

CHAPTER 7

Sex, Gender, and the Social Determinants of Health

CWHHA ATLAS ON THE EPIDEMIOLOGY,
DIAGNOSIS AND MANAGEMENT OF
CARDIOVASCULAR DISEASES IN WOMEN



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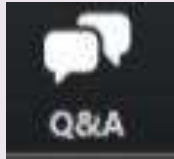
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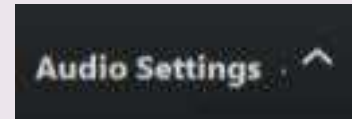
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WELCOME & HOUSEKEEPING



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Polling Question: Who is joining us today?



- Clinician
- Allied health
- Researcher
- Clinical Trainee
- Research trainee
- Person with Lived Experience
- Family/Friend or caregiver for someone with heart disease
- Other

DISCLOSURE STATEMENT

We do not have an affiliation (financial or otherwise) with a commercial organization that may have a direct or indirect connection to the content of this presentation.

Learning Objectives

At the end of this webinar, you will be able to:

- Review the intersectional nature and relationship of sociocultural determinants of health
- Describe sex and gender factors that influence awareness, access to care, and health outcomes in cardiovascular health and disease
- Identify gaps in cardiovascular care that are unique to and/or more common in women
- Understand the need for action and guidelines



Canadian Women's Heart Health Alliance (CWHHA)

LAUNCHED IN 2018

Nearly 200 members!



Mission: Disseminate education and best practices re: Women's cardiovascular (CV) health among **healthcare providers and women with lived experience.**



Goal: Eliminate knowledge gaps in specific CV issues and develop new practice considerations in care for women, thereby improving the health of Canadian women.



CANADIAN WOMEN'S
HEART HEALTH CENTRE

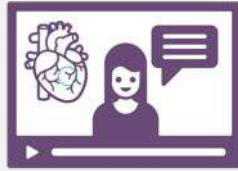
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CWHHA Project Themes



Advocacy



Training and
Education



Research and
Knowledge
Generation



Knowledge
Translation and
Mobilization



Health Systems
and Policy



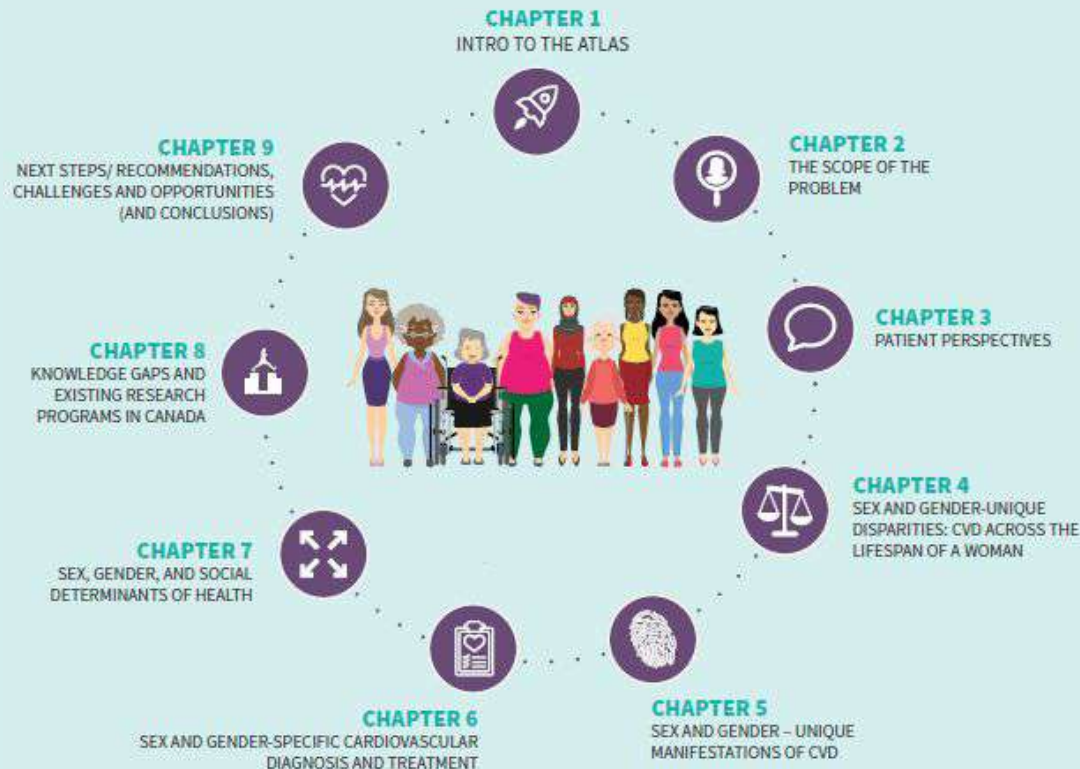
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CANADIAN WOMEN'S HEART HEALTH ALLIANCE **ATLAS**

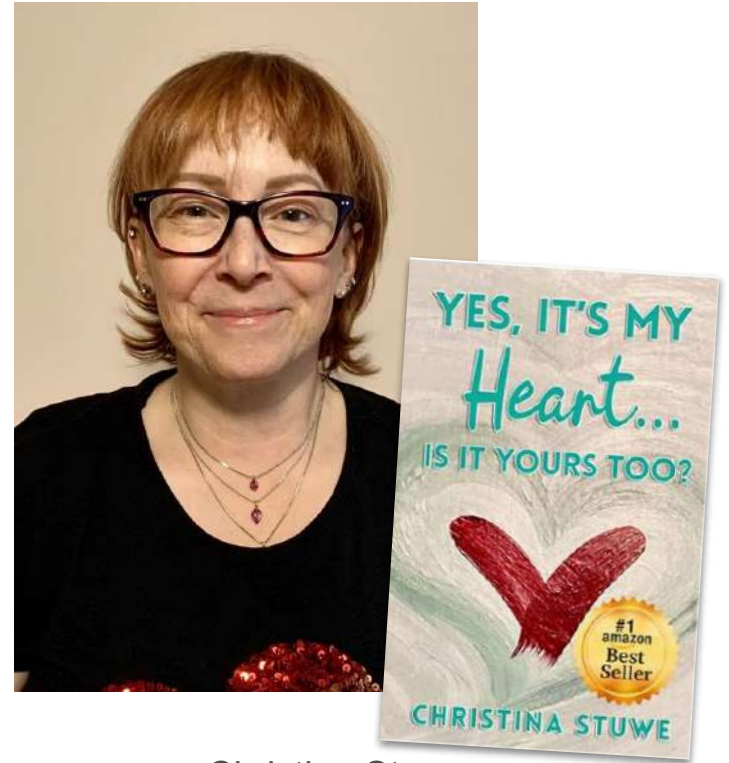
Epidemiology, Diagnosis, and Management of Cardiovascular Diseases in Women



- 9 unique “chapters”
- CJC Open
- Editor: Dr. M. Graham
- 1st: published April 2020
- Annual chapter updates
- “Living document”

Norris CM Mulvagh SL. CJC Open 2020



CHRISTINA'S STORY



Christina Stuwe
Person with Lived Experience
Calgary, AB

REVIEW | [ARTICLES IN PRESS](#)

CANADIAN WOMEN'S HEART HEALTH ALLIANCE ATLAS: EPIDEMIOLOGY, DIAGNOSIS, AND MANAGEMENT OF CARDIOVASCULAR DISEASE IN WOMEN Chapter 7: Sex, Gender, and the Social Determinants of Health

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[Open Access](#) • Published: August 03, 2023 • DOI: <https://doi.org/10.1016/j.cjco.2023.07.013>

Sex and Gender Definitions

SEX



- Biology – chromosomes at birth (female/male)
- Encompasses hormones, genes, anatomy, physiology, etc.

GENDER



- Socially influenced determination (man/woman)
- Is culturally specific and temporal



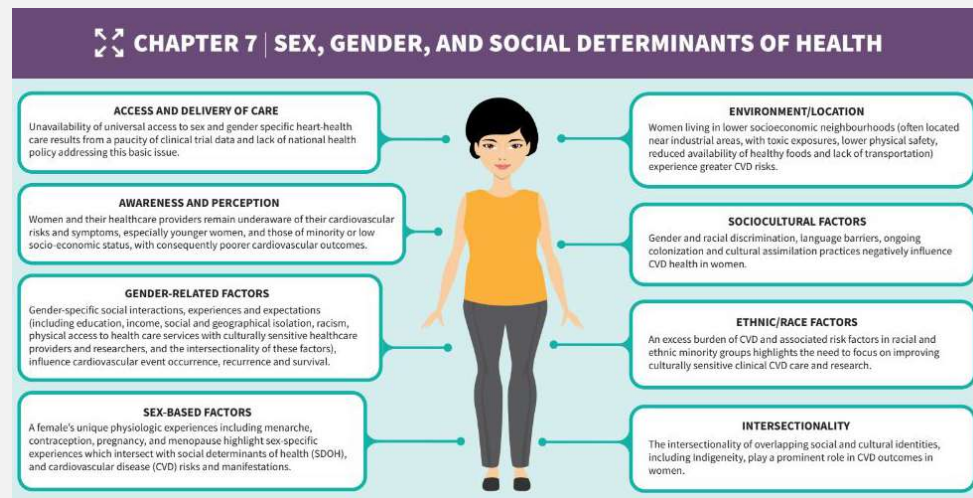
Awareness and Perception

Women and their healthcare providers remain under aware of their cardiovascular (CV) risks and symptoms, especially younger women and those of minority or low socioeconomic status (SES) with consequently poorer CV outcomes.



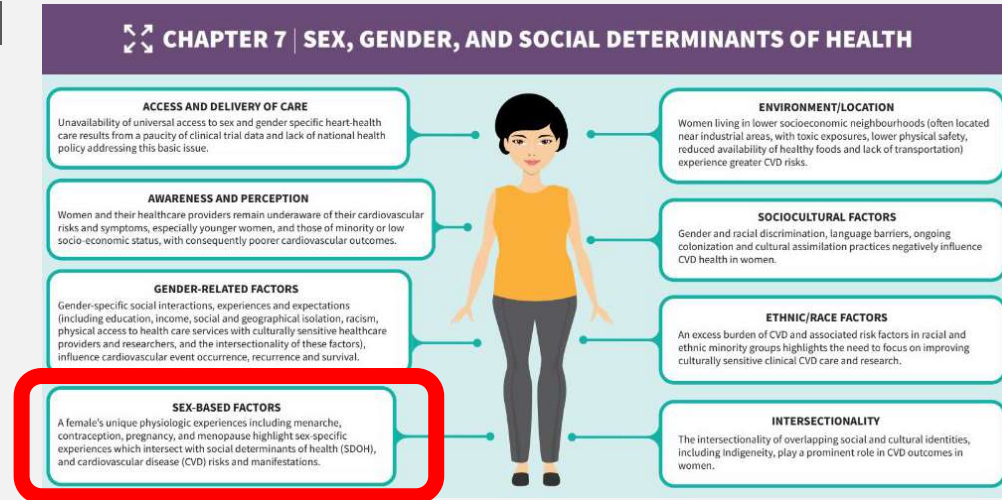
Social Determinants of Health and Gender-Related Factors

- Education
- Income
- Social and geographical isolation
- Racism
- Physical access and delivery of healthcare services
 - with culturally sensitive healthcare providers and researchers
- Intersectionality
 - Impact on CV event occurrence, recurrent and survival



Social Determinants of Health and Sex-Based Factors

- Female unique physiological experiences
- Menarche
- Contraception
- Pregnancy
- Menopause



Social Determinants of Health (SDOH): Ethnic / Race Factors

- Case: Maya: 55 year South Asian woman, accountant
- Intermittent chest burning, worse during busy tax season
- Hx: pre-DM, high cholesterol (Rx: atorvastatin), depression X 1 yr
- Family History: father - myocardial infarction at age 49
- Dx: GERD; Rx: proton pump inhibitor - minimal relief
- One day at work: chest burning, into throat, presyncope
- ER: acute inferior MI with heart block
temporary pacemaker, right coronary artery stent
aggressive risk factor management

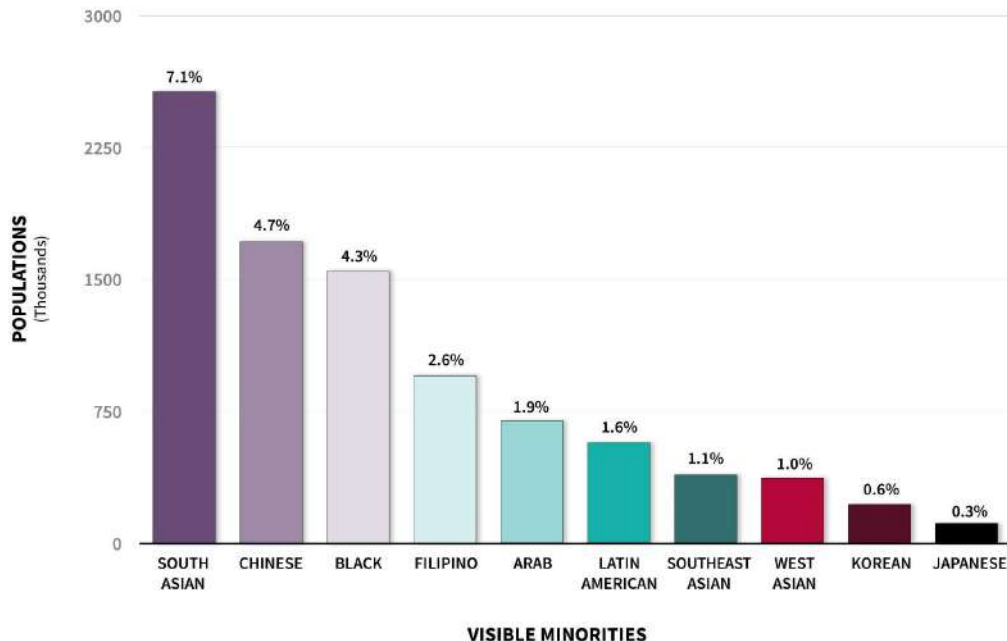


Questions:

- What symptoms suggested possible heart disease?
- What are her risk factors for heart disease?
- Why were these not addressed?

Cardiovascular Disease in Ethnic Populations

CANADA RACIALIZED GROUPS, N AND % OF POPULATION, 2021



Racialized groups comprise
26.5%
of the Canadian population

Race/Ethnicity and Cardiovascular Disease (CVD)

South Asians (SA) and Blacks:

- Increased risk of heart disease, HTN, stroke compared to Caucasians
- Type 2 diabetes (DM) more prevalent
 - SA women 3 X more likely to develop DM in pregnancy
- Myocardial infarction & stroke can occur 5-10 years earlier compared to other ethnicities
- Increased CVD hospitalization & mortality rate

East Asians:

- Less coronary disease, more heart failure
- Increased CVD risk as duration of stay in Canada increases

Ethnic groups: higher risk of non-obstructive coronary artery disease (M/INOCA)



Rana A et al.; Cardiovascular risk among South Asians living in Canada: a systematic review and meta-analysis. CMAJ Open. 2014;2:E183-191

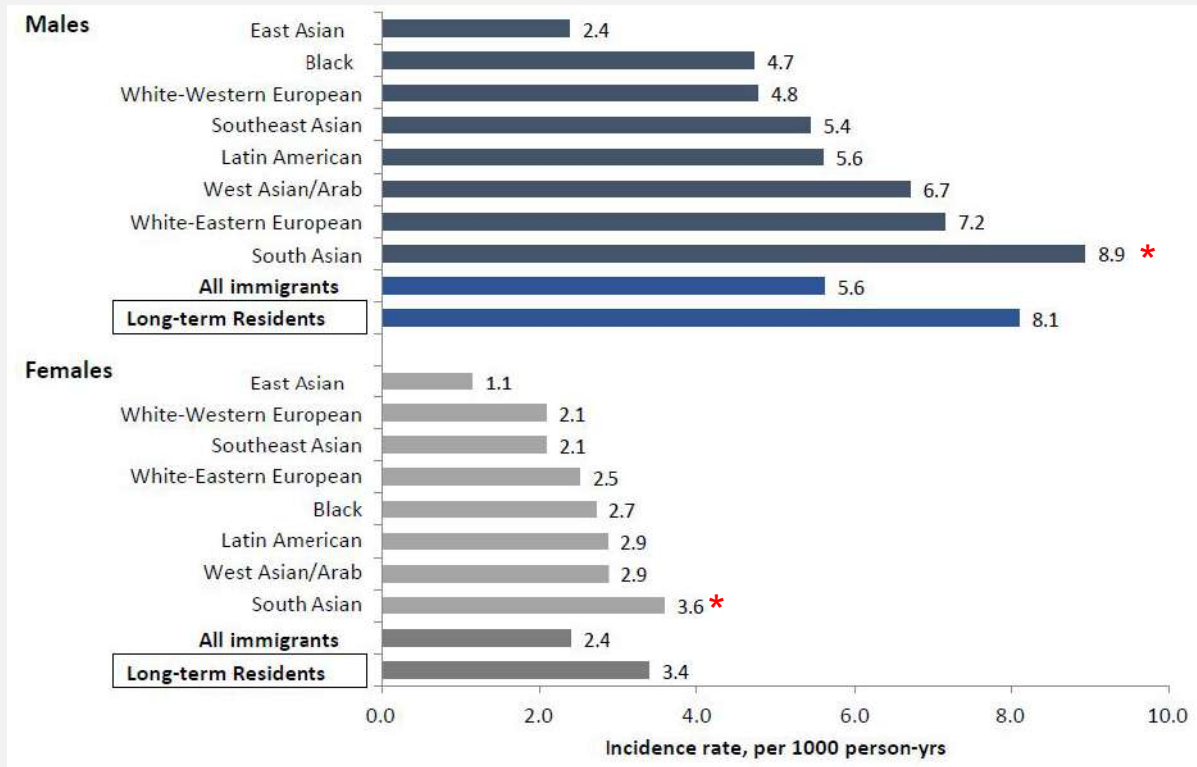
Tjepkema M et al.; Mortality inequalities of Black adults in Canada. Health Rep. 2023;34:3-16

Tu J et al. Incidence of major cardiovascular events in immigrants to Ontario, Canada: the CANHEART immigrant study

.Circulation.2015;132:1549-1559

Chiu M, et al.; Temporal trends in cardiovascular disease risk factors among white, South Asian, Chinese and black groups in Ontario, Canada, 2001 to 2012: a population-based study. BMJ Open.2015;5:e007232

Age-standardized incidence of major CV event by ethnicity, 2002-2011*



***Major cardiovascular events include:**

- myocardial infarction (MI)
- stroke
- percutaneous coronary intervention (PCI)
- coronary artery bypass grafting (CABG) surgery
- death due to ischemic heart disease or stroke

Tu, J et al., Incidence of Major Cardiovascular Events in Immigrants to Ontario, Canada, *Circulation*, 2015, doi: 10.1161/CIRCULATIONAHA.115.015345
Image: www.canheart.ca, Canadian Collaborative Research Network

Social Determinants of Health and Indigenous Women

Case: Maggie (60 years) has previously suffered a heart attack and had a triple bypass. She returned to her home community 6 months ago

- Maggie calls the clinic to book an appointment as soon as they open and gets the last appointment available that day
- The locum attending the clinic that day is, once again, a new face
- Maggie speaks Dene as her primary language and sometimes struggles with English
- In the brief time available for her to see the physician, she tries to communicate the chest pain she has been experiencing recently when walking upstairs
- The locum seems to understand Maggie is having pain from the colder air of the changing seasons and recommends an inhaler for suspected asthma



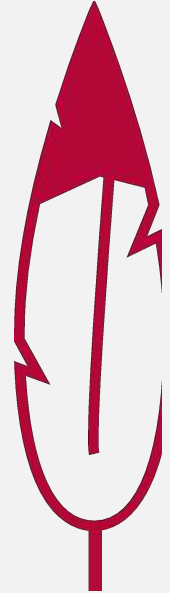
Questions:

- **Do you perceive disparities in Maggie's access to care, and in the care received?**
- **What can be done to resolve these inequities?**



Social Determinants of Health and Indigenous Women

- Jurisdictional challenges
- Variable health care coverage
- Residences and access to care
- Discrimination, racism, microaggressions, stereotyping in care
- Language and cultural differences
- Cultural connectedness
- Colonization, family structure and processes



Social Determinants of Health: Environment and Location

Case: Li (30 year old) is living in a northern, rural community

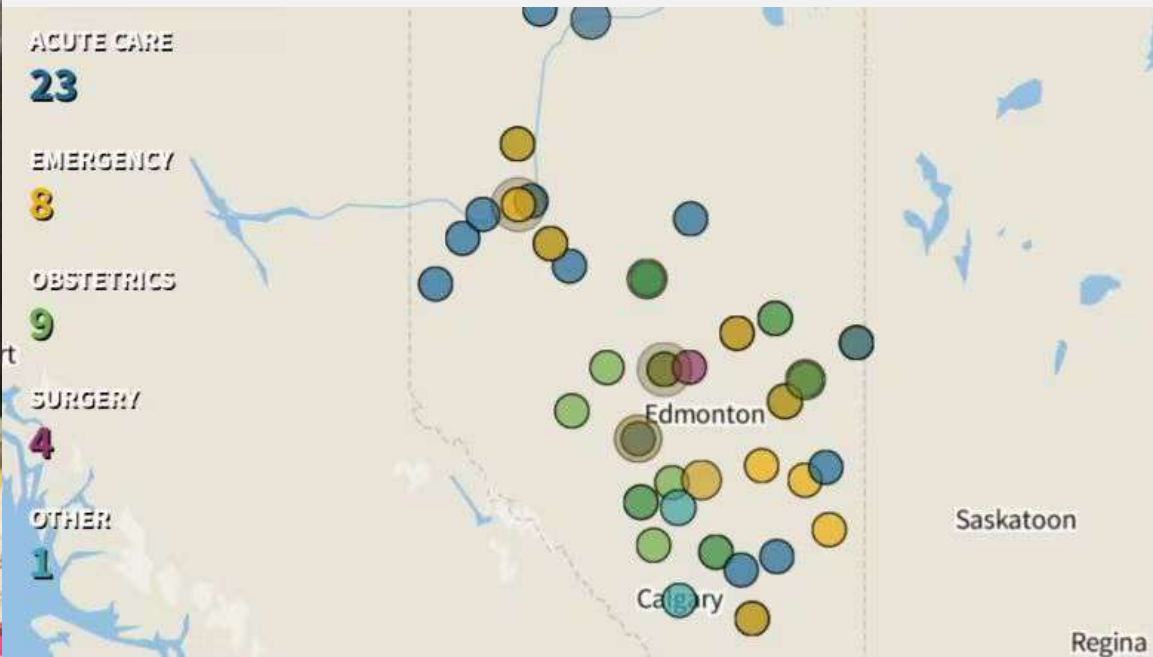
- She is 35 weeks pregnant and has early signs of preeclampsia and gestational diabetes
- There is a nursing station 20 min from her community
- The nearest hospital and obstetrics facility is at least 3.5 hours away
- The local water source is contaminated with carcinogenic hydrocarbons
- Available food stores include a small convenience store in the community and a grocery store which is a 2 hour drive

Questions:

- How is Li's ability to live a healthy lifestyle influencing her risk of heart disease?
- What can be done to resolve these inequities?



Social Determinants of Health: Environment and Location - Rural Challenges



Social Determinants of Health:

Environment and Location - Urban Challenges

Urban low income neighbourhoods

- More women
- Greater CVD after considering income differences
- More likely to face air pollution - vehicle, industrial
 - Women more reactive
- Neighbourhood safety, social cohesion and aesthetic quality concerns
 - Built environment
 - Violence, disadvantage and disorder increase women's risks
 - Food deserts
 - Difficult to access green spaces for activity



Sociocultural Factors

Case: Manpreet (41 years) experiences anxiety

- She has 3 children (3-12 years) and elderly parents to care for
- Both Manpreet and her partner work full time
- Manpreet is solely responsible for all cooking, cleaning, childcare within the home



Questions:

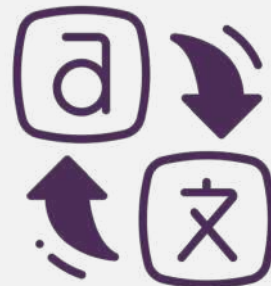
- What “unrecognized” risk factors for heart disease is Manpreet experiencing?
- How can these be addressed?



Sociocultural Factors

- Rigid gender roles
- Women emotionally responsible for household
- Marital discord, domestic violence
- Language barriers
- Discrimination, racism, microaggressions, stereotyping
- Cultural differences
- Lack of time and diversity among clinicians

Need targeted, linguistically tailored, culturally specific and sensitive health education, preventive care and treatment options



Access and Delivery of Care

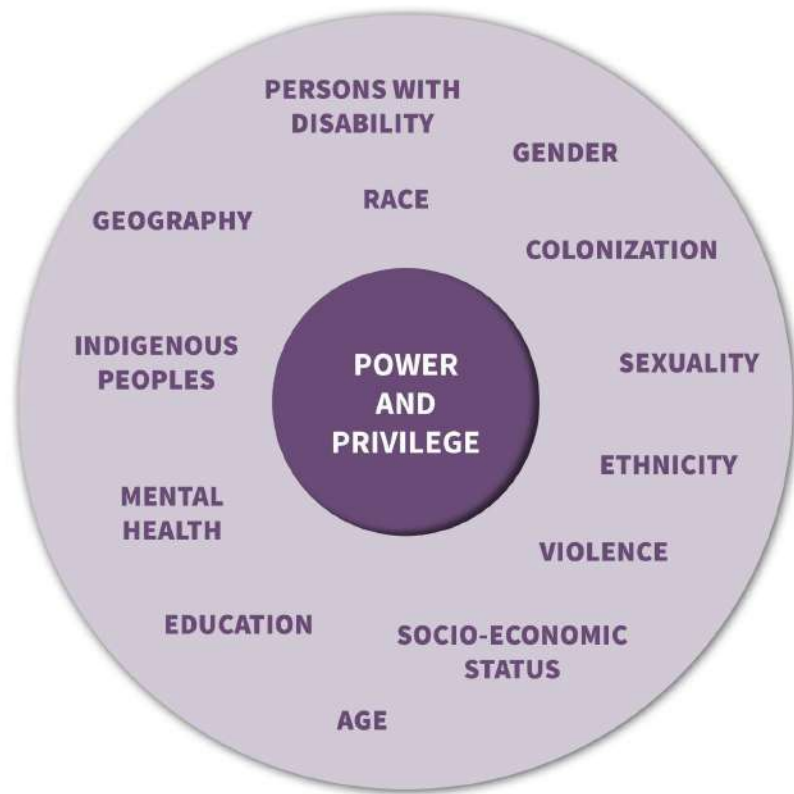
- Approachability
 - Acceptability
 - Availability
 - Accommodation
 - Appropriateness
-
- Health care settings
 - Research/clinical trials
 - Training and education

Urban vs. Rural

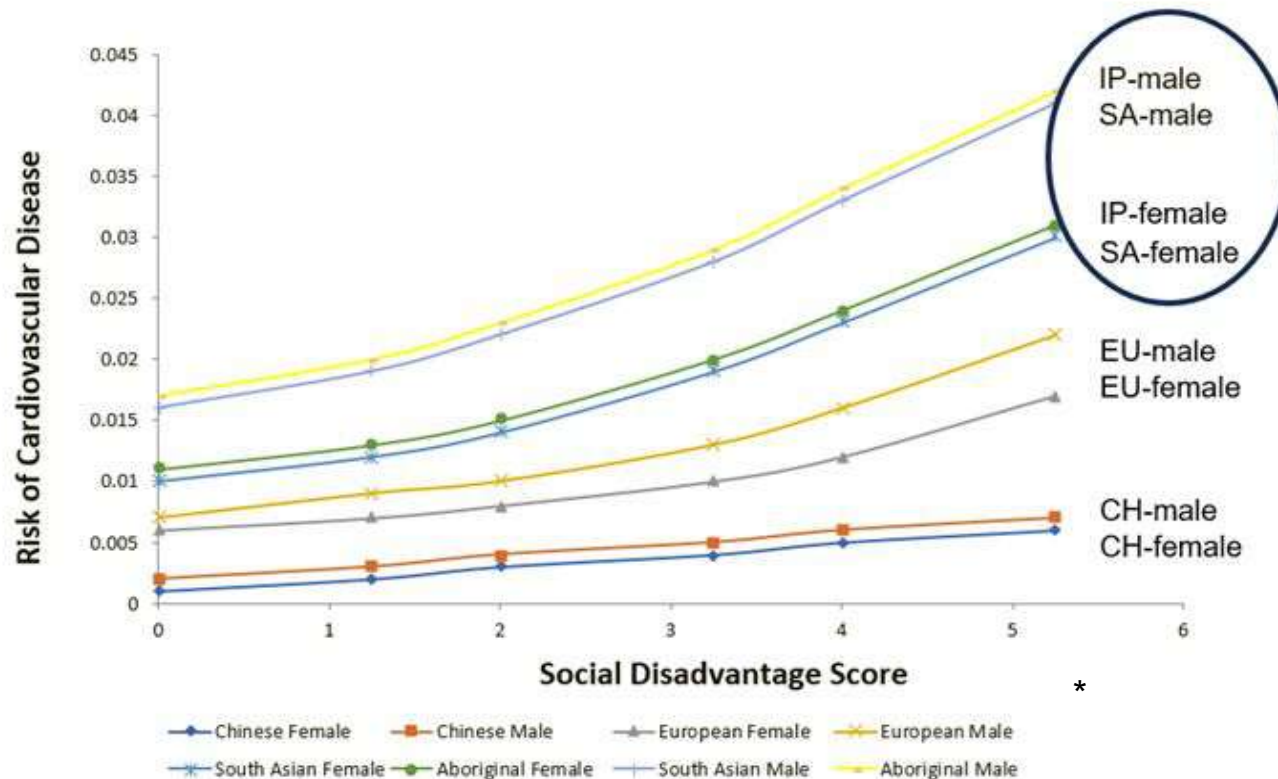


Intersectionality: In the Context of Sex, Gender and SDOH (Ch. 7)

- Crenshaw's framework
- Social & cultural identities
 - Overlap/interconnectedness
 - Advantage & disadvantage
- Under-recognized risk factors: forces “above the skin”
- Racism, colonialism, ageism, patriarchy, power, privilege
- Increase in women's CV morbidity & mortality



Risk of Cardiovascular Disease and Social Disadvantage *



IP:
Indigenous
person
SA: South
Asian
EU:
European
CH:
Chinese

*Social Disadvantage Index: employment status, income, marital status, poverty, social isolation, low education, geography

Anand S et al., Int'l J of Epidemiology, 2006

CHAPTER 7 | SEX, GENDER, AND SOCIAL DETERMINANTS OF HEALTH

ACCESS AND DELIVERY OF CARE

Unavailability of universal access to sex and gender specific heart-health care results from a paucity of clinical trial data and lack of national health policy addressing this basic issue.

AWARENESS AND PERCEPTION

Women and their healthcare providers remain underaware of their cardiovascular risks and symptoms, especially younger women, and those of minority or low socio-economic status, with consequently poorer cardiovascular outcomes.

GENDER-RELATED FACTORS

Gender-specific social interactions, experiences and expectations (including education, income, social and geographical isolation, racism, physical access to health care services with culturally sensitive healthcare providers and researchers, and the intersectionality of these factors), influence cardiovascular event occurrence, recurrence and survival.

SEX-BASED FACTORS

A female's unique physiologic experiences including menarche, contraception, pregnancy, and menopause highlight sex-specific experiences which intersect with social determinants of health (SDOH), and cardiovascular disease (CVD) risks and manifestations.

ENVIRONMENT/LOCATION

Women living in lower socioeconomic neighbourhoods (often located near industrial areas, with toxic exposures, lower physical safety, reduced availability of healthy foods and lack of transportation) experience greater CVD risks.

SOCIOCULTURAL FACTORS

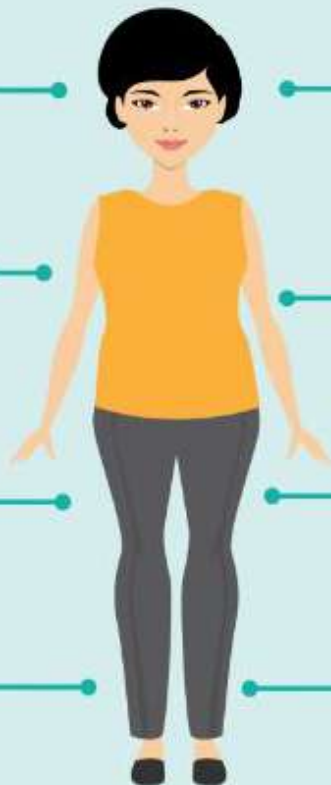
Gender and racial discrimination, language barriers, ongoing colonization and cultural assimilation practices negatively influence CVD health in women.

ETHNIC/RACE FACTORS

An excess burden of CVD and associated risk factors in racial and ethnic minority groups highlights the need to focus on improving culturally sensitive clinical CVD care and research.

INTERSECTIONALITY

The intersectionality of overlapping social and cultural identities, including Indigeneity, play a prominent role in CVD outcomes in women.



Intersectionality: in the Context of Sex, Gender and SDOH (Chapter 7)

Summary

- CVD & mortality highest in
 - Indigenous and racialized women
 - Disproportionate adverse social determinants of health

Action Items

- Develop contextually and culturally relevant **clinical & education programs**
 - Educate HCPs and marginalized women
 - Provide clinical access
- Identify sex & gender-specific CVD risk - **clinical tools**
- Mandate inclusivity in **research**
 - Sex/gender AND racialized AND Indigenous peoples
 - Support research evaluating effects of racism on health



Questions & Answers



**WE WANT TO
HEAR FROM YOU.**

Questions, Comments...



CANADIAN WOMEN'S
HEART HEALTH CENTRE

NATIONAL
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Save the Date! Chapter 8 Webinar

Knowledge Gaps and Status of Existing Research Programs in Canada

January 9, 2024
11am PT / 12pm MT /
2pm EST / 3pm AST

Visit CWHHA.ca to register





THANK YOU!



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