

Gender-Based Analysis of Alcohol Use

Developed in WGH 207: Advanced Topics of Women, Gender, and Health
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Appropriate HSPH Core Courses:

SBS 504: Substance Use and Public Health. This class discusses substance use (including alcohol use) but does not examine substance use through a sex/gender-based lens.

Brief Background:

Sex and gender are integral to public health drinking guidelines. For instance, the recommended limits for “low-risk” drinking by the U.S. Department of Health and Human Services are no more than four drinks per day for men or three drinks per day for women, and no more than 14 drinks in a week for men or seven drinks in a week for women.¹ However, the reason for differential recommendations based on being a “man” or a “woman” is not stated. Whether the use of “man” or “woman” is referencing sex-assigned-at-birth, gender identity, gender expression, gender roles, gender norms, or some other component of sex and/or gender is also not stated. Additionally, the use of binary language in these guidelines erases trans and nonbinary individuals who are at a disproportionately higher risk of binge drinking and alcohol use disorder compared to cisgender individuals due to societal and structural factors.² Finally, it is unclear if the differences in health outcomes due to alcohol use such as liver disease and cancer is due to sex or gender identity or some other variable entirely that sex and/or gender may only be an imperfect proxy of (e.g., height, body weight).

Learning Objectives for Students:

1. Apply a gender-based critical framework to understanding factors that impact alcohol consumption.
2. Enumerate limitations of current public health guidelines for alcohol use from a sex/gender perspective and the implications of these limitations with respect to clinical and public health research and practice.

Teaching Methods:

1. Assign pre-reading for students to complete before class.

- 1) Bauer GR. Sex and gender multidimensionality in epidemiologic research. *American Journal of Epidemiology*. 2023;192(1), :122-132 doi: 10.1093/aje/kwac173

- a) This article will introduce students to sex and gender multidimensionality to understand how using sex/gender as proxies in research can introduce bias and erase the experiences of marginalized gender groups.
- 2) Adams RS, Ledingham E, Keyes KM. Have we overlooked the influence of "wine-mom" culture on alcohol consumption among mothers? *Addict Behav.* 2022;124:107119. doi:10.1016/j.addbeh.2021.107119
 - a) Students will use this article as an introduction to how gender interplays with alcohol consumption through gender norms and expectations.
- 3) Glossary of information (included in the Supplemental Materials)

Questions for students to consider as they read:

- How is drinking influenced by the different dimensions of gender, including gender identity, gender expression, gender roles, and gender norms?
 - What cultural/institutional factors influence gender norms/expression around drinking?
 - How might gender norms influence the amount of and speed at which alcohol is consumed?
- How is drinking culture gendered?

2. Lead an in-class case study.

Students will be presented with the current CDC guidelines for “acceptable” alcohol consumption. They will break up into small groups and discuss the following questions:

- 1) What are your initial thoughts on these CDC “drinking in moderation” guidelines?
- 2) What is the message someone reading these guidelines (whether a physician or patient or someone else) might get about alcohol use?
- 3) What are the limitations of these guidelines especially when considering how sex and gender are incorporated into the guidelines?
- 4) What are the potential implications of these limitations on research?
- 5) What are the potential implications of these limitations on clinical care?
- 6) What are the potential variables that gender/sex may be being used as a proxy for in the alcohol consumption guidelines? How could you design a study to test this?

3. Facilitate a full class discussion.

Students will then come together as a large group to discuss the following questions to summarize the takeaways from the teaching example:

- 1) Why are there different guidelines for “men” and “women”?
 - a) How does sex influence alcohol consumption (e.g., physiologic differences)?
 - b) How do gender norms influence alcohol consumption?
- 2) Based on the small group discussions and what we just talked about, what are some other or additional factors that alcohol consumption guidelines should be based on?

- a) For example, what are biological risk factors that could be more effective when risk stratifying individual alcohol consumption?

4. Conduct a wrap-up.

Inform the class that these guidelines are U.S. specific, as other countries have different recommendations, with some being sex-based and some not. Additionally, the amount of alcohol in a standard drink varies from country to country.

- Examples: Belgium allows up to 21 drinks a week for men and 14 for women. Australia, on the other hand, does not have sex-specific guidelines, and instead recommends that adults drink no more than 10 standard drinks in a week. A standard drink in the U.S. is 14 grams of alcohol, but only 10 grams in Australia.⁶
- Note: These differences could reflect cultural differences, differences in how countries interpret risks, and/or differences in how decision-makers and government scientists in different countries interpret nutritional epidemiological research. Regardless of why the guidelines might be different in different countries, these differences show that alcohol consumption guidelines are not based entirely on biology and are, at least to some degree, socially constructed.

Supplemental Material

References

1. What are the U.S. guidelines for drinking? - Rethinking Drinking - NIAAA. Accessed April 10, 2023.
<https://www.rethinkingdrinking.niaaa.nih.gov/how-much-is-too-much/is-your-drinking-pattern-risky/Drinking-Levels.aspx>
2. Guy AA, Surace A, Zelaya DG, et al. Transgender and gender diverse adults' reflections on alcohol counseling and recommendations for providers. *Am J Orthopsychiatry*. 2023;93(2):166-175. doi:10.1037/ort0000663
3. Skogen JC, Bøe T, Thørrisen MM, Riper H, Aas RW. Sociodemographic characteristics associated with alcohol consumption and alcohol-related consequences, a latent class analysis of The Norwegian WIRUS screening study. *BMC Public Health*. 2019;19(1):1364. Published 2019 Oct 24. doi:10.1186/s12889-019-7648-6
4. Vaeth PA, Wang-Schweig M, Caetano R. Drinking, Alcohol Use Disorder, and Treatment Access and Utilization Among U.S. Racial/Ethnic Groups. *Alcohol Clin Exp Res*. 2017;41(1):6-19. doi:10.1111/acer.13285
5. Adams RS, Ledingham E, Keyes KM. Have we overlooked the influence of "wine-mom" culture on alcohol consumption among mothers?. *Addict Behav*. 2022;124:107119. doi:10.1016/j.addbeh.2021.107119
6. Greta R Bauer, Sex and Gender Multidimensionality in Epidemiologic Research, *American Journal of Epidemiology*, Volume 192, Issue 1, January 2023, Pages 122–132, <https://doi.org/10.1093/aje/kwac173>
7. Glass too full? why safe drinking guidelines vary between countries. The Guardian. <https://www.theguardian.com/society/2023/jan/15/glass-too-full-why-safe-drinking-guidelines-vary-between-countries>. Published January 14, 2023. Accessed May 5, 2023.
8. Greaves L, Poole N, Brabete AC. Sex, Gender, and Alcohol Use: Implications for Women and Low-Risk Drinking Guidelines. *Int J Environ Res Public Health*. 2022;19(8):4523. Published 2022 Apr 8. doi:10.3390/ijerph19084523
9. Hibbs, C. Cisssexism. *Encyclopedia of Critical Psychology*. 2014. https://link.springer.com/referenceworkentry/10.1007/978-1-4614-5583-7_679

Glossary

The following information will be provided to students to read before the lecture.

- Sex-related factors influencing alcohol consumption⁸
 - Metabolism
 - Individuals assigned female at birth tend to have lower volume of body water and higher volume of body fat on average compared to individuals assigned male at birth, which results in greater first-pass metabolism of alcohol by individuals assigned male at birth.
 - Individuals assigned female at birth break down and absorb alcohol faster than individuals assigned male at birth and reach a higher blood alcohol concentration on average.
 - Hormones
 - Hormonal changes of pregnancy, menopause, or from oral contraception pill ingestion may impact alcohol metabolism.
 - In individuals assigned male at birth, higher testosterone levels may be associated with increased risk of alcohol use, and the same has been found for individuals assigned female at birth with respect to estrogen levels.
 - Genetics
 - Genetic influences on alcohol use disorder may be greater among individuals assigned male at birth.
- Gender-related factors⁸
 - Gender norms around drinking
 - We typically think of drinking as a “masculine” behavior, both in the sense of it being a “masculine” gender norm to drink alcohol and also a means of “masculine” gender expression (i.e. men drinking beer as a means of performing masculinity within a context in which hegemonic gender norms construct beer drinking as “manly”). However, the pre-reading on “wine mom culture” is a good example of how cultural norms can lead to increased alcohol consumption among women.
 - Gender minorities and alcohol consumption
 - These groups tend to have higher rates of alcohol consumption and binge drinking compared to non-gender minorities, which has been found to be associated with cissexist discrimination.²
 - Definition: Cissexism is “discrimination against individuals who identify with and/or present as a different sex and gender than assigned at birth and privilege conveyed on individuals who identify with and/or present as the same sex and gender as assigned at birth.”⁹
- Intersectional factors

- The following examples show how a gender-based analysis alone cannot fully explain differences in alcohol consumption, but rather intersect with various identities that lead to substantial differences in alcohol use within and between groups.
 - Native Americans have higher rates of alcohol consumption compared to whites.⁴
 - Young adults are more likely to engage in binge drinking than older adults.³
 - People with low socioeconomic status have higher rates of alcohol consumption when compared with people of higher socioeconomic status.³
- The above inequities underscore how gender groups are non-homogenous and rates of alcohol use likely differ substantially both between and within groups by race/ethnicity, age, and socioeconomic status.