



National Collaborating Centre
for Infectious Diseases
Centre de collaboration nationale
des maladies infectieuses



University
of Manitoba

Sex- and Gender-Based Analysis+ in Health Research 101

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April 20, 2026

I have the privilege to live and work on the original lands of Anishinaabeg, Ininiwak, Anisininewuk, Dakota Oyate, Dene and Inuit, and on the National Homeland of the Red River Métis. I work to respect the Treaties that were made on these territories, recognize past and on-going harms, and I commit to move forward in partnership with all partners in a spirit of reconciliation and collaboration.

No conflicts to disclose.

Prairie Winter Sunset is a photograph by Philip Rispin, uploaded on April 12th, 2020.



Outline

SGBA+

- History
- Why are we doing this – better science, better outcomes
- Some definitions and concepts
- Wait a minute, what about ... ?
- How does it work?

Polling Question 1

On a scale of 1 to 5, how confident are you that you can appropriately define and distinguish between sex and gender-related variables in a health-related context?

Sex and gender-based analysis is

... an approach to assess how factors such as sex, gender, age, race, ethnicity, socioeconomic status, disability, sexual orientation, cultural background, migration status, and geographic location (among others) interact and intersect with each other and broader systems of power.

<https://www.canada.ca/en/health-canada/corporate/transparency/corporate-management-reporting/health-portfolio-sex-gender-based-analysis-policy.html>

Government of Canada / Gouvernement du Canada

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Cananda.ca > Departments and agencies > Health Canada > Health Canada's transparency > Health Canada's corporate management reporting

Health Portfolio Sex- and Gender-Based Analysis Plus Policy: Advancing Equity, Diversity and Inclusion

From: [Health Canada](#)

Policy Statement

Government of Canada / Gouvernement du Canada

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Canadian Institutes of Health Research

Home → Priority areas → Sex and Gender in Health Research

Sex and Gender in Health Research

There is significant evidence to demonstrate that biological and social differences between women, men, girls, boys, and gender-diverse people contribute to differences in their health. Sex (biological attributes) and gender (sociocultural factors) influence our risk of developing certain diseases, how well we respond to medical treatments, and how often we seek health care. Accounting for sex and gender in health research has the potential to make health research more rigorous, more reproducible and more applicable to everyone.

CIHR is a signatory on the Government of Canada's Health Portfolio Sex- and Gender-Based Analysis Policy, as well as the [Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans](#). Both policies underscore the importance of integrating sex and gender into health research when appropriate. As such, **CIHR expects that all research applicants will integrate sex and gender into their research design and practices when appropriate**

CIHR's Sex and Gender-Based Analysis (SGBA) in Research Action Plan ensures that health research in Canada leads to sound science and reliable evidence that effectively addresses biological (sex) and sociocultural (gender and the identity factors) differences between diverse groups of people.

SGBA is both a process – the analysis, and a product – the resulting information.

Gender and Women's Health

- Women's health research and the women's health movement worldwide
 - Women in Development
 - Gender in Development
- Gender-based analysis in health policy

In Canada:

- 2009 Auditor General's Report
- GBA+ through Status of Women Canada
- 2015 Auditor General's Report
- SGBA(+) policy of the Health Portfolio
 - Health Portfolio Sex- and Gender-Based Analysis Plus Policy: Advancing Equity, Diversity and Inclusion (2023)

THE WORLD BANK
WHO WE ARE WHAT WE DO WHERE WE WORK UNDERSTANDING POVERTY WORK WITH US WE LIVE

Understanding Poverty / Topics

The World Bank In Gender

The World Bank takes as its starting point that no country, community, or economy can achieve its potential or meet the challenges of the 21st century without the full and equal participation of women and men, girls and boys.

Research [View All Research >](#)

- REPORT
WOMEN, BUSINESS AND THE LAW 2023
- REPORT
Gender-Based Violence Prevention and Response in World Bank Operations: Taking Stock After a Decade of Engagement (2012-2022)
- REPORT
Measuring Women and Men's Work : Main Findings from a Joint ILO and World Bank Study in Sri Lanka
- REPORT
GENDER EQUALITY IN DEVELOPMENT: A Ten-Year Retrospective

Government of Canada / Gouvernement du Canada [Fr](#)

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Health Portfolio Sex- and Gender-Based Analysis Plus Policy: Advancing Equity, Diversity and Inclusion

From: [Health Canada](#)

Policy Statement

The Government of Canada's Health Portfolio ^[1] uses Sex- and Gender-Based Analysis Plus (SGBA Plus) to develop, implement, and evaluate the Health Portfolio's research, surveillance, legislation, policies, regulations, programs, services, and other initiatives ^[2]. The objective of this policy is to strengthen the integration and application of SGBA Plus in all Health Portfolio activities to advance equity, diversity and inclusion.

SGBA Plus is an analytical process used in the Health Portfolio. It is an intersectional approach to assess how factors such as [sex](#), [gender](#), [age](#), [race](#) ^[3], [ethnicity](#), [socioeconomic status](#), [disability](#), [sexual orientation](#), [cultural background](#),



BETTER SCIENCE WITH SEX AND GENDER

A PRIMER FOR HEALTH RESEARCH

Johnson, J.L., Greaves, L. & Repta, R. Better science with sex and gender: Facilitating the use of a sex and gender-based analysis in health research. *Int J Equity Health* 8, 14 (2009). <https://doi.org/10.1186/1475-9276-8-14>

Many conditions or diseases do not affect the sexes equally in their prevention, diagnosis, progression, and treatment.

Symptoms and disease progression can be substantively different.

Some diseases are more prevalent in one sex: osteoporosis, autoimmune diseases, and depression disproportionately affect women. Women and men deal with different types and manifestations of cancer.

The metabolization of some drugs is different between males and females.

https://cihr-irsc.gc.ca/e/documents/igh_strategic_plan_2018-2023-e.pdf
https://bccwh.bc.ca/wp-content/uploads/2012/05/2007_BetterScienceWithSexandGenderPrimerforHealthResearch.pdf



What about men? And boys? And Non-binary persons?

YES

thebmj

covid-19

Research ▾

Education ▾

News & Views ▾

Campaigns ▾

Jobs

Education And Debate

Sex, gender, and health: the need for a new approach

BMJ 2001 ; 323 doi: <https://doi.org/10.1136/bmj.323.7320.1061> (Published 03 November 2001)

Cite this as: *BMJ* 2001;323:1061

Summary points

Men are now following the example of women in drawing attention to the links between gender, health, and health care

The health of both sexes is influenced by biological factors including, but not confined to, their reproductive characteristics

Socially constructed gender characteristics are also important in shaping the capacity of both women and men to realise their potential for health

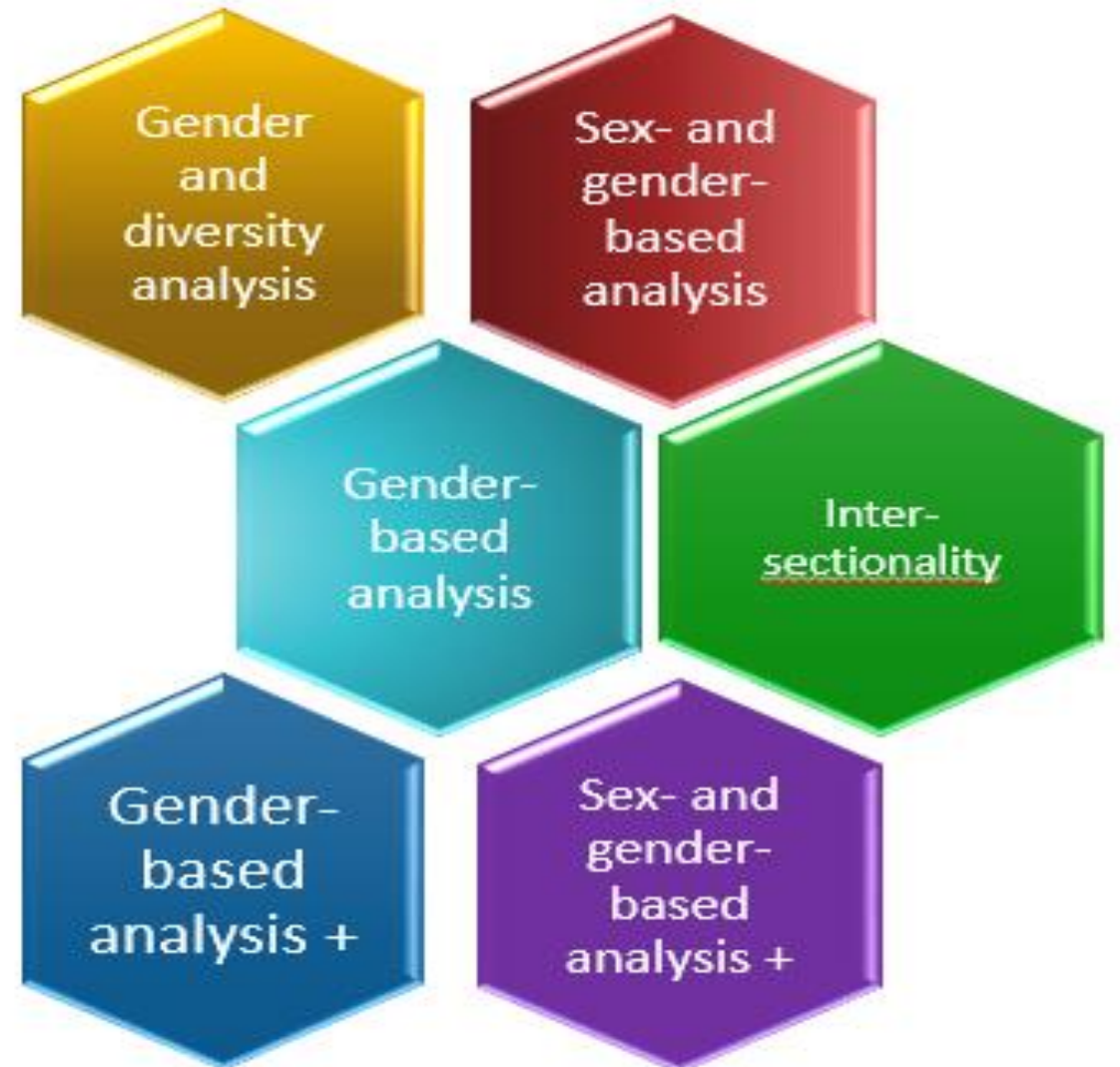
Gender inequalities in access to health promoting resources have damaging effects on women's wellbeing

Men face particular problems because of the relation between masculine identities and risk taking

Greater sensitivity to sex and gender is needed in medical research, service delivery, and wider social policies

SGBA+ in Health

Terms vary inside government and in other sectors. However, the end result is the same: thoughtful consideration of how sex, gender and other identifiers and intersections can be and are applied to policies, legislation, programs and services.



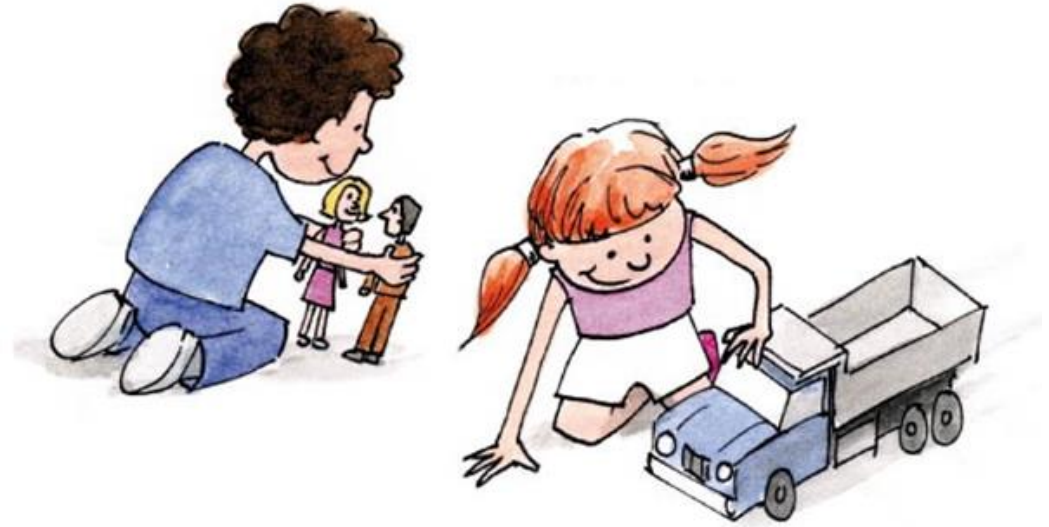
Core concept: Sex

“Sex” refers to the biological & physiological characteristics that distinguish males and females in any species, including humans.

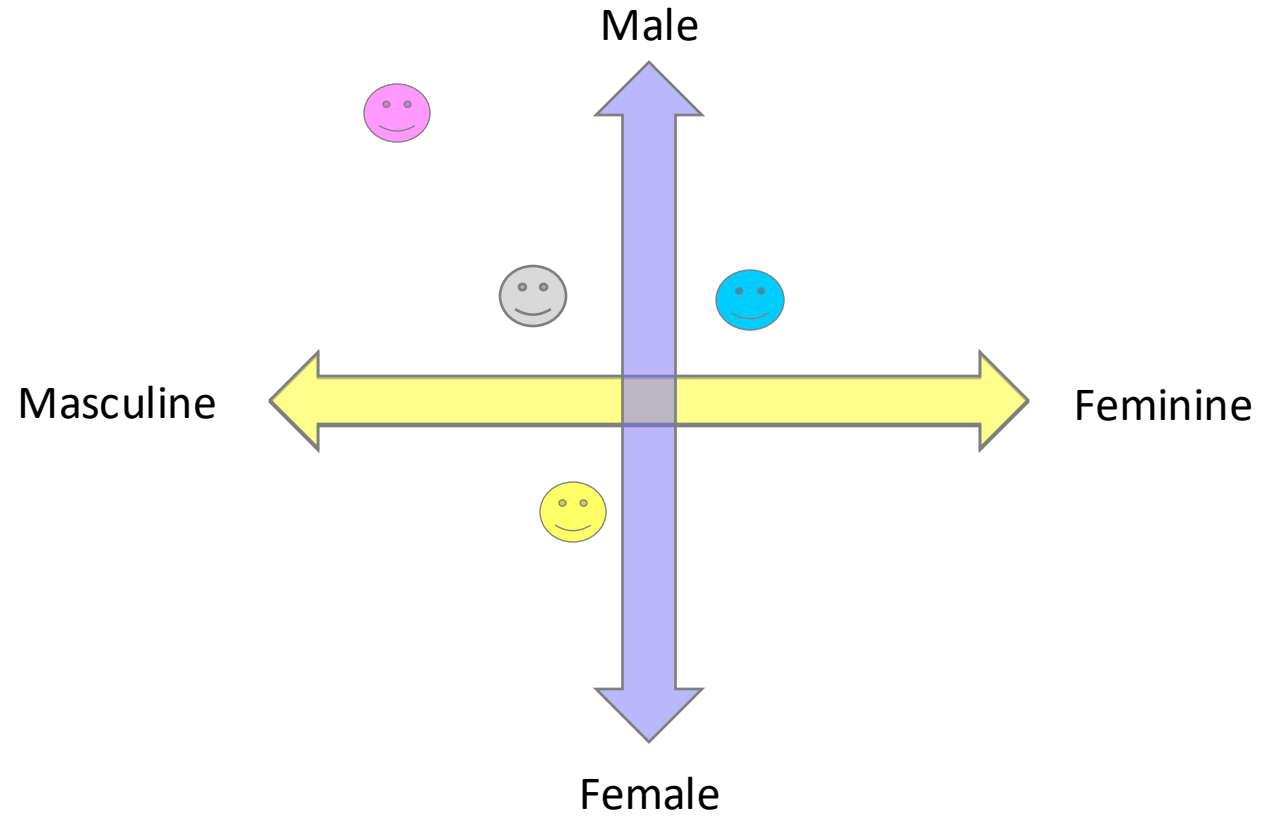


Core concept: Gender

“Gender” refers to the socially constructed roles and relationships, personality traits, attitudes, behaviours, values, relative power and influence individuals adopt and that society ascribes to women, men and gender diverse folks.



Sex and gender intersect along continuums



Polling Question 2

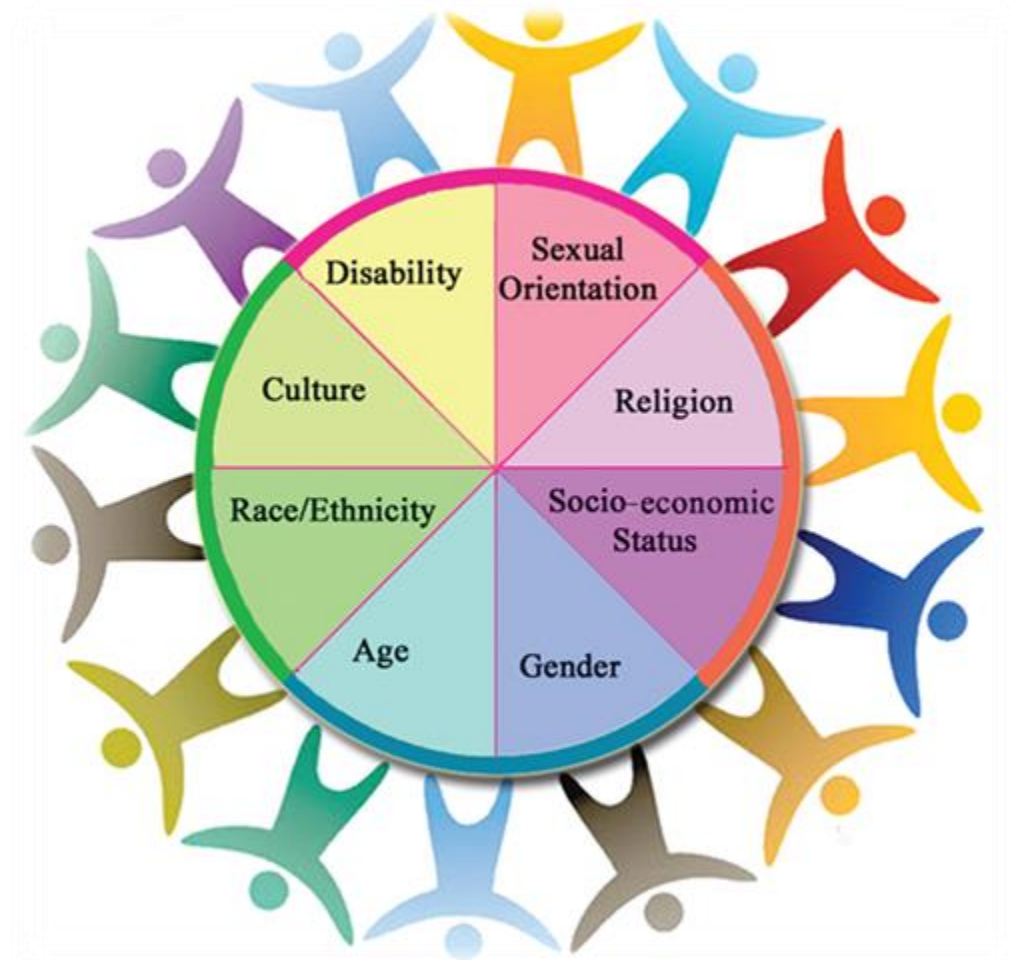
Which of the following statements uses the term sex or gender correctly?

Multiple Choice Poll (choose the best answer)

- A) In patients with infectious mononucleosis, viral load varies by gender
- B) Female aggressors in intimate partner violence incidents may be more likely to wield a weapon because of gender differences in physical strength.
- C) Sex differences exist in the association between pack years of cigarette smoking exposure and lung function.
- D) Health-seeking behaviour in men and women is an example of a sex-related variable.

Core concept: Diversity

At its most basic and best, “diversity” comprises any and all differences between and among people. Often the term is associated with culture and ethnicity, but it includes other visible and invisible differences.

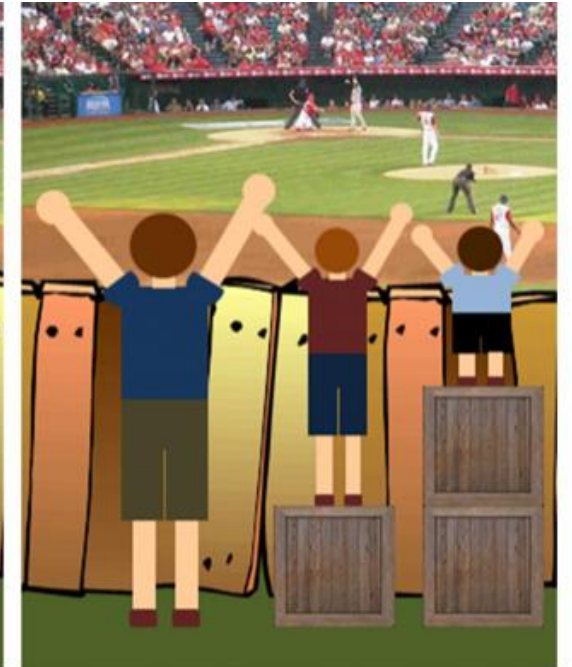


Core concept: Equity

- “Equality” aims to ensure that everyone gets *the same things* in order to enjoy full, healthy lives.
- “Equity” aims to understand and provide people *what they need* to enjoy full, healthy lives. And that is not the same for all.



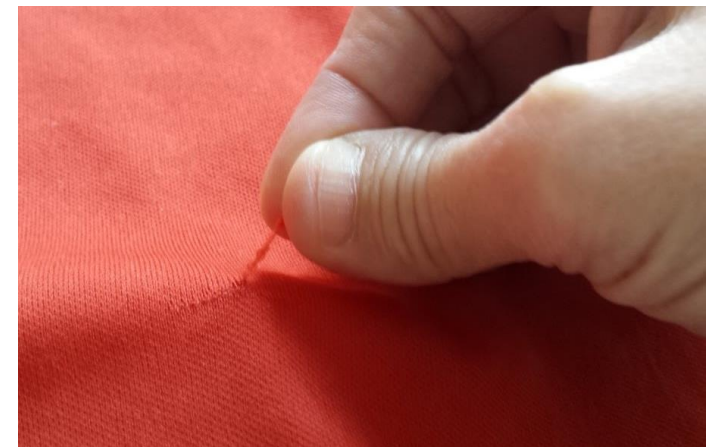
EQUALITY



EQUITY

Core Concept: Intersectionality

- First raised by Kimberl ee Crenshaw in 1989 and 1991
- Everyone is more complex than just having one identity:
 - woman AND white AND privileged BUT not well off
 - man AND non-white AND well-educated AND living with anxiety
 - gender diverse AND white AND well-educated AND living with disability
- Similarly, our relationships of power and within structural systems are complex
- These identifiers and relationships to society intersect under different circumstances



Who am I?

- Senior Program Manager, NCCID
- Assistant Professor, College of Community and Global Health
- Adjunct Professor Sociology, University of Winnipeg
- Past advisor on gender and health: PAHO & WHO
- A white woman in a colonized country
- Privileges from status and education
- Not a full professor
- First generation immigrant
- Devoted to family, but also independent

Who are You?



<http://thatlittleworld.blogspot.com/2011/09/tutorial-adding-fringe-to-woven-wrap-or.html>

WHICH DIMENSION(S) OF GENDER ARE RELEVANT?



GENDER IDENTITY

How an individual self-identifies, including how they behave, express their gender, and are perceived by other people



GENDER RELATIONS

How individuals interact with and are treated by other people based on their perceived and/or expressed gender identity



GENDER ROLES

Social expectations and norms typically associated with a given gender



INSTITUTIONALIZED GENDER

The way power, resources, and opportunities are distributed in society based on gender



SGBA+ allows us to link the **incidence** of diseases, to **the pain** women and men feel, to **how it is diagnosed** with radiography, to how women's and men's pain and disease are **perceived by physicians (and which ones)**, and to **why women's or men's responsibilities** may prevent them from taking advantage of their position on a **wait list** for surgery

So, how do we do SGBA?

SGBA+

A is for analysis

It's a process of reflection, evidence gathering and analysis:

- Does the population or sample represent the experiences of diverse groups affected by the study issue?
- Does the sampling approach reinforce traditional notions of commonly shared experiences?
- What can be done to help ensure participation meets recruits' needs (e.g., access to internet, shift work)?
- Does the data collection strategy provide opportunity for expression of diverse experiences and perspectives?
- Based on the results, are there implications for diverse groups of men, women, non-binary persons, and the relationships among them?
- Do power and inequality contribute to the findings? If so, how?



Sex- and Gender-Based Analysis (SGBA)
A TOOLKIT FOR NUTRITION PROGRAMS



TOOL 3: Key areas of inquiry to include in SGBA¹¹

**HOUSEHOLD (PRIVATE)
COMMUNITY (PUBLIC)**

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SERVICE PROVIDERS/POLICY INFLUENCERS

GENDERED DIVISION OF LABOUR	SOCIAL NORMS AND RELATIONS	ENVIRONMENT	PARTICIPATION & REPRESENTATION
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PRODUCT & SERVICE QUALITY (PROVISION)

Do the health and nutrition services take in consideration the specific gendered needs of:

- Women
- Men
- Boys
- Girls

Gender considerations could include:

- Hours of operation
- Gender of providers
- Equity in wait times
- Privacy screens
- Burden of caring for family
- Cost

Does the current education system provide girls and boys with gender-sensitive health and nutrition information?

PRODUCT & SERVICE CONSUMPTION

Are there **issues that disproportionately affect the consumption of health and nutrition services and products** for women and girls vs. men and boys? For adolescent girls and boys vs. older women and men?

- Lack of demand for product or services due to stigma
- Difficult access due to remoteness or safety concerns
- Lack of accessible information
- Negative experiences at point of delivery
- Inadequate water, sanitation and hygiene (WASH) facilities
- Need for spousal and/or parental consent

Do any of the above issues affect girls' participation in education?

Are there other issues related to schooling which are differentially experienced by girls and boys?

PRODUCT & SERVICE DISTRIBUTION

What factors negatively influence the distribution of nutrition and health services and products?

- Language
- Infrastructure
- Transportation
- Remote location
- Etc.

Are there certain groups of people who are not currently reached by existing health and nutrition services? Who are they?

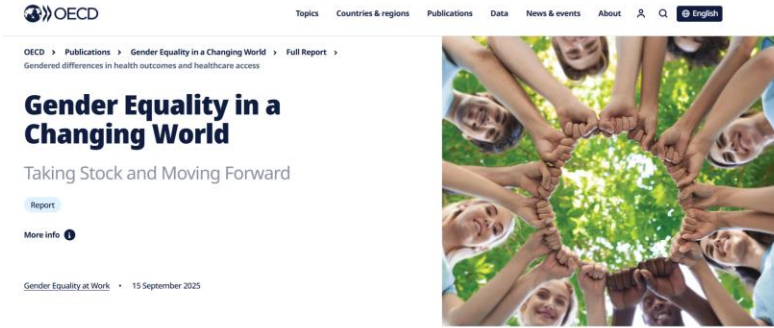
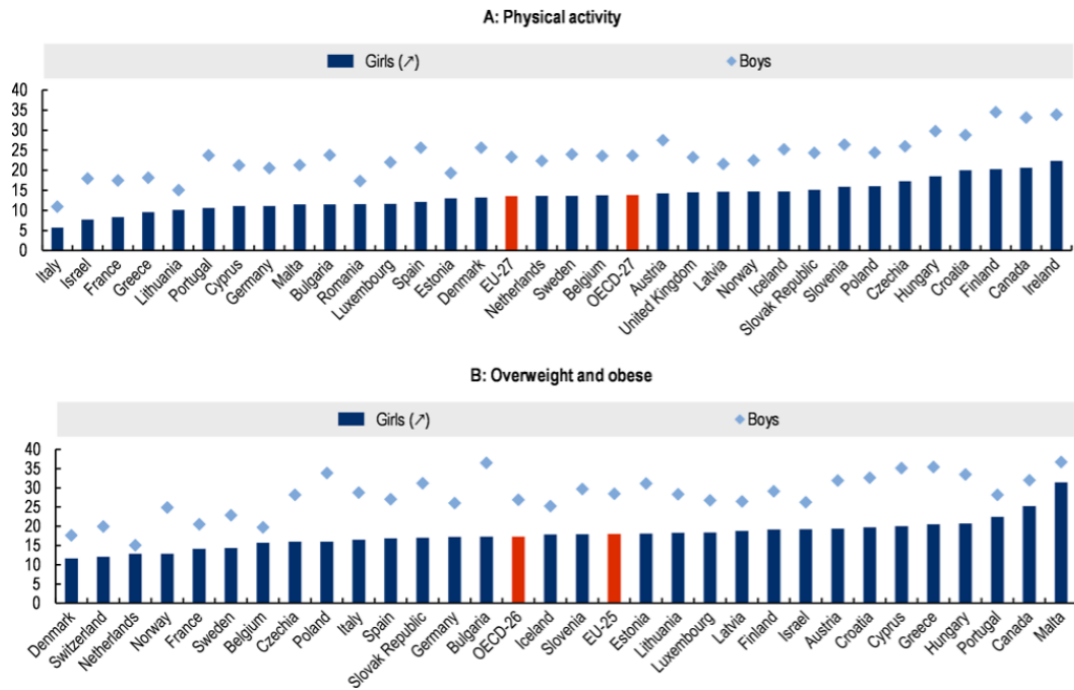
What nutrition and health services and products are distributed through education platforms? Are girls and boys able to equitably benefit from these interventions?

Are there other platforms which could be used to reach women, men, adolescent girls and boys with health and nutrition services and products?

¹¹ Based on blend o

How do we do SGBA?

Share (%) of children aged 11-, 13-, and 15-years-old being physically active for a total of at least 60 minutes every day for the last 7 days (Panel A) and who are classified as overweight or obese (Panel B), by gender, 2021-22



Box 7.2. Gender equality in future sports career expectations

On average, across 22 EU and OECD countries,¹ less than percentage of girls aged 15 years state that they expect to be athletes and sports players (ISCO-08 code 3 421) by age 30 years (OECD, 2024[19]), compared to almost 4% of boys. Several explanations contribute to this gender gap, including:

- **Gender norms:** Sports are traditionally associated with “masculine” traits – such as strength, resilience, speed and competitiveness – and women and girls who engage in sports are often perceived as more masculine (EIGE, 2017[20]; Midgley et al., 2021[21]). As a result, it is not surprising that boys aged 8-18 years are four times more likely to participate in organised youth sport than girls (Emmonds et al., 2021[22]), and lower sports participation among girls and women also naturally translates into lower career expectations in sport.
- **Poorer media coverage:** Sportswomen receive less media coverage than sportsmen, and when they do, it is often about their appearance as opposed to their performance (Fink, 2015[23]; EIGE, 2017[20]; Midgley et al., 2021[21]). Since career expectations are influenced by media (Chambers et al., 2018[24]), lower visibility of women athletes translates into fewer girls seeing themselves as sportswomen.
- **Lack of women role models, coaches and officials:** Sports, including coaching and officiating, are dominated by men (EIGE, 2017[20]). A lack of women coaches and role models may affect girls’ interest in sports and the development of girls as athletes, especially at crucial stages such as puberty. Indeed, evidence shows that women are more motivated by “same-gender and sport-matched” role models (Midgley et al., 2021[21]).
- **Underinvestment in women’s sports:** Long-standing inequities in public and private funding for women’s sports contribute to women’s underrepresentation. Women, for example, find it “difficult to access specialised equipment” and struggle to obtain “optimal times on hockey rinks, basketball courts, or golf courses” (Midgley et al., 2021[21]). In a recent survey in the United Kingdom across 28 different sports, 99 out of 143 elite sportswomen responded that most of the equipment they use is not specifically designed for women (BBC, 2024[25]).
- **Underrepresentation of women as decision-makers:** In 2024 in the EU-27, in the national sports federations of the top ten most funded Olympic sports, women accounted for only 24% of members (EIGE, 2024[26]). Similarly, at the political level, women account for only 31% of ministers responsible for sports in their portfolios (EIGE, 2024[27]).
- **Fewer professional opportunities and lower compensation:** For much of sports history – and in some cases until quite recently – women were unable to compete in certain sports at certain events. For example, despite competing internationally in ski jumping events since the 1990s, women were excluded from the Olympic sport until 2014 (Encyclopaedia Britannica, 2025[28]). Pole vault was also not on the women’s programme of the Olympics until 2000 (Encyclopaedia Britannica, 2025[29]), despite being a competitive event at the Games since 1896. Some countries also

SGBA+ involves the following steps:

1. **Critically examining** all research, data, information and experience relevant to the research for consideration (or omission) of sex, gender and intersectional factors, such as age, ethnicity, region or income.
2. **Describing the differential effects** for sub-populations of biological, social, cultural and economic factors that affect their well-being.
3. **Generating ideas** after the differential effects are identified (or predicted), so that responses, plans and policies can be tailored.
4. **Continuing to survey** the sex and gendered determinants and processes that are experienced by women, men and other expressions of sexual and gender minority and how they affect well-being and health for individuals and for populations.



SGBA+, Intersectional Research Requires Mixed Methods

- What is the issue?
- Why is it a women's issue?
- Which women?

The individual, families, local society, systems and structures.

Quantitative



Who, where, what

Qualitative



How, why

Housing
Food security
Resource extraction
Violence
Health care reform
Poverty
First Nations health rights
Bill C-31
Maternal health
Disasters
Water
Rural health care
Mental wellness
Caregiving

By early November

We have progressed from data collection to data analysis.



A Methodology to Analyse the Intersections of Social Inequalities in Health

Gita Sen, Aditi Iyer & Chandan Mukherjee

Pages 397-415 | Published online: 22 Jul 2009

[Download citation](#) <https://doi.org/10.1080/19452820903048894>

Full Article

Figures & data

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Abstract

An important issue for health policy and planning is the way in which multiple sources of disadvantage, such as class, gender, caste, race, ethnicity, and so forth, work together to influence health. Although 'intersectionality' is a topic for which there is growing interest and evidence, several questions as yet

Contents lists available at [ScienceDirect](#)

Social Science & Medicine

journal homepage: www.elsevier.com/locate/socscimed

Incorporating intersectionality theory into population health research methodology: Challenges and the potential to advance health equity

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ABSTRACT

Intersectionality theory, developed to address the non-additivity of effects of sex/gender and race/ethnicity but extendable to other domains, allows for the potential to study health and disease at different intersections of identity, social position, processes of oppression or privilege, and policies or institutional practices. Intersectionality has the potential to enrich population health research through improved validity and greater attention to both heterogeneity of effects and causal processes producing health inequalities. Moreover, intersectional population health research may serve to both test and generate new theories. Nevertheless, its implementation within health research to date has been pri-



Translating the theory of intersectionality into quantitative and mixed methods for empirical gender transformative research on health

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^a Department of Psychiatry and Biobehavioral Sciences, Semel Institute for Neuroscience and Human Behavior, University of California, Los Angeles, CA, USA; ^b Department of Health Policy and Management, Fielding School of Public Health, University of California, Los Angeles, CA, USA

ABSTRACT

Intersectionality theory has been used primarily in legal research to provide a framework for understanding the experiences of populations situated within multiple systems of oppression, particularly in relation to anti-discrimination law and gender-based violence. Gender transformative approaches to health seek to move beyond individual-level change and instead centre on restructuring the power relationships that create and maintain gender inequalities. Intersectionality theory is well suited for the study of gender transformation on health, but

journal homepage: <http://www.elsevier.com/locate/ssmph>

Intersectionality in quantitative research: A systematic review of its emergence and applications of theory and methods

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ARTICLE INFO

Keywords:

Intersectionality
Epidemiology
Research methods
Systematic review
Statistics

ABSTRACT

Background: Intersectionality is a theoretical framework rooted in the premise that human experience is jointly shaped by multiple social positions (e.g. race, gender), and cannot be adequately understood by considering social positions independently. Used widely in qualitative studies, its uptake in quantitative research has been more recent.

Objectives: To characterize quantitative research applications of intersectionality from 1989 to mid-2020, to evaluate basic integration of theoretical frameworks, and to identify innovative methods that could be applied to health research.

Methods: Adhering to PRISMA guidelines, we conducted a systematic review of peer-reviewed articles indexed within Scopus, Medline, ProQuest Political Science and Public Administration, and PsycINFO. Original English-language quantitative or mixed-methods research or methods papers that explicitly applied intersectionality theoretical frameworks were included. Experimental studies on perception/stereotyping and measures development or validation studies were excluded. We extracted data related to publication, study design, quantitative

Sex- and Gender-based Analysis

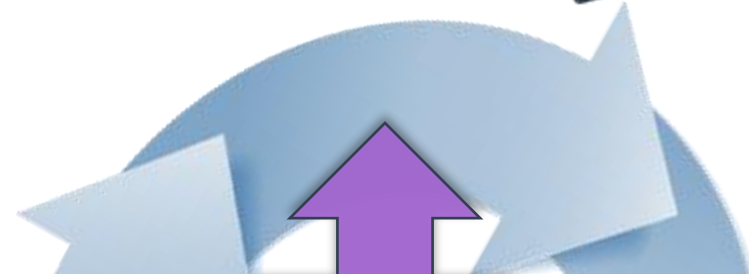


- In summary, GBA has been incorporated into data analysis if:
 - ✓ Sex disaggregated data are presented and analyzed;
 - ✓ Women, girls, men and boys are fully represented in the data by sex and age, as appropriate;
 - ✓ Data are available for individuals, not just for families;
 - ✓ The effect of gender as a determinant of health has been considered;
 - ✓ The influence of gender on other determinants has been considered;
 - ✓ Data about diversity among women/girls and men/boys are presented and analyzed;
 - ✓ Data about women/girls and men/boys who carry a greater burden of illness or whose health may be more vulnerable are presented and analyzed.

checklist
of
concepts of sex,
equity into
equity

- The application of SGB inclusive policies, appropriate cost-effective services, science

	ASSESSMENT	ANALYSIS	INPUT	OUTPUT	OUTCOMES
HEALTH SYSTEM	Identify Evidence Base and Gender Context in: <ul style="list-style-type: none"> » Access to assets » Knowledge, beliefs and perceptions » Practices, roles, participation » Legal rights and status 	Analyze the impact of gender constraints and opportunities on program objectives	Gender Integration in Program Design and Implementation Activities are designed to: <ul style="list-style-type: none"> » reduce/overcome gender-based constraints » increase gender equality 	Monitoring, Evaluation and Learning	Changes in Behavior
INDIVIDUAL	<ul style="list-style-type: none"> » Men less likely to be educated about RMNCH due to gender roles » RMNCH perceived as a woman's domain » Having children as a defining character of womanhood or manhood 	<ul style="list-style-type: none"> » Men may hinder RMNCH prevention and treatment practices » Men do not participate in RMNCH » Prevention of early marriage and pregnancy is inhibited 	<ul style="list-style-type: none"> » Educating and engaging men (with women) about RMNCH at all entry points » Adolescent reproductive life skills education that addresses gender norms that contribute to early marriage/pregnancy 	<ul style="list-style-type: none"> » Sex-disaggregated data where relevant » Gender-based constraints are reduced: <ul style="list-style-type: none"> • Number of countries where the program supported a gender analysis • Number of districts with a gender strategy • Number of people who have completed gender norms changing activities • Percentage of women allowed a companion at birth • Percentage of women who experienced disrespectful care or abuse during their most recent delivery 	<ul style="list-style-type: none"> » Men and women identify equitable responsibility for RMNCH » Equal education about RMNCH in men and women » Increased use of FP
HOUSEHOLD	<ul style="list-style-type: none"> » Women lack decision-making power to access or utilize services » Women's lack of control over resources » Gender-based mistreatment—GBV, heavy household work burden, less food distribution » Women as caretakers and men not 	<ul style="list-style-type: none"> » Women are not able to access RMNCH services » Women are not able to pay for RMNCH services » Gender-based mistreatment and heavy workload contributes to poor health in women » Men are less capable of facilitating child health care 	<ul style="list-style-type: none"> » Promoting gender equality through social and behavior change communication to facilitate healthy practices and uptake of services » Educating men and families about effects of gender-based mistreatment and violence on maternal and child health outcomes » Offering parenting courses for mothers and fathers that promote positive fatherhood, joint birth planning, and delaying and spacing pregnancy 		<ul style="list-style-type: none"> » Adult and adolescent men and women freely access services » Reduced gender-based mistreatment and violence » Men's participation in fatherhood and caregiving



WHICH DIMENSION(S) OF GENDER ARE RELEVANT?



GENDER IDENTITY

How an individual self-identifies, including how they behave, express their gender, and are perceived by other people



GENDER RELATIONS

How individuals interact with and are treated by other people based on their perceived and/or expressed gender identity



GENDER ROLES

Social expectations and norms typically associated with a given gender



INSTITUTIONALIZED GENDER

The way power, resources, and opportunities are distributed in society based on gender

WHICH GENDER-RELATED VARIABLES ARE RELEVANT?

- Stress
- Personality traits
- Anxiety and depression
- Self-reported gender identity (e.g., woman, man, non-binary)

- Marital or relationship status
- Social support (e.g., ENRICHD Social Support Inventory³)
- Family or local network (i.e., social capital)
- Experiences of gender-based violence
- Experience with healthcare providers (e.g., use of gender inclusive language)

- Household responsibilities
- Family caregiver or parental responsibilities
- Occupation or employment status
- Primary earner status
- Gender of healthcare providers

- Wage gap
- Education level
- Retirement eligibilities
- Gender inequality (e.g., Gender Inequality Index^{4*})

*Note that this instrument uses only a binary definition of sex.

An Example from our Research Team



Manitoba HIV Program Report 2018-2021

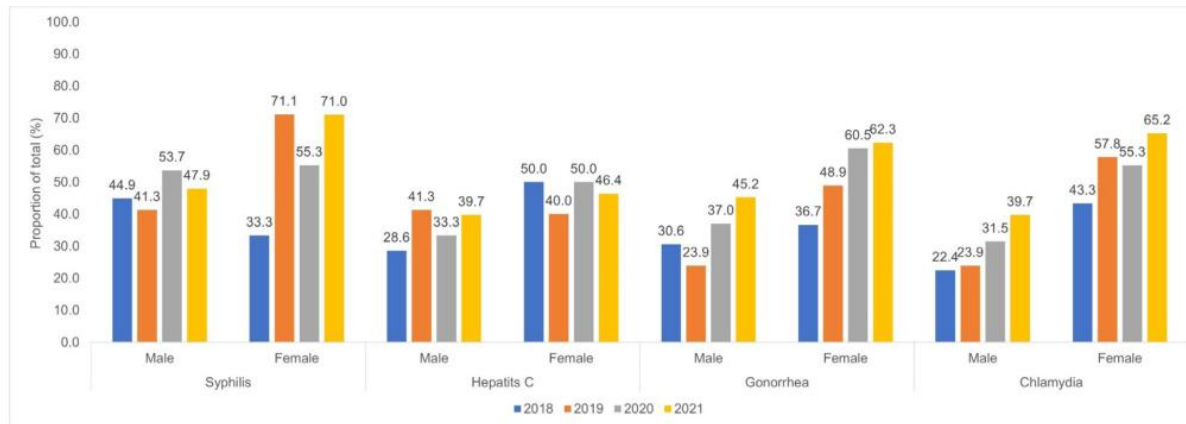
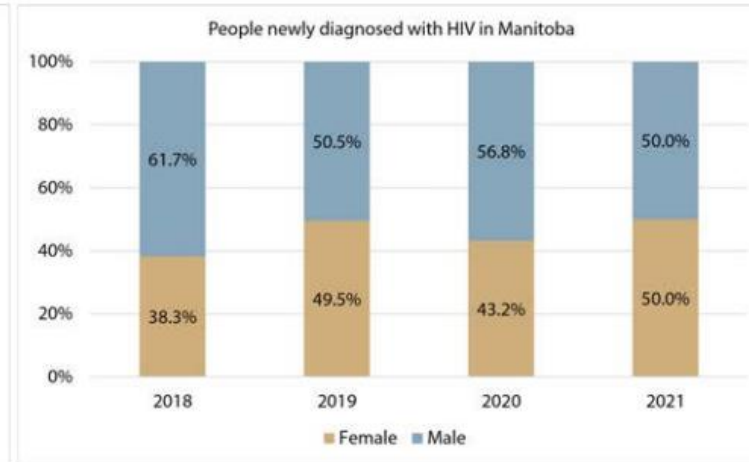
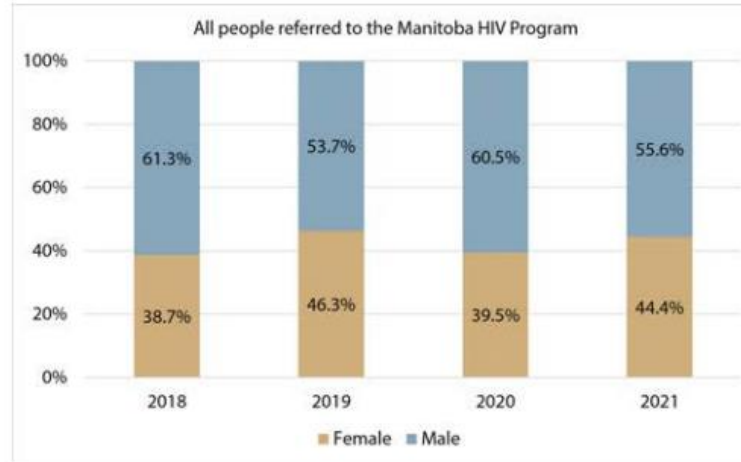


Figure 1. Proportion of females and males with at least one any-time diagnosis of syphilis, hepatitis C, gonorrhea, or chlamydia by year of HIV diagnosis.

FRAMING THE FINDINGS

referr



Health disparities in Manitoba are shaped by structural and social determinants of health



The convergence of homelessness, mental health concerns, substance use, socio-economic factors and COVID-19 is driving a syndemic* of HIV and other sexually transmitted and blood born infections (STBBIs) in Manitoba



Indigenous Peoples in Manitoba are disproportionately affected by this syndemic due to the ongoing influences of colonization, structural racism, and intergenerational trauma

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Sex differences in houselessness, injection drug use, and mental health conditions among people newly diagnosed with HIV in Manitoba, Canada from 2018 to 2021: a retrospective cohort study

Alexander Sharp^a · Megan Sorokopud-Jones^a · Margaret Haworth-Brockman^{b,c} · Ken Kasper^{a,d,e} · Lauren MacKenzie^{a,d} · Laurie Ireland^{d,f,g} · Kathy Gawlik^e · Lucelly Lopez^h · Johanna Marcela Vanegas^h · Jared Bullard^{i,j,k} · Carl Boodman^a · Julianne Sanguins^b · Mike Payne^{d,f} · Kimberly Templeton^d · Yoav Keynan^{a,b,c,l} · Zulma Vanessa Rueda^{h,j} [Show less](#)

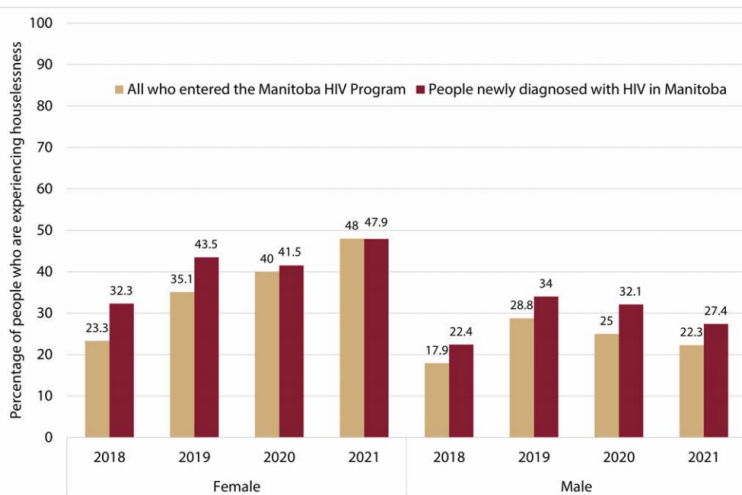
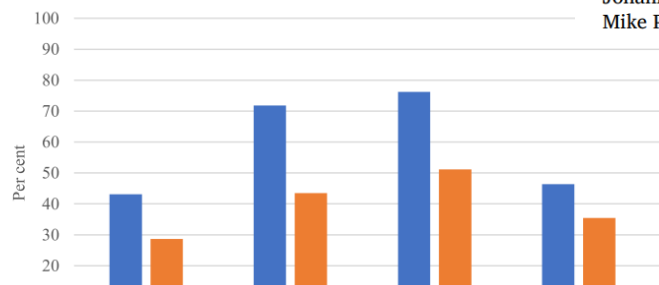


Figure 6. Percentage of people newly diagnosed and referred to the Manitoba HIV Program who reported experiencing houselessness by sex assigned at birth, 2018-2021

15



Added value of this study

Our research was co-designed and co-developed with people living with HIV, HIV clinicians and frontline workers, and HIV and public health program managers and administrators with equity, sex and gender-based and intersectional lenses. This study describes a unique North American population newly diagnosed with HIV with growing incident rates of HIV and lower proportions of undetectable viral load. Nearly 50% of this population were female. A significant proportion of females and males newly diagnosed with HIV have at least one or more intersections between houselessness, injection drug use, and mental health. While many individuals in the cohort started antiretroviral treatment (81.2%), only 64.9% achieved an undetectable viral load (61.1% among females and 67.9% among males, and around 60% among people experiencing houselessness, PWID, and people who use methamphetamine).



Sexually transmitted and blood-borne infections by sex, methamphetamine use, and houselessness before, at, and after HIV diagnosis in Manitoba, Canada

Megan Sorokopud-Jones¹, Alexander Sharp¹, Margaret Haworth-Brockman^{2,3}, Ken Kasper^{1,4,5}, Lauren MacKenzie^{1,4}, Laurie Ireland^{4,6,7}, Kathy Gawlik⁵, Lucelly Lopez⁸, Johanna Marcela Vanegas⁸, Jared Bullard^{9,10,11}, Carl Boodman¹, Julianne Sanguins², Mike Payne^{4,6}, Kimberly Templeton⁴, Yoav Keynan^{1,2,3,9,#}, Zulma Vanessa Rueda^{8,9,#,*}

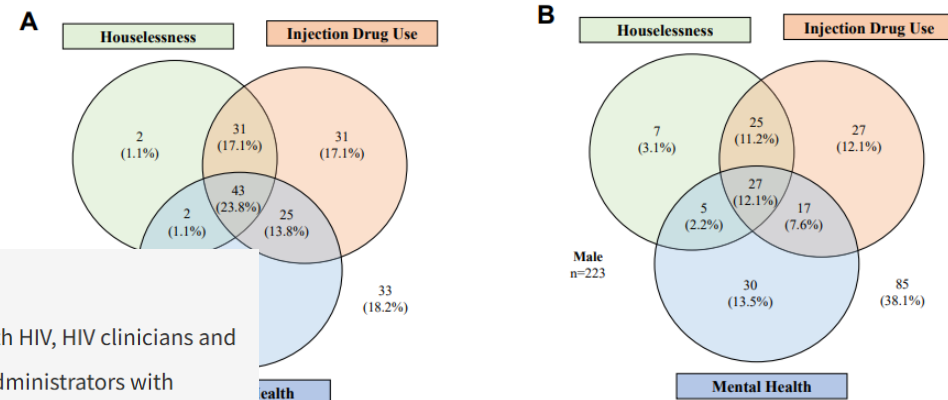


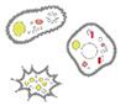
Figure 7. Sexually transmitted and blood-borne infections by sex, methamphetamine use, and reported mental health condition among (A) females and (B) males newly diagnosed with HIV in Manitoba, Canada from 2018 to 2021. Females have a considerable vulnerability, 81.8% (148/181) of females and 61.9% (138/223) of males have at least one or more intersections between houselessness, injection drug use, and mental health.

Sex and Gender Training Modules

These interactive modules are designed to help researchers and peer reviewers account for and appropriately assess the integration of sex and gender across multiple areas of health research. There are three different courses to choose from. Please select and complete the module most relevant to your research area.



COURSE 1: SEX AND GENDER IN BIOMEDICAL RESEARCH



This module is intended for those conducting basic science research. Complete this module if your research involves experiments with cells, tissues, animals or other biological samples.

[Start Now >>](#)

COURSE 2: SEX AND GENDER IN PRIMARY DATA COLLECTION WITH HUMAN PARTICIPANTS



This module is intended for those conducting clinical research. Complete this module if your research collects quantitative or qualitative primary data from human participants.

[Start Now >>](#)

COURSE 3: SEX AND GENDER IN THE ANALYSIS OF SECONDARY DATA FROM HUMAN PARTICIPANTS

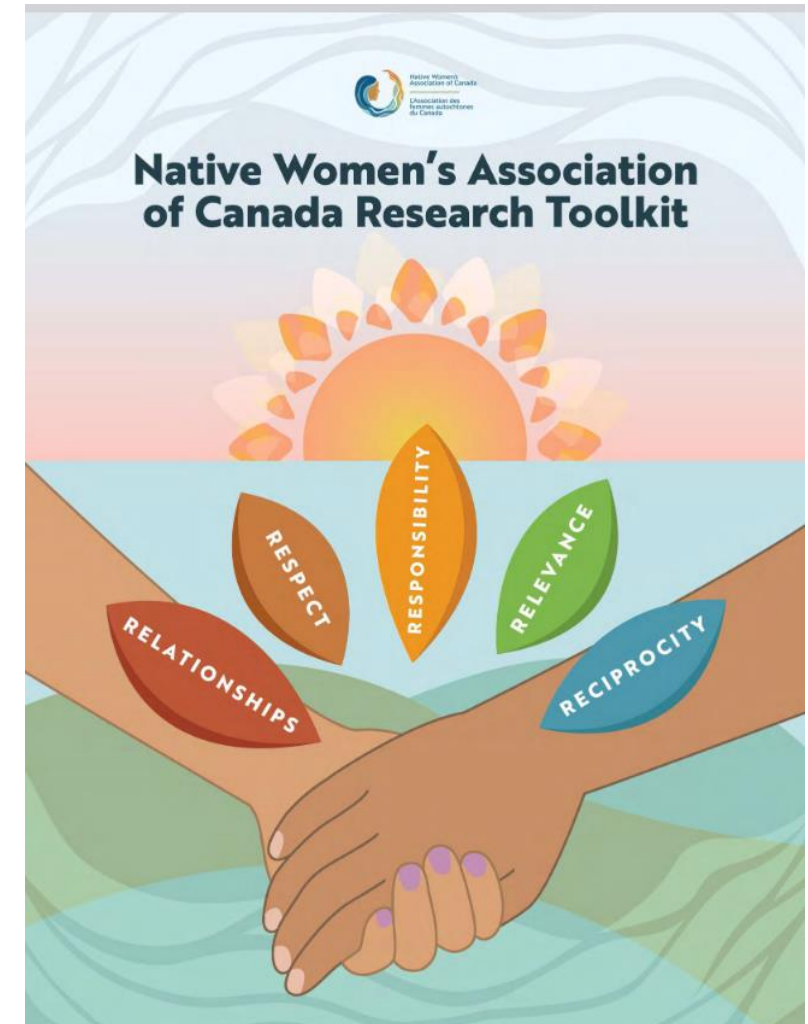


This module is intended for those conducting secondary data analyses. Complete this module if your research involves the biostatistical analysis of existing datasets with human participants.

[Start Now >>](#)

CRGBA is comprised of the following five key concepts:

1. DISTINCTIONS-BASED
2. INTERSECTIONAL
3. GENDER-DIVERSE
4. INDIGENOUS KNOWLEDGE
5. TRAUMA INFORMED



<https://nwac.ca/academics-policy/research-and-publications/culturally-relevant-gender-based-analysis/>

A Basic Checklist

SGBA+

A is for analysis

- ✓ Start with sex
- ✓ Look for gender, diversity – other literature & reports, including qualitative research
- ✓ Hear from the community what is important in their lives – power, relationships, agency, structural harms
- ✓ Think about equity and desired outcomes

It's all about context and it is not always about differences; but we won't know if we don't look

Polling Question 3

Which of the following statements concerning sex/gender considerations in a research study involving humans is correct?

Choose the best answer.

- A) Women and men may have different interests and availability to participate in research studies
- B) It is scientifically defensible to exclude women from Phase II drug trials due to variability in female estrus cycles.
- C) The possibility of gender bias does not apply to sex-related variables such as weight and height when participants are self-reporting
- D) There is no need for gender considerations to be included in the information shared with the public to improve body image and reduce eating disorders in adolescent youths

Workshop Topics

- Working with data – gender by proxy
 - Presenting data
- Reading papers for sex and gender
- Writing with SGBA+ in mind

Thank you
Questions?

