 3

Biases can be automatic, but acting on them can lead to discrimination, where we treat someone differently than others. And there are two types of biases: the personal ones we carry, and the broader, systemic biases built into society. What’s more, our personal biases can be conscious or unconscious. Let's dive in and explore how bias influences us at these different levels.

Conscious Bias 1

Imagine reviewing an application from a renowned researcher. You're excited, expecting quality, and inclined to give them the benefit of the doubt, even before reading. This bias is conscious; you're aware of your positive predisposition due to the applicant's reputation. However, this inclination might lead you to overlook flaws in the proposal.

Conscious Bias 2

Conscious bias refers to our explicit awareness of favourable or unfavourable attitudes, behaviours, or assumptions. Thankfully, because we recognize these biases, we can actively work to mitigate them. By acknowledging our predispositions, we can strive for fairness and impartiality in evaluations, ensuring all proposals receive thorough consideration.

Unconscious Bias 1

Imagine again that you're a peer reviewer evaluating research proposals. As you read through a proposal, you might unconsciously favour ideas or methodologies that align with your own background or experiences.

Unconscious Bias 2

For instance, if the proposal comes from a prestigious institution or is authored by someone with whom you share similarities (such as gender, ethnicity, or academic discipline), you might unknowingly give it more favorable consideration. Conversely, if the proposal comes from a lesser-known institution or from someone with whom you don't identify, you might unintentionally undervalue their work. This bias can lead to unfair evaluations, overlooking innovative ideas or talented researchers simply because they don't fit your preconceived notions of excellence.

Unconscious Bias 3

In the academic peer review process, unconscious bias can hinder inclusion and diversity by perpetuating the dominance of certain perspectives and marginalizing others. Recognizing and mitigating these biases is crucial for ensuring a fair and equitable evaluation of research proposals, ultimately fostering a more inclusive academic community.

Systemic Biases 1

In addition to those at the individual level, biases can also be systemic. This refers to the ways in which society's rules and norms can hold some people back while benefiting others.

Systemic Biases 2

Imagine if all the best opportunities were only for those who were able to conduct their research or attend school continuously, without needing a leave of absence. This would benefit those who do not need to take time off from their work or studies, but it could disadvantage those who need time off due to caregiving obligations, a disability, or for medical reasons.

Systemic Biases 3

Systemic biases have cumulative and long-lasting impacts. These biases may not be easily recognized by those who do not face the related barriers or inequalities. In Canada, studies show wage gaps, disparities in job security, and experiences of discrimination are well-documented among First Nations, Inuit, and Métis Peoples, in 2SLGBTQI+ communities, in persons with disabilities and other minority groups.

Interactions Between Individual and Systemic Biases

Individual biases are often shaped and influenced by systemic biases and vice versa. Both individual and systemic biases can reinforce barriers for underrepresented groups during the peer review process. Recognizing systemic bias is a first step towards focusing on the content of proposals under review, not on our assumptions about the researcher, topic or users. The next two questions will test your knowledge on biases.

Multiple Choice 1

An organizing committee is given a suggestion for their upcoming conference to provide tactile maps for visually impaired attendees to navigate the venue. They overlook this suggestion in favour of installing wheelchair ramps and providing sign language interpreters.

Which of the following best illustrates unconscious bias in the committee’s decision-making process?

A. The committee members openly express their reluctance to provide tactile maps for visually impaired attendees, citing concerns about the cost involved.
B. Despite recognizing the importance of accessibility, the committee overlooks the suggestion to provide tactile maps for visually impaired attendees.
C. The committee follows a standard checklist for accessibility requirements, which includes wheelchair accessibility and sign language interpreters but fails to consider other accessibility needs.
D. The committee actively seeks input from attendees with disabilities, incorporating accessibility requirements that cater to a wide range of needs, including tactile maps for visually impaired individuals.

Correct answer:

Well done! The correct answer is B.

Option B is a clearer example of unconscious bias because the committee members are well-intentioned in their efforts to ensure accessibility but overlook suggestions that are crucial for meeting the needs of visually impaired attendees.

This oversight may stem from a lack of awareness or understanding of the challenges faced by this group, leading to unconscious bias in decision-making. Bias is not always clear cut, and decisions can reflect multiple forms of bias at the same time. For example, systemic bias can lead to conscious or unconscious bias.

Click anywhere to continue.

Incorrect answer:

Good effort! However, let's reconsider the options and the scenario provided.

Option A demonstrates conscious bias, as the committee members openly express reluctance towards providing accessibility requirements for visually impaired attendees based on negative attitudes or prejudices.

Option C highlights systemic bias, where the committee follows established procedures without critically evaluating their effectiveness or considering feedback from affected groups, leading to exclusionary practices.

Option D showcases a proactive approach to address biases by actively seeking input from affected individuals and adjusting plans accordingly, indicating an absence of unconscious bias.

Noting that bias is not always clear cut as decisions can reflect multiple forms of bias at the same time. For example, systemic bias can lead to conscious or unconscious bias.

Click anywhere to continue.

Multiple Choice 2

A postdoctoral researcher from a mid-tier university recently joined the lab of one of the top researchers in her field. Early in her appointment, she requests permission from her senior professor to attend an important conference focused on her new area of study. The professor responds with a smirk and a dismissive remark implying that the researcher hasn't earned that privilege yet and must prove her worth in the lab before attending any prestigious conferences.

Which concept best describes the behavior exhibited by the professor in this situation?

A. Conscious bias
B. Unconscious bias
C. Systemic bias
D. None of the above

Correct answer:

Well done! The correct answer is A. Conscious bias.

The professor made a deliberate and derogatory remark towards the postdoctoral researcher, based on assumptions about their past experience. Conscious biases are those that individuals are aware of, often stemming from personal beliefs or prejudices.

In this case, the professor's response demonstrates a clear and conscious decision to discriminate against the researcher based on their perceived experience and educational background.

Click anywhere to continue.

Incorrect answer:

Good effort! However, let's reconsider the options and the scenario provided.

In the scenario, the professor's deliberate and overt reaction, marked by a smirk and dismissive remark towards the postdoctoral scholar, suggests a conscious awareness of their biases rather than an unconscious predisposition.

While systemic biases may influence individual behaviors, the scenario primarily focuses on the professor's direct and personal interaction with the researcher, making it more indicative of a personal bias rather than a systemic issue. Therefore, the correct answer remains option A) Conscious bias.

Click anywhere to continue.

Objective 2

Why do biases matter?

Biases Affects People's Lives

Biases influence the research landscape and can affect everything from job opportunities to peer review of research proposals, and the likelihood of publication. Some researchers enjoy more funding, citations, and promotions due, in part, to biases. This creates an advantage for those researchers in securing additional funding while newer researchers or ideas are left at a disadvantage; a phenomenon known as the Matthew effect. These underlying biases hinder progress and innovation in research. By addressing bias broadly, the Tri-Agency can better fulfill their mission of driving innovation and generating knowledge that benefits society.

Biases can Intersect 1

Intersectionality refers to unique circumstances that are shaped through experiencing multiple biases simultaneously. It is a concept introduced to the academic world by professor Kimberlé Crenshaw and built upon by other feminist scholars. Understanding intersectionality helps us grasp how biases function in research.

Biases can Intersect 2

Discrimination can occur in various directions. Someone might face marginalization based on one aspect, but privilege based on another. For instance, in student evaluations, racialized men are often

seen as being more authoritative than racialized women, but less authoritative than white men. Review committees must reflect on how biases linked to overlapping identities can operate.

Declaration on Research Assessment (DORA)

Recognizing that bias in the peer review process can impact the assessment of research contributions and impacts, the agencies have signed the San Francisco Declaration on Research Assessment. Use the button on your screen to learn more about DORA. By signing this declaration, the agencies have committed to supporting the development and promotion of best practices in the assessment of scholarly research.

Learn more about DORA

Objectives 3 and 4

Biases in the research ecosystem

Types of bias in peer and merit review

In this section, we will look at how these nine types of bias affect researchers, research directions, and research users.

1. Racial bias
2. Bias against Indigenous Peoples and communities
3. Ableist bias
4. Language bias
5. Institutional affiliation bias
6. Age bias
7. Career stage bias
8. Gender bias
9. Bias related to sexual orientation

1. Racial Bias 1

References

Racism is the idea that a race, a social and political concept based on colour or ethnicity, can be superior to another. Racist actions, practices, or policies result in biased beliefs about people and can lead to unequal treatment, sometimes exclusion, and fosters inequality. It comes in various forms like anti-Black, anti-Asian, and racism against First Nations, Inuit, and Métis Peoples. Islamophobia and antisemitism are also forms of racism.

1. Racial Bias 2

In research, racism can hinder job prospects and funding opportunities, while burdening racialized staff with extra responsibilities like mentoring or community work, reducing time for research and funding applications. Racialized people are frequently portrayed in stereotypical ways and racialized faculty are underrepresented at Canadian research institutions, with disparities varying by race.

1. Racial Bias 3

According to the 2016 Census, racialized groups made up 21% of university teaching staff. This was similar to their share of the total labour force but lower than their representation among doctorate holders (31%). Some groups were even less represented. Black university teachers made up only 2% of faculty, even though they were 3% of the labour force.

1. Racial Bias 4

Racism influences the funding and publication of research. Researchers from racialized backgrounds often employ community-focused research methods that differ from traditional approaches. However, review committees tend to favour familiar, possibly less innovative methods. This preference highlights the importance of integrating DORA principles into the peer review process to ensure an equitable funding environment.

1. Racial Bias 5

For instance, racialized researchers are more likely to submit articles for publication on topics that are less likely to be accepted. Use the button on your screen to see the research. This creates two issues: First, it maintains a bias in funding and publishing toward dominant groups, even if their work may not be as innovative. Second, it makes it more difficult for racialized researchers to secure funding.

Research on Racial Bias in the Research Ecosystem

While Canadian data is limited, a United States study looking at 2014 to 2016 data on award rates found that: Black health scientists received large National Institutes of Health awards at 55% the rate of White scientists.

Erosheva, E. A., et al. (2020). Science Advances, 6(23), eaaz4868.

A study from the United Kingdom found that: Grants awarded to racialized researchers were on average £65,000 smaller than those awarded to White researchers.

Lia, L. Y., et al. (2020). Science in Parliament, 76(4), 17-19.

1. Racial Bias 6

These dynamics not only impact the careers of racialized researchers, but also affect the degree to which research benefits everyone who lives in Canada.

Multiple Choice 3

Which of the following is not a challenge faced by racialized faculty members in Canadian universities?

A. Stereotypical treatment contributes to their absence from campus and causes feelings of otherness or isolation.
B. Often conduct research on topics of significant influence in their fields and enjoy higher acceptance rates when publishing articles.
C. Typically bear a heavier burden of mentoring, supporting students, and fostering community connections.
D. Face funding barriers because their research often does not align with the dominant group members' research agendas.

Correct explanation:

Well done! The correct answer is B.

Racialized faculty members do not typically enjoy higher acceptance rates when publishing articles, despite researching topics of significant influence in their fields.

Click anywhere to continue.

Incorrect explanation:

Good effort! However, let's reconsider the options provided.

While there may indeed be a preference for familiar topics and methodologies by review committees, racialized faculty members do not typically enjoy higher acceptance rates when publishing articles, despite researching topics of significant influence in their fields.

This lack of recognition can stem from systemic biases that prioritize certain types of research over others, often to the detriment of community-focused work.

Click anywhere to continue.

Multiple Choice 4

What impact does systemic bias in the publication and funding decision-making processes have on racialized researchers?

A. They face fewer barriers in securing funding and recognition.
B. Their research agendas are more likely to be accepted regardless of novelty.
C. They are more likely to receive support for community-focused research.
D. They experience barriers in having their work accepted and funded.

Correct explanation:

Well done! The correct answer is D.

Systemic biases in the publication and funding decision-making processes often create barriers for racialized researchers in having their work accepted and funded.

Click anywhere to continue.

Incorrect explanation:

Good effort! However, let's reconsider the options provided.

Systemic biases in the publication and funding decision-making processes often create barriers for racialized researchers.

These barriers can include lower acceptance rates for their work, difficulties in securing funding, and overall challenges in having their contributions recognized and supported within academia.

Click anywhere to continue.

2. Bias Against Indigenous Peoples and Communities 1

References

First Nations, Inuit, and Métis students and faculty are underrepresented at Canadian research institutions. According to Statistics Canada in 2019, while Indigenous Peoples accounted for 5% of the population in Canada, less than 2% of PhD students and just over 2% of all faculty were Indigenous. In the same year, ~1/3 of Indigenous faculty and researchers reported experiencing unfair treatment or discrimination at their institution.

2. Bias Against Indigenous Peoples and Communities 2

The shortage of Indigenous faculty limits mentorship opportunities and often requires them to take on additional responsibilities, reducing their time for research and publication. They must also navigate challenging academic environments, geographic isolation, and a widespread perception that First Nations, Inuit, and Métis researchers belong in specific disciplines. In fact, not all researchers working on Indigenous issues are Indigenous themselves, and not all Indigenous researchers work in areas of Indigenous research.

2. Bias Against Indigenous Peoples and Communities 3

The peer review process can also exclude First Nations, Inuit, and Métis values and knowledge. For example, review committee members may not value community-based research or may tokenize Indigenous participation, favouring Western or European developed methodologies. This perpetuates a systemic bias that research using Western methods is considered more fundable than research rooted in Indigenous ways of knowing and doing.

2. Bias Against Indigenous Peoples and Communities 4

This systemic bias is rooted in low understanding and application of the rights of Indigenous Peoples, including First Nations, Inuit, and Métis ways of knowing and doing. It creates a lack of Indigenous

researchers by diminishing the value of their cultural methodologies, which can discourage them from seeking funding. The overall effect is to reduce the impact and benefits of research for all people in Canada.

3. Ableist Bias 1

References

Ableism occurs through prejudiced thoughts and discriminatory actions based on physical, mental and/or emotional differences. Because of ableism, people with disabilities are perceived to be less able to contribute, and of less inherent value than others. Ableism limits opportunities for persons with disabilities, creates and sustains conditions of inaccessibility and exclusion.

3. Ableist Bias 2

Valuing research productivity over impact is a symptom of ableism in the research ecosystem. This bias assumes that people contribute less if they don't match an idealized person with a traditional career trajectory. Such as a person enrolled in full-time studies, working long hours, presenting at several conferences, and constantly publishing.

3. Ableist Bias 3

This ableist expectation has varying impacts on the experiences of researchers with disabilities depending on factors like how apparent their disability is, as well as their gender, race, or age. For example, those with nonapparent disabilities often must think about the risks and benefits of disclosure, as colleagues or administrators may doubt their research capabilities or rights to accessibility supports.

3. Ableist Bias 4

Accessibility requirements for persons with disabilities vary greatly within the research community and are sometimes unavailable or inconsistent. When support is lacking, researchers with disabilities often must spend their own time advocating for accommodations or making environments accessible, which detracts from their research and can make them appear less productive. Even when support is available, administrators may lack the necessary knowledge to implement it effectively.

3. Ableist Bias 5

Individuals with disabilities are often left to navigate an inaccessible system on their own, and the time and labour it takes is not accounted for when assessing productivity.

Multiple Choice 5

You are reviewing the proposal of an applicant who completed their postdoctoral fellowship in 6 years at the same institution in which they did their PhD. In the career advancement section of their application, the applicant noted that they had to frequently switch to part-time studies and took a leave for a semester as they were experiencing chronic pain. Which of the comments below would not constitute a bias?

A. The applicant completed their postdoctoral studies in the same institution as their PhD. This shows little autonomy and demonstrates a lack of commitment to diversifying their research experience.
B. Considering the part-time period, the applicant only has a couple of years of applied research experience. Their capacity to undertake the proposed project is not demonstrated.
C. The laboratory research work included in the applicant proposal requires long hours standing up. This might not be feasible for the applicant considering their chronic pain.
D. The applicant has yet to explain how the experience acquired during the active years of their fellowship provides them with the relevant skills to undertake this research.

Correct explanation:

Well done! The correct answer is D.

This focuses on assessing the applicant's relevant skills and experience during the active years of their fellowship. It is a valid and unbiased evaluation of their qualifications for the proposed research project.

It does not make assumptions based on the applicant's disability or the timeline in which they completed their postdoctoral fellowship, and it refrains from discriminatory or ableist judgments. Instead, it centers on the applicant's demonstration of the necessary competencies for the project.

Click anywhere to continue.

Incorrect explanation:

Good effort! However, let's reconsider the options and the scenario provided.

It's important to ensure evaluations are focused on relevant experiences and qualifications, rather than assumptions about a person's chronic condition or institutional accommodations. This answer overlooks the broader context of the applicant's situation, making assumptions about their value or contribution due to their disability.

Review your selection to make sure it doesn't draw negative conclusions about the applicant's research potential given their disability or impose inappropriate expectations, such as questioning a person's physical capacity or denying reasonable accessibility supports.

Click anywhere to continue.

4. Language Bias 1

References

While Canada has two official languages, most research is published and read in English, which disadvantages Francophone researchers and communities. Throughout the broader research system, journals in languages other than English often have lower visibility and impact. This can lead to bias in review processes.

4. Language Bias 2

Francophone researchers face barriers working in French that aren't considered in traditional productivity measures. As recommended by DORA, assessments of productivity should consider a range of contributions and impacts, beyond publications. It should also consider the applicant's context and how it may have affected their progress.

4. Language Bias 3

Additionally, research published only in English may not address the diverse needs and cultural identities of Francophone communities, impacting its relevance to all people living in Canada.

4. Language Bias 4

Linguistic biases can impact peer and merit review in two main ways. First, if reviewers aren't confident in their second or third language skills, it can affect their ability to properly evaluate applications. This uncertainty may lead to a preference for reviewing in their first language. Second, the applications being reviewed might have been prepared in a language other than the scholar's first. Pressure to write in a non-native language can prevent researchers from fully expressing themselves and conveying their ideas effectively. This also holds true for people who primarily communicate with American Sign Language, Indigenous Sign Language, and Quebec Sign Language (*Langue des signes québécoise*).

4. Language Bias 5

Review committees should focus on the research itself rather than linguistic details, recognizing the value of linguistic diversity in strengthening Canadian research.

5. Institutional Affiliation Bias 1

References

Be wary of making assumptions about the availability of resources, the institution's size, or its capacity for collaboration. Institutional affiliation bias can stem from various factors such as the size, type, language, perceived prestige, or research tradition of the applicant's institution. It can result in overlooking promising proposals from smaller institutions or favour those from larger, more renowned establishments.

5. Institutional Affiliation Bias 2

Depending on the program's nature, access to resources and collaborative environments beyond the host institution may be critical for achieving the project's goals. During the evaluation process, reviewers should assess whether the applicant has outlined the necessary infrastructure (e.g. networked environments or platforms) for the research to be successful.

5. Institutional Affiliation Bias 3

Actively mitigating these biases ensures a fair and equitable evaluation process, which will prioritize funding innovative projects regardless of institution size or status.

Multiple Choice 6

A research proposal to examine food insecurity in rural populations has been submitted by an individual at a large institution. This is an ambitious project looking to survey individuals in multiple provinces. Unfortunately, they have not indicated whether they have the necessary resources to conduct the proposed research, the expertise to evaluate the survey data, or the commitments in place to collaborate with institutions in other provinces.

Which of the following is an unbiased response to the research proposal?

A. Given the large size of the institution, the individual likely has the training and experience, and is suitable for this grant.
B. Due to its size, the institution likely has the necessary connections to allow the individual to conduct the proposed research.
C. The individual has neither demonstrated that they have the necessary resources to support this research, nor have they secured these resources elsewhere.
D. The individual's institution would be able to support the scope of the proposal alone, provided that the applicant describes how the survey data will be analyzed.

Correct explanation:

Well done! The correct answer is C.

Larger institutions do not necessarily produce trained individuals or have the necessary resources or connections to support large-scale, ambitious research projects.

The applicant should describe in detail what resources they've secured to administer the survey, the commitments they've obtained from collaborators, and that they or their team members have the necessary expertise to analyze the data.

Click anywhere to continue.

Incorrect explanation:

Good effort! However, let's reconsider the options and the scenario provided.

This response demonstrates a biased assumption that larger institutions produce trained individuals and have the necessary resources or connections to support large-scale, ambitious research projects.

Click anywhere to continue.

6. Age Bias 1

References

Age bias is the predisposition to think, feel, and act in certain ways towards individuals based on their age. This bias often stems from the broader concept of ageism, which is the belief that certain age groups are inherently deficient.

6. Age Bias 2

Age bias can influence peer reviewers' assessments in several ways. For instance, when the age of an applicant is not evident, reviewers may make assumptions about their experience and legitimacy in the field, which could either disadvantage or favour the applicant unfairly. Younger researchers might be perceived as less capable of tackling ambitious or complex research projects. Older researchers might face skepticism about their ability to innovate or adapt to new methodologies.

7. Career Stage Bias 1

References

Career stage bias can significantly impact grant funding and research productivity in academia.

7. Career Stage Bias 2

Early-career researchers often face challenges in securing grants due to their limited track record and experience, while established researchers may benefit from their reputation and established networks. In this situation, there is an unequal distribution of funding, with early-career researchers receiving less support despite potentially having more innovative ideas.

7. Career Stage Bias 3

Reviewers should evaluate proposals in the context of the applicant's career stage, taking into account non-linear career paths, personal circumstances, and any periods of leave. This approach ensures that proposals are assessed fairly, with consideration for the individual's unique journey and what is appropriate for their stage of career development.

7. Career Stage Bias 4

Consider the expertise of the applicant and research team, the novelty of the research, feasibility of the proposed methodology, and potential to advance the field.

8. Gender Bias 1

References

Research into gender biases have traditionally focused on the bias experienced by ciswomen in relation to cismen. Application and review scores in some cases can favour cismen researchers who have a successful record of obtaining funding.

8. Gender Bias 2

There is a 2019 study of CIHR funding opportunities which compared a program that primarily assessed the proposed research, with one that primarily assessed the candidate. Funding success rates between males and females (data on sex was used in the study) were no different when assessing the research, but females were less successful than males (8.8 vs. 12.7%, respectively) when the program initially assessed the candidate.

8. Gender Bias 3

These findings, as well as those from other studies, point to a bias against women as applicants, regardless of the quality of the proposal, and highlight the negative influence of gender bias on funding success rates. Less research has focused on gender biases as they relate to transgender ("trans") and non-binary people.

8. Gender Bias 4

Use the button on your screen to learn more about how biases against ciswomen and trans researchers hinder their participation in research, publishing, and securing funding. Ciswomen, trans, and non-binary researchers are often involved in more service work, advocacy, teaching & mentoring in their institutions, and may therefore have fewer "traditional" academic outputs (e.g., publications and grants) as a result.

Being Transgender in the Research Ecosystem

Few studies have specifically examined biases against trans and non-binary individuals in academic review processes, but what their findings have shown is that biases exist and contribute to significant barriers in research, publishing, and funding accessibility for this community. Economic struggles, higher rates of discrimination and harassment compound these challenges, affecting trans researchers' ability to enter and remain in academia. Additionally, the emotional toll of loss, grief, and mental distress can disrupt scholarly focus. Trans researchers may face challenges if they've transitioned, having to decide whether to omit past work published under a different name (called a "deadname"), disclose their transgender status by publishing corrections, or keep their deadname despite the discomfort it might evoke.

9. Bias related to Sexual Orientation 1

References

Sexual orientation is independent of gender identity and covers three main aspects:

1. How someone sees themselves sexually.
2. Who they're attracted to emotionally or romantically.
3. Who they engage with intimately.

9. Bias related to Sexual Orientation 2

Biases against non-heterosexual orientations often stem from workplaces that favour or assume heterosexuality as the default. This belief, known as heteronormativity, can make 2SLGBTQI+ (Two-Spirit, lesbian, gay, bisexual, transgender, queer, intersex and others) faculty and trainees feel marginalized. For researchers in these communities, deciding whether to reveal their sexual orientation is difficult, as they must weigh potential risks to their work and relationships.

9. Bias related to Sexual Orientation 3

For example, Alex is a researcher preparing to submit a groundbreaking paper to a top journal. Use the button on your screen to learn more about their inner conflict as they grapple with whether to reveal their 2SLGBTQI+ identity in their author bio. Concerned about potential bias, Alex opts not to disclose to limit the bias against their work that reviewers may exhibit based on their personal identity.

Disclosing Sexual Orientation

For 2SLGBTQI+ researchers, choosing not to disclose their sexual orientation can mean not fully integrating their personal identity into their work. This can lead to constant vigilance to keep their orientation hidden, strained relationships with colleagues and students, and poor mental health. Those who have disclosed report challenges like loss of credibility, exclusion, hostility, and harassment, which can affect their research. What's more, biases based on gender, race, and ability can intersect to slow progress further and hinder creativity.

Multiple Choice 7

Select the correct term to match the definitions. You can review the definition of each term in the glossary.

A. Referring to a person whose gender does not align with the binary gender model of man or woman.
    - Non-binary

B. A person whose gender identity differs from what is typically associated with the sex they were assigned at birth.
    - Transgender person

C. A person who identifies with the sex they were assigned at birth.
    - Cisgender person

D. The socially constructed roles, behaviours, expressions and identities of girls, women, boys, men, and gender diverse people. It influences how people perceive themselves and each other, how they act and interact, and the distribution of power and resources in society.
    - Gender

Conclusion

In Summary

We have seen in this module that biases are mental shortcuts shaped by upbringing, culture, and experience, leading to discriminatory assumptions. Systemic biases within societal and institutional norms can create unequal access for underrepresented groups in research. Individuals from underrepresented groups face multiple forms of inequality, which can limit their contributions to research. Biases related to gender, sexual orientation, race, ability, age, and institution type can influence funding decisions and research outcomes. Module 2 will delve into specific areas of the review process where biases impact funding decisions and explore strategies to mitigate them effectively.

Survey

Before concluding this module, please complete this form to assist the agencies in tracking uptake and improving the quality of our learning products.

Thank You

Thank you for completing this learning module. Input your name to generate a completion certificate.

Additional Resources

For further information on some of the issues raised in these modules, please refer to the following resources.

- Review the TCPS-2 (2022) – Chapter 9: Research Involving First Nations, Inuit, and Metis Peoples of Canada.
- Read the Tri-Agency statement on Equity, Diversity and Inclusion.

If you have questions about how the concepts in these modules apply to a particular review process, please contact the respective agency.