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Impact of sex- and gender-related factors on women's alcohol consumption

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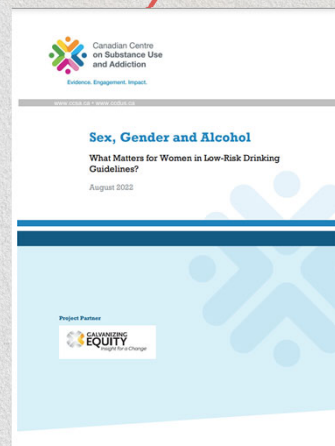
November 29, 2023

Le temps des
concordances

Introduction

We were asked by the Canadian Centre on Substance Use and Addiction to prepare a report to inform the work of the scientific committee which developed Canada's Guidance on Alcohol and Health.

We looked to identify sex/gender-related factors for alcohol use by women.



Greaves, L., Poole, N., Brabete, A. C., & Wolfson, L. (2022). *Sex, gender and alcohol. What matters for women in low risk drinking guidelines*. <https://www.ccsa.ca/sites/default/files/2022-08/CCSA-LRDG-Sex-Gender-and-Alcohol-what-matters-for-Women-in-LRDGs-en.pdf>

- ▶ Both sex related factors and gender related influences interact to determine impacts on alcohol use by women, and the consequences for women.
- ▶ In addition, these factors and influences interact with intersectional factors (such as age, race, SES, sexual orientation) and processes (such as a sexism and racism).
- ▶ We were not looking for sex differences only.

Research Approaches

- **Sex &/or Gender Differences** research focuses on comparative studies of males and females/men and women
- **Sex &/or Gender Related Factors** research focuses on mechanisms, processes and dynamics
- **Sex-Gender Interactions** research focuses on real world relationships and impacts of sex and gender
- **Intersectional analyses** that centre sex-gender interactions and measure the impact of context, processes and factors that interact with sex and gender to affect health

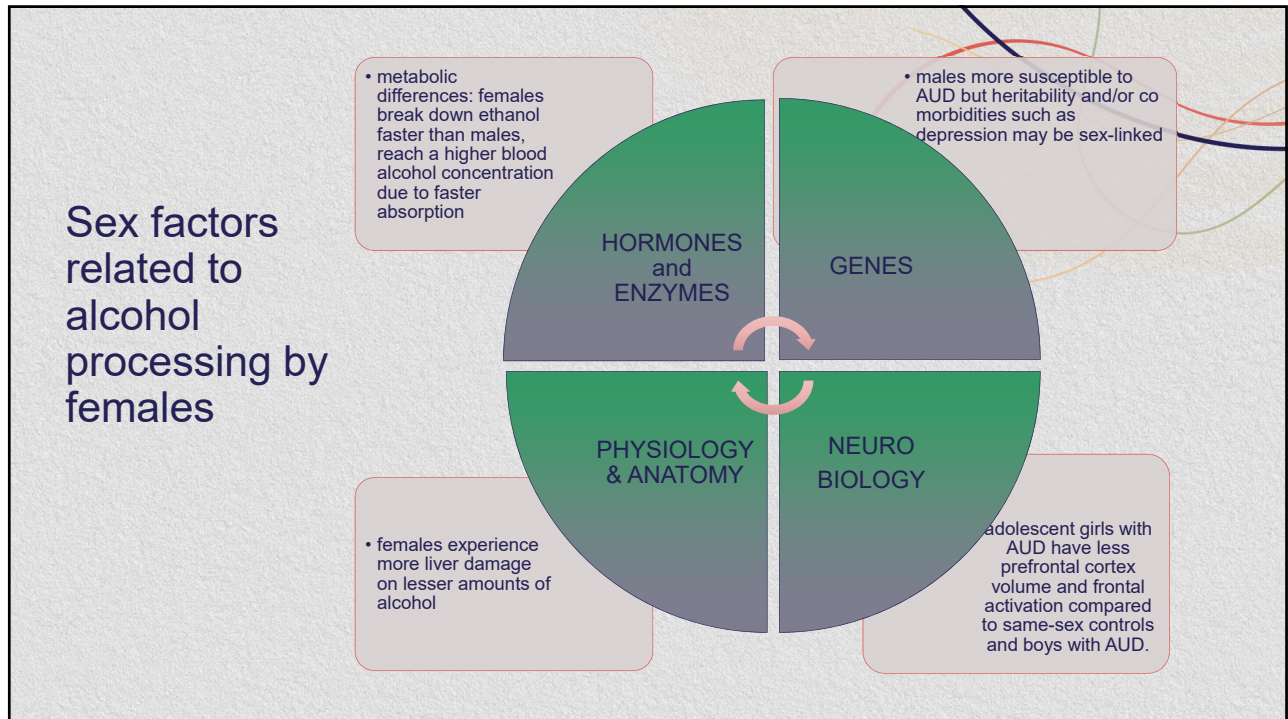
Methods

- ▶ Our literature search strategy is included in this journal article. It included a review of recent evidence that updated a large scoping review funded by the CIHR on sex, gender and 4 substances in order to collect literature related to sex, gender and alcohol published since 2018



Greaves, L., Poole, N., & Brabete, A. C. (2022). Sex, Gender, and Alcohol Use: Implications for Women and Low-Risk Drinking Guidelines. *International Journal of Environmental Research and Public Health*, 19(8), 4523. <https://www.mdpi.com/1660-4601/19/8/4523>

Sex-related Factors



Sex-related Factors

- ▶ Enzymes, genes, body weight and size, fat/water ratio, organ function and metabolism are important in processing alcohol and are affected by sex-related factors.
- ▶ Females experience faster intoxication, more risk for disease, including breast cancer, and more long-term harm, such as liver damage and injury, after ingesting lower amounts of alcohol compared to males.

There are risks of alcohol use for both men and women, even at low levels of drinking, but it is not a level playing field

Pregnancy and Delivery Outcomes

Based on several Australian reviews we looked for updates on women's health outcomes in pregnancy such as:

- Miscarriage
- Preterm delivery
- Hypertensive disorders of pregnancy
- Gestational diabetes
- Low amniotic fluid
- Placenta previa
- Placental abruption
- Stillbirth

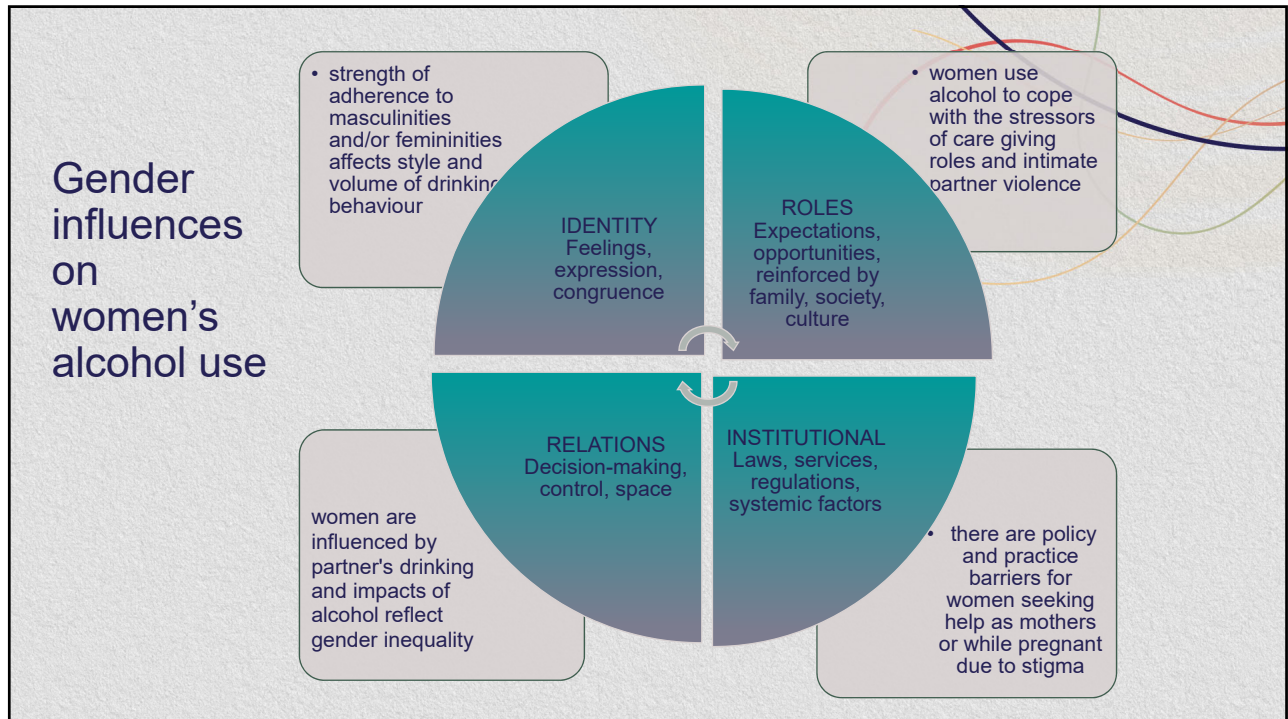
We found updates on:

- **Miscarriage** – Inconsistent findings among studies but one study found dose-dependent relationship with more than 5 drinks per week
- **Hypertensive disorders of pregnancy** — One study found increased PIGH-levels in the second and third trimesters with ≥ 8 drinks per week of alcohol in the periconception period
- **Placental abruption** – Increased odds of placental abruption with a dose responsive relationship

Sundermann, A.C., et al., *Alcohol Use in Pregnancy and Miscarriage: A Systematic Review and Meta-Analysis*. *Alcoholism: Clinical & Experimental Research*, 2019. **43**(8): p. 1606-1616.

Steane, S.E., et al., *Prenatal alcohol consumption and placental outcomes: a systematic review and meta-analysis of clinical studies*. *American journal of obstetrics and gynecology*, 2021.

Gender-related Influences



Research examples - Gender Influences

Gender norms

One review examined the evidence between conformity with gender norms and alcohol use and/or abuse in adults

- ▶ Patr6-Hern6ndez, R.M., Y. Nieto Robles, and R.M. Limi6ana-Gras, *The relationship between gender norms and alcohol consumption: A Systematic Review*. *Adicciones*, 2020. **32**(2): p. 145-158.

Another review found norms related to mothering as influential in women's health behaviour including tobacco and alcohol use during pregnancy

- ▶ Rockliffe, L., et al., *Factors influencing health behaviour change during pregnancy: a systematic review and meta-synthesis*. *Health psychology review*, 2021: p. 1-20.

Gender relations

Several of recent reviews focussed on the influence of intimate partner violence (IPV) and coercive relationships on alcohol use by girls and women, for example:

- ▶ Stubbs, A. and C. Szoek, *The Effect of Intimate Partner Violence on the Physical Health and Health-Related Behaviors of Women: A Systematic Review of the Literature*. *Trauma, violence & abuse*, 2021: p. 1524838020985541.
- ▶ Melkonian, A.J. and L.S. Ham, *The effects of alcohol intoxication on young adult women's identification of risk for sexual assault: A systematic review*. *Psychology of Addictive Behaviors*, 2018. **32**(2): p. 162-172.

Research examples - Gender Influences

Gender identity

In general, people who are in either sexual or gender minority groups have been considered to consume more alcohol than those in majority groups, however reliance on non-representative samples, and a range of other methodological limitations are drawbacks of the research.

- ▶ Hughes, T.L., et al., *Research on alcohol and other drug (AOD) use among sexual minority women: A global scoping review*. *PLoS One*, 2020. **15**(3): p. e0229869.
- ▶ Gilbert, P.A., et al., *Alcohol research with transgender populations: A systematic review and recommendations to strengthen future studies*. *Drug Alcohol Depend*, 2018. **186**: p. 138-146.

Gendered institutional impacts

One systematic review of qualitative studies involving pregnant and recently postpartum women described the barriers and facilitators that influence alcohol use in pregnancy including access to care, information and resources.

- ▶ Lyall, V., et al., *"The Problem Is that We Hear a Bit of Everything...": A Qualitative Systematic Review of Factors Associated with Alcohol Use, Reduction, and Abstinence in Pregnancy*. *International journal of environmental research and public health*, 2021. **18**(7).

Several systematic reviews focused on availability of preconception health knowledge, messages, interventions, and programming, for example:

- ▶ Cairncross, Z.F., et al., *Measurement of Preconception Health Knowledge: A Systematic Review*. *American Journal of Health Promotion*, 2019. **33**(6): p. 941-954.

Interactions and Intersections



Interactions of Sex and Gender



- ▶ Both sex and gender interact to determine impacts on alcohol use by women, and the consequences for women.
- ▶ These processes result in internalized stigma for women and (re)trauma, often resulting in vicious circles of alcohol use and negative consequences.
- ▶ For example, gender based violence and alcohol use are connected - one systematic review described the negative effects of IPV on physical health outcomes for women, including worsening the symptoms of menopause, increasing the risk of diabetes, developing chronic diseases and pain, contracting sexually transmitted infections, and engaging in risk-taking behaviors including the abuse of drugs and alcohol

Intersections

Sex and gender interactions are enhanced when understood in an intersectional context, considering characteristics such as socioeconomic status, race, age, and other drug use.



<https://canfasd.ca/wp-content/uploads/publications/FASD-Prevention-Annotated-Bibliography-2022-v3.pdf>

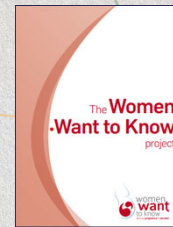
This image - of the proximal influences on women's alcohol use in pregnancy, plus the social and structural determinants affecting use and access to care - is used by the FASD Prevention Network Action Team to illustrate intersectional influences.

Summary

Messaging

It is challenging to translate research findings on health outcomes of alcohol use for women into public health messages. Here are some statements that might be considered:

- ▶ There are risks of alcohol use for both men and women, but it is not a level playing field, as alcohol affects women's bodies more negatively
- ▶ Alcohol is processed by women's bodies differently, causing more negative health effects, earlier, after lesser amounts of alcohol
- ▶ Women and girls become intoxicated faster after drinking less than men due to smaller bodies and organs, less body water, hormonal effects, and different enzyme actions that break down alcohol
- ▶ Women experience more liver injuries on lower levels of alcohol, compared to men
- ▶ Women's health is negatively affected by alcohol use, including links to a number of cancers, including breast cancer
- ▶ Drinking during pregnancy is risky. Alcohol use in pregnancy negatively affects both women's and fetal health. Alcohol use in pregnancy can increase the risk of miscarriage.
- ▶ Women's exposure to gendered experiences such as sexual assault and IPV is enhanced by alcohol use



An Australian project, designed to inform health practitioners about the importance of having discussions about alcohol, built on research with women, who indicated they wanted to practitioners to discuss the effects of alcohol (in respectful and informative ways)

Women and Alcohol

Alcohol

- Alcohol is widely used in Canada, and is deeply embedded into our society.
- Although alcoholic drinks come in various forms (e.g., in beer, wine, rum, coolers), they all contain ethanol, thus the health effects and risks are the same regardless of the type of alcoholic drink consumed.
- Alcohol is a "depressant" drug that slows down parts of your brain that affect your thinking and behaviour as well as your breathing and heart rate.
- Many people drink alcohol for relaxing tension and make them feel more at ease or outgoing.
- Drinking alcohol can also make you feel drunk or intoxicated. Signs of being drunk include flushed skin, impaired judgment, reduced inhibition, reduced muscle control, slowed reflexes, problems walking, slurred speech, and double or blurred vision.
- Signs of being heavily intoxicated include difficulty standing, throwing up, blacking out, and having no memory of what you said or did while drinking. Heavy drinking can lead to coma and death.
- Drinking can sometimes result in a "hangover" about eight to ten hours after your last drink. Symptoms can include headache, nausea, diarrhea, dehydration, shakiness, and vomiting.
- It is possible to develop a physical and psychological dependence (addiction) on alcohol.

Canada's Guidance on Alcohol and Health

The Guidance acknowledges that deciding to drink is a personal choice and that there is a continuum of risk associated with weekly alcohol use. The guidance can help women know about their drinking and reduce immediate and long-term alcohol-related harms.

Some key points from the Guidance include:

- Your risk of developing several types of cancer, including breast and colon cancer, increases at 3-6 standard drinks per week.
- There are benefits to your health and wellbeing if you do not drink at all.
- When pregnant or trying to get pregnant, there is no known safe amount of alcohol use.
- No matter where you are best on the continuum of risk, any reduction in alcohol use is beneficial to your health.

Alcohol and Your Health

- Alcohol affects people differently. The way alcohol affects you depends on many factors, including:
 - Your sex, age, body weight and size, organ function and metabolism
 - Your sensitivity to alcohol
 - The type and amount of food in your stomach
 - How much and how often you drink
 - How long you've been drinking
 - Who you are with, where you are, and what you are doing
 - How you expect the alcohol to make you feel
 - Whether you've taken any other substances (e.g., cannabis, prescribed medication, illicit substances, etc.)
 - Your family history
- There are risks of alcohol use for everyone but alcohol affects females more negatively than males. Women experience more negative health effects earlier, after drinking lesser amounts of alcohol.
- Factors such as body size, hormonal effects and enzymes that break down alcohol result in higher blood alcohol levels and faster intoxication for women. Similar factors raise the risk of alcohol-related diseases.
- Many various physical and chronic health conditions are linked to drinking, even at low levels.
 - Alcohol can cause several types of cancer, such as breast, colon, mouth and throat, larynx, esophagus, liver, and rectum.
 - Drinking alcohol can also increase your risk of stroke and heart disease.
- Drinking is related to numerous other serious health conditions (e.g., diabetes, hypertension, epilepsy, stroke, pancreatitis, dysrhythmias and liver disease and cirrhosis).
- Women experience more liver injury from lower levels of alcohol, compared to men.



This sheet, available from the CEWH website summarizes the health impacts of alcohol for women, is designed for health practitioners to use when discussing alcohol with women

Summary

- ▶ Sex matters
- ▶ Gender matters
- ▶ It is important that health practitioners discuss sex and gender factors, when conveying the overall message (Drinking less is better) of Canada's Guidance on Alcohol and Health



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