Sex, gender and tobacco

a systematic literature review on gender-informed tobacco prevention, cessation and harm reduction interventions

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Outline

- Sex- and gender-based factors in tobacco
- Overview of the project
  - Systematic review methods
  - Preliminary findings
- Can tobacco control be gender transformative?
- Conclusions

Project Team

- Principal Investigator: Dr. Lorraine Greaves
- Co-Investigators:
  - Dr. Nancy Poole (Centre of Excellence for Women's Health)
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  - Lucy Hume (Jean Tweed Centre)
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- Research Staff:
  - Natalie Hemsing: Research Associate
  - Rose Schmidt: Research Manager
  - Lindsay Wolfson: Research Assistant
  - Julie Stinson: Research Assistant
  - Andreea Catalina Brabete: Research Assistant
  - Cindy Jiang: Research Assistant

Project Objectives

1. Systematic reviews on sex and gender related factors in substance use, and the effectiveness of including sex, gender and gender transformative elements in health promotion/prevention, harm reduction and treatment responses to 4 substance use issues.
   - Cannabis
   - E-cigarettes/ tobacco
   - Alcohol
   - Opioids
2. Baseline assessments at three sites on KAP regarding integration of sex, gender and gender transformative concepts in their approaches.
3. Co-develop and test sex and gender-informed materials, messages and approaches to address the 4 substance use issues.
4. Measure and compare the before and after impacts of integrating sex, gender and gender transformative elements three sites on the KAP behaviours of providers and managers.
5. Translate and disseminate project findings into final products.

Sex, gender and tobacco control

- Tobacco control has been gender blind in research, policy and programming
- Overemphasis on pregnancy and smoking
- Use of gender stereotypes in programming
- Gender and equity need to be integrated into tobacco policy, program and research initiatives

Amos A, Greaves L, Nichter M, Bloch M. (2011) Women and tobacco: a call for including gender in tobacco control research, policy and practice. Tobacco Control.

Greaves, L. (2014). Can Tobacco Control Be Transformative? Reducing Gender Inequity and Tobacco Use among Vulnerable Populations. *International journal of environmental research and public health*, *11*(1), 792-803.

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Gender related factors (social & cultural)

- Gender-related factors include roles, norms, identities, rules associated with men, women, boys, girls, transgender:
  - smoking initiation
  - patterns of tobacco use
  - meanings ascribed to smoking
  - ability to control SHS exposure
  - responses to tobacco policies and interventions

Examples of impact of gender on tobacco use, response to policy, vulnerability:

- men more often exposed to SHS at work; women more often in the home [1, 2].
- girls often smoke to control negative mood and emotions [3]
- tobacco industry has linked smoking with empowerment and sexual attractiveness for women [4] and strength and masculinity for men [5]

Sex Based Factors (biological)

- Biological characteristics and physiological processes associated with male and female bodies
  - prevalence and typology of diseases and conditions;
  - genetics and epigenetics
  - hormones, anatomy, metabolism, responses to medication, etc

- **Examples of the impact of tobacco use** on the body, and the prevalence and typology of resulting diseases and conditions
  - sex hormones and smaller airways increase women's risk of respiratory illness [6]
  - male smokers are more likely than women to develop bladder cancer [7] and oral cancer (particularly when combined with alcohol use) [8]
  - nicotine replacement therapies are often less effective in women [9]
  - nicotine withdrawal is affected by menstrual patterns [10]

Scoping & Systematic Review Questions

Scoping Review Question:

Q1) *How* do sex and gender related factors impact:

a) patterns of use;

b) health effects of;

c) and prevention/ treatment/ or harm reduction outcomes for opioid, alcohol, tobacco (including e-cigarette use) and cannabis use?

Systematic Review Question:

Q2) *What* harm reduction, health promotion/ prevention and treatment interventions and programs are available *that include sex, gender and gender transformative elements* and how effective are these in addressing opioid, alcohol**, tobacco** and cannabis use?

Systematic Review: progress

- Academic database searches: complete
- Grey literature searches: complete
- Screening for inclusion:
  - Title screening: complete
  - Abstract screening: complete
  - Full paper screening: *in progress*

Systematic Review: next steps

- Complete screening
- Data extraction & quality assessment
  - NICE, UK methods & quality appraisal tools
  - Feminist quality appraisal
- Narrative synthesis of findings

Morgan, T., Williams, L. A., & Gott, M. (2017). A Feminist Quality Appraisal Tool: exposing gender bias and gender inequities in health research. *Critical Public Health*, *27*(2), 263-274.

Table 1. Feminist Quality Appraisal Tool.

Author and year	
Stated purpose/aim of paper	
Study design Consider how the study has conceptualised gender. What definition of gender is used, if at all? What is informing the use of gender?	• Has the reason for focusing on gend • Has a working definition of gender b • Has 'gender' and 'sex' been successfu • If gender is mediated through anoth how it interacts with gender ideals? • Have multiple genders, e.g. women/ • If not, is the reason sufficient for not • Are there any other major theories o or undermine gender within the stu
Data collection and analysis Consider whether the methodology and methods employed to collect and analysis data have taken into account the social context of the data collected and the efficacy of these methods in capturing gendered considerations. Consider also the subjectivity of the researcher collecting the data.	• *Collection* • Has the data collection process taken into consideration the socio/cultural and particular gendered contexts of the participants' surroundings? • In quantitative, qualitative and mixed-method studies, has the author been self-reflexive about how their own gender and ideas of gender may have impacted their methodology? • Has the author taken into consideration different genders tendencies to respond and disclosure differently? • Has the study been written in a way that demonstrates awareness of the gendered power dynamics that exist between interviewer and interviewee and have the researchers considered how to accommodate this? • Have other non-identity factors that are socially attached to gender identity been included in order to acknowledge the complexity of gender? • *Analysis* • Has gender been used as a category of analysis or has gender simply been one variable that has been analysed? • Have qualitative methods allowed for the participants to communicate the complexity of their gendered experiences? • If multiple genders have been included in the sample, has data been sex-desegregated? • Have multi-level models been employed to see whether societal factors have an important role in causing differences? • Have relevant subset analyses been applied? • Have sensitivity analysis and heterogeneity been considered?
How is gender contextualised in study's discussion? Awareness of how gendered behaviours stem from norms embedded in particular societies. These norms can be conformed to and contested within individuals' experiences. These norms may also intersect with other identity-forming features e.g. age and race.	• Has gender been characterised as a social construct? • Have gender norms been acknowledged as a feature of the structural conditions of a particular society? • Have any particular formations of femininity and masculinity in the context of the study been identified? • Have normative ideas of gender been acknowledged as unstable, and with the potential to change over time? • Have other identity-forming factors that contribute to how people perceive themselves and are perceived in society considered, such as race, ethnicity, sexuality, age, physical ability?
Effective recommendations for change? Effective prescriptions are made to challenge and change disparities on an individual and direct, as well as on a societal level.	• Who is the target (both direct and indirect) of the proposed policy, program or project? Who will benefit? Who will lose? • Have women been consulted on the 'problem' the intervention is to solve? How have they been involved in development of the 'solution'? • Does the intervention challenge the existing gender division of labour, tasks, responsibilities and opportunities? • Have specific ways been proposed for encouraging and enabling women to participate in the policy/program/project, despite their traditionally more domestic location and subordinate position? • Has the long-term impact in regard to women's increased ability to take charge of their own lives, and to take collective action to solve problems, been considered?

Q....
Sex and gender differentiated?
Different genders in study?
Gendered power dynamics considered?
Femininity and masculinity considered?
Structural conditions considered?
Other identity forming factors considered?
Have women been consulted on the problem?
Solution changes the existing order?....

Feminist Quality Appraisal Tool

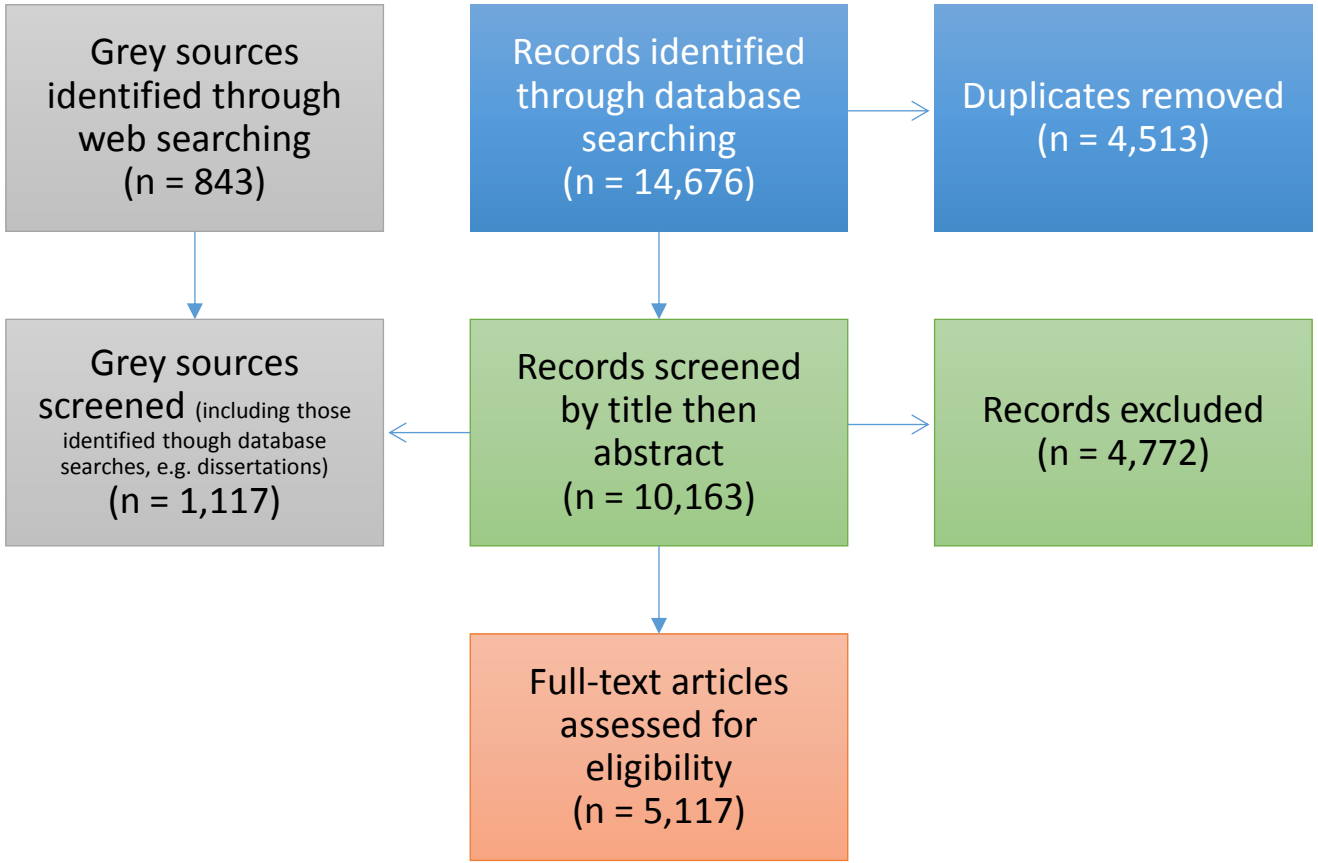
Gendered analysis of health research:

1. Conceptual underpinnings of studies
2. Data collection & analysis
3. Gendered context in discussion section
4. Effective recommendations for change

Quality of Feminist Analysis:

- thorough
- moderate
- cursory

Review: flow diagram



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Q2 Tobacco articles found to date

Q2 (systematic review) papers:

- Harm Reduction n=5
- Prevention n=13
- Treatment n= 51

Preliminary Findings

- some interventions address specific sex- and gender- related factors for women or men
  - Most gender informed interventions are treatment/ cessation
  - Very few gender informed prevention & harm reduction interventions
- many interventions may be gender specific:
  - delivered to specific groups of women or men, but not tailored to address sex- or gender- related factors
- lack of interventions tailored to gender diverse people
  - Some interventions tailored to LGBTQ, but do not report by gender group

Many deficiencies in sex & gender measurement, analysis & reporting

1. Do not:
    1. measure
    2. report
    3. analyze sex/gender
2. Indicate sex or gender of sample, but does not report results by gender group
3. Provide minimal data about sex and gender differences
    1. one table without significant analysis
    2. one line in the discussion, etc.
4. Conflate sex and gender
5. Conflate sexual orientation and gender

Prevention

Schwinn et al 2018

- *Real Teen*: a web-based substance abuse prevention program for girls (n=788)
- Skill building: coping with stress, managing mood, maintaining a healthy body image, and refusing substance use offers
- Guided by animated narrator, “Alexis”
- Post-test: girls in intervention smoked fewer cigarettes (58% less in past month); and reported higher self-esteem, goal setting, media literacy, and self-efficacy
- One year follow-up: lower smoking (67% less in past month) & binge drinking rates compared to control

Bottorff et al 2014

- To address link between SHS exposure during breast development and breast cancer in young women
- Gender-specific Youtube videos to raise awareness among girls and boys
- Girls & boys provided positive feedback on the videos and interest in sharing

Bottorff, J. L., Struik, L. L., Bissell, L. J., Graham, R., Stevens, J., & Richardson, C. G. (2014). A social media approach to inform youth about breast cancer and smoking: An exploratory descriptive study. *Collegian*, *21*(2), 159-168.

Schwinn, T. M., Schinke, S. P., Hopkins, J., Keller, B., & Liu, X. (2018). An online drug abuse prevention program for adolescent girls: posttest and 1-year outcomes. *Journal of youth and adolescence*, *47*(3), 490-500.

Cessation interventions for women

- Interventions to address stress management and concerns over weight gain during cessation
- Interventions addressing fluctuations in craving during menstrual cycle (Carpenter et al 2008)
  - 2 sessions counselling + NRT
  - Randomized to quit either during follicular phase (n=25) or luteal phase of cycle (n=19)
  - Higher quit rates in follicular group: 32% vs. 19% (2 weeks after quit date)
- E.g. Yoga to support stress management among women who are quitting smoking (Bock et al 2012)
  - CBT + vinyasa yoga, 8 weeks (n=55)
  - Greater quit rates post-treatment
  - At 6 month follow-up, difference in quit rates no longer statistically significant
  - Reduced anxiety and improved well-being

Bock, Beth C., et al. "Yoga as a complementary treatment for smoking cessation in women." *Journal of Women's Health*21.2 (2012): 240-248.
Carpenter, M. J., Saladin, M. E., Leinbach, A. S., Larowe, S. D., & Upadhyaya, H. P. (2008). Menstrual phase effects on smoking cessation: a pilot feasibility study. *Journal of women's health*, *17*(2), 293-301.

Cessation for LGBT individuals

- The Last Drag
  - LGBT-specific group cessation program
  - education delivered in an LGBT-supportive group, using LGBT-specific smoking information
  - Evaluation in San Francisco reported 59% had quit at 7th session
  - 36% quit rate at 6-month follow up
  - female, ethnic minority, and/or transgender individuals were less likely to attend more than one class and had lower quit rates

Eliason, M. J., Dibble, S. L., Gordon, R., & Soliz, G. B. (2012). The last drag: an evaluation of an LGBT-specific smoking intervention. *Journal of homosexuality*, *59*(6), 864-878.

Harm reduction with e-cigarettes: sex and gender

- Not tailored to address sex or gender, but measured sex/ gender differences in outcomes

Dawkins et al 2012	Both nicotine and placebo e-cigarettes reduced the desire to smoke and withdrawal symptoms in males but not females [11]
Grace et al 2015	Females rated e-cigarettes more highly than males; satisfaction predicted later reductions in smoking [12]; potential for effective NRT delivery, especially for women
Piñeiro et al 2016	Men more likely to report initiating e-cigarette use to quit smoking due to health concerns; women more likely to report initiation based on recommendations from family and friends Men report greater use of e-cigarette use related to positive reinforcement (enjoyment); women reported continued use for negative reinforcement (to manage stress, negative mood) [13]
Pang et al 2017	"Affective PMS" associated with greater number of smoking cessation aids used in past quit attempts, including increased use of e-cigarettes [14]; reflects difficulty of cessation during luteal phase and amidst acute PMS

A new frontier:
gender transformative tobacco control

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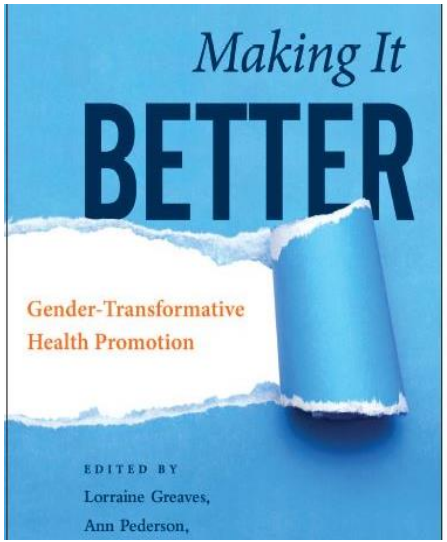
What is gender transformative work?

- Improves health and reduces inequity <u>at the same time</u>



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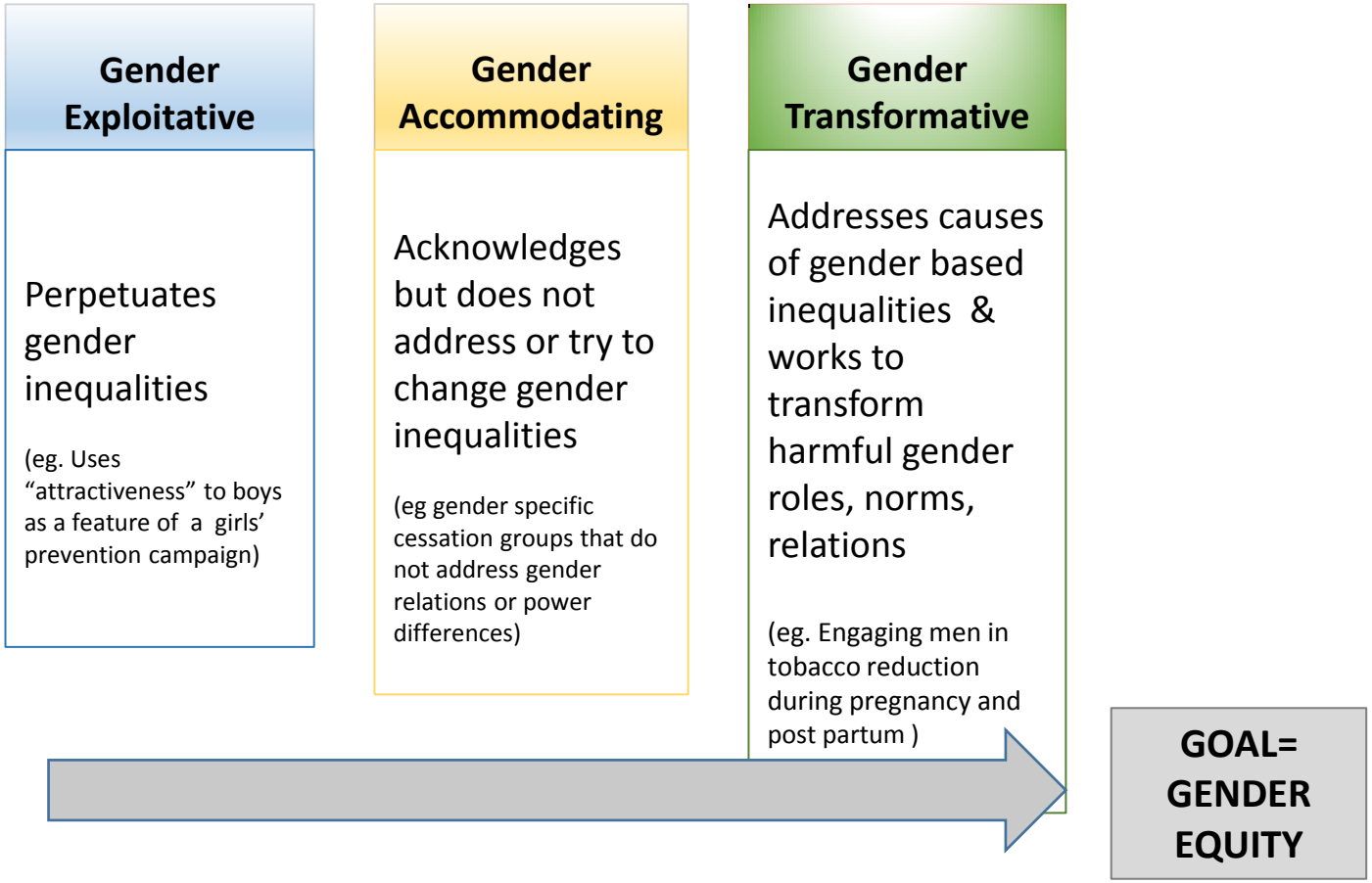
Gender transformative tobacco control

- Takes on the dual goals of reducing gender inequities *at the same time* as preventing or reducing tobacco use or exposure
- Reflects the intent of the Preamble to the FCTC
- Develops initiatives that:
  - *address* social determinants of health, such as housing or child care and links to smoking
  - *engage* women and men in planning interventions
  - *address* stigma attached to smoking and to those who smoke
  - *improve* media literacy and critical thinking in girls and boys
  - *engage* partners and family in tobacco reduction in safe, power sharing ways
  - *identify* explicit equity goals when defining tobacco control policy objectives

Hemsing, N. and Greaves, L. Igniting Global Tobacco Control. In Greaves et al (eds), *Making It Better: Gender-Transformative Health Promotion.* CSPI: Toronto, ON. (2014)


Gender Exploitative
Perpetuates gender inequalities
(eg. Uses "attractiveness" to boys as a feature of a girls' prevention campaign)
Gender Accommodating
Acknowledges but does not address or try to change gender inequalities
(eg gender specific cessation groups that do not address gender relations or power differences)
Gender Transformative
Addresses causes of gender based inequalities & works to transform harmful gender roles, norms, relations
(eg. Engaging men in tobacco reduction during pregnancy and post partum)
GOAL= GENDER EQUITY

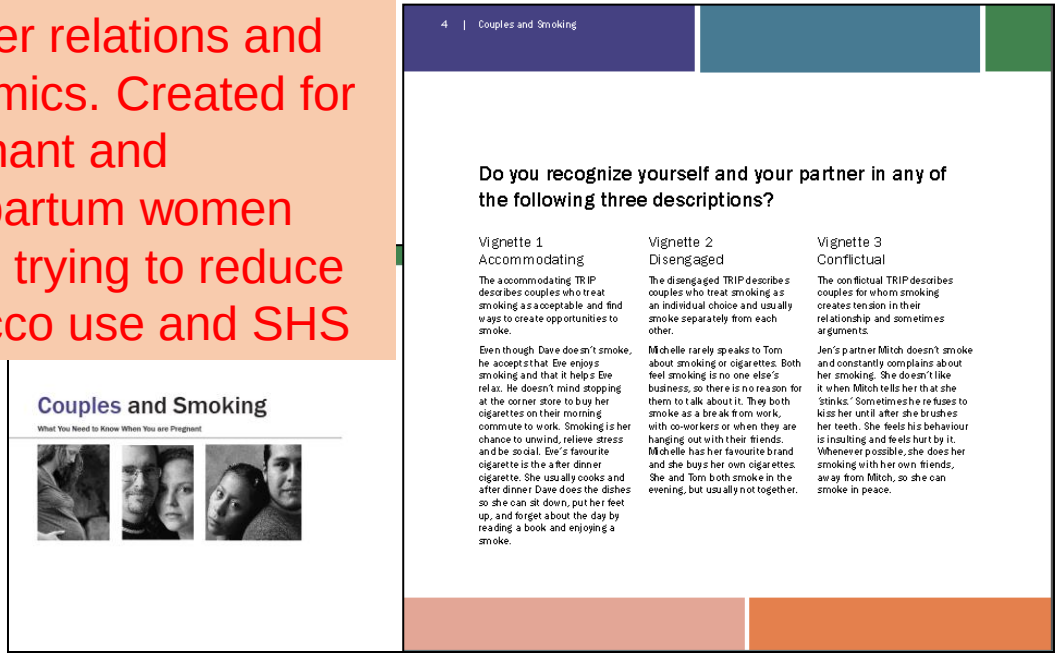
Smoking Cessation: engaging men and boys in caring work and fathering

http://dadsingear.ok.ubc.ca/

- virtual smoking cessation tool
- Interviews with 20 new fathers who viewed the web based smoking cessation resources
- Focus on fathering was effective draw to the website
- Addressed a range of masculine ideals such as strength and compassion

Bottorff, J. L., Oliffe, J. L., Sarbit, G., Kelly, M. T., & Cloherty, A. (2015). Men's Responses to Online Smoking Cessation Resources for New Fathers: The Influence of Masculinities. *JMIR research protocols*, *4*(2).

Harm Reduction:
Practical advice about gender relations and dynamics. Created for pregnant and postpartum women when trying to reduce tobacco use and SHS



Summary & Conclusions

- Sex- and gender- informed interventions are needed to reflect the science fully, and address all aspects of tobacco use
  - tobacco dependence
  - health effects
  - harm reduction and prevention
- Gender informed interventions are needed for all genders & sexual orientations
- Challenge now is to develop gender-transformative approaches to tobacco control

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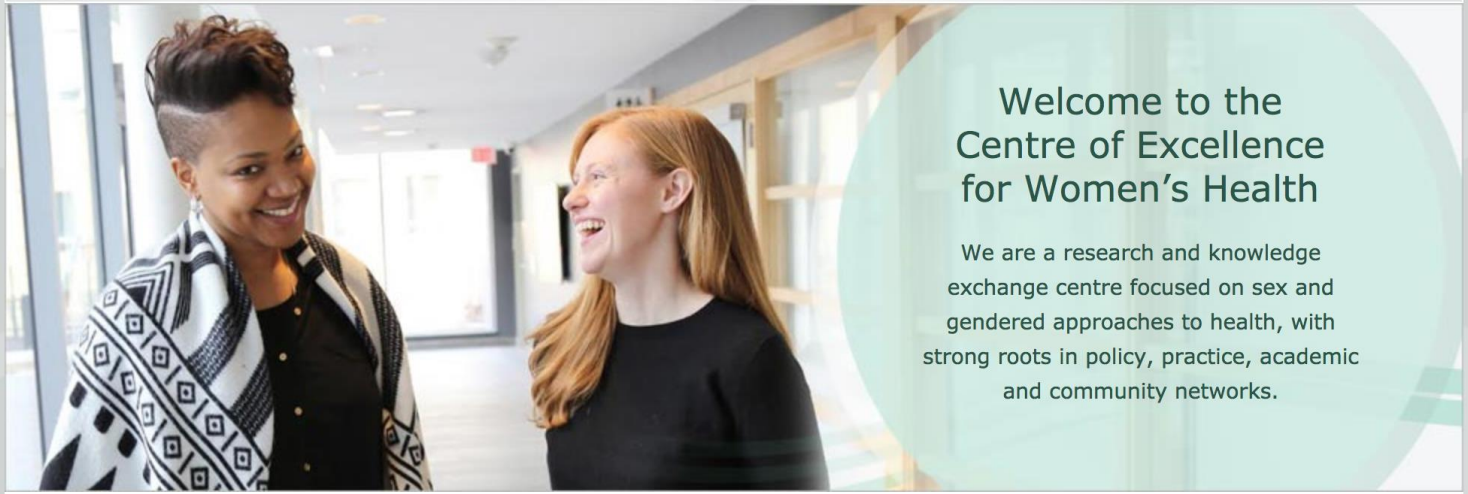

Welcome to the Centre of Excellence for Women's Health

We are a research and knowledge exchange centre focused on sex and gendered approaches to health, with strong roots in policy, practice, academic and community networks.

Trauma Gender Substance Use

Sex, Gender and Tobacco

What do sex and gender have to do with tobacco use?

Sex related factors affect the biological response to tobacco use and treatments, and gendered factors such as social, cultural and economic norms, relationships and opportunities affect smoking initiation, patterns of use, cessation and responses to tobacco policies, for men, women, boys and girls.

Some **sex-related factors** identified in the tobacco research literature include:

- Sex hormones & smaller airways increase women's risk of respiratory illness
- The menstrual cycle influences withdrawal symptoms
- Pharmacological smoking cessation therapies may be less effective for women
- Smoking has damaging effects on both sperm and ovarian reserve
- Male smokers are more likely to have abnormal lipids in the blood
- Male smokers are more likely to develop bladder cancer and oral cancers
- Male smokers are more likely to develop insulin resistance

There are also gendered reasons for, and meanings attached to smoking, and barriers to quitting. Some gender-related factors identified in the literature include:

- Women more often smoke to control negative mood and emotions
- Trauma and smoking are highly correlated in both men and women
- Men are more often exposed to second hand smoke at work and in public places
- Women are more often concerned that quitting would result in weight gain
- The tobacco industry links smoking with: empowerment and beauty for women and strength and mystery for men
- Women are more likely to experience depression – a barrier to cessation
- Expectant women, and new mothers and fathers experience smoking related stigma
- Women may not have the power to implement home smoking restrictions

Tobacco control policies have been variously critiqued for lacking a gender lens, and calls have been made for approaches that are gender transformative. These are approaches that consciously improve the equality of women and men, girls and boys, while concurrently working to improve smoking cessation and reduction outcomes.

Examples of Gender Transformative Tobacco Control

Gender-transformative approaches to tobacco actively examine, question, and challenge stereotypical gender norms and imbalances of power as a means of reducing tobacco use along with increasing gender equity. Some examples:

- Avoiding harmful stereotypes and attitudes about women and men in health promotion campaigns
- Addressing the social needs of women and men who smoke in treatment
- Supporting women's political, social and economic empowerment in designing policies
- Engaging men in changing social norms about substance use and masculinities in programming
- Systematically integrating sex and gender analysis in program planning and policy design
- Including social justice and human rights goals in tobacco control

Canadian Leadership, Global Impact

- The Centre of Excellence for Women's Health (CEWH) established the first and only research program on girls, women, gender and tobacco in 1997, led by Lorraine Greaves (founding Executive Director and current Senior Investigator at the CEWH). In the past 20 years, we have conducted over 50 projects on tobacco. We have studied the gendered impact of tobacco control policies on women and men, argued for sex, gender and diversity analysis in policy making, examined the links between gender equity and tobacco use, and advocate the application of gender transformative approaches to tobacco control policy and practice.
- Our reports, articles, books and popular documents have been translated and used in countries from Ireland to Spain to China, as they offer practical gender analysis in areas such as smoking during reproductive years, quitting smoking and understanding the gendered impacts of the Framework Convention on Tobacco Control (WHO-FCTC).
- The Trauma/Gender/Substance Use project will guide the further integration of trauma informed, gender informed and gender transformative practices into substance use prevention, health promotion, treatment, harm reduction and policy in Canada in 2017-18.

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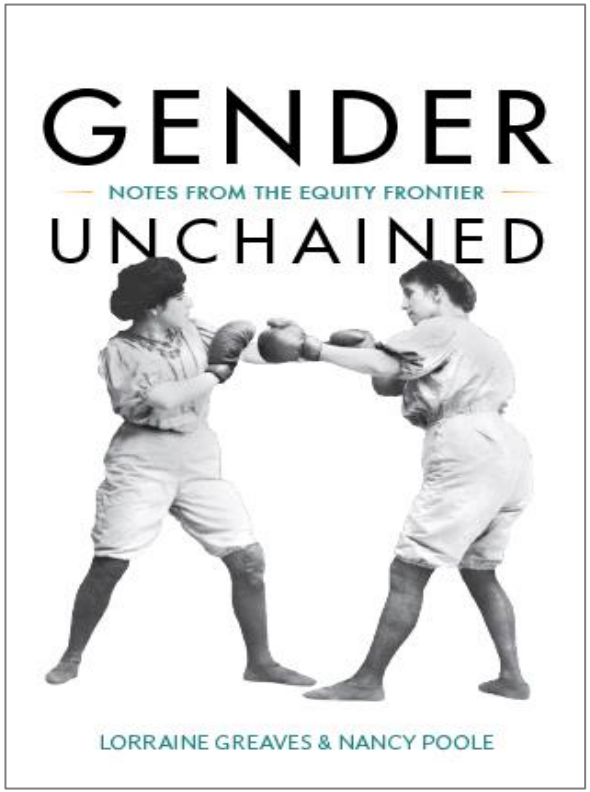

Available at www.genderunchained.com , the FriesenPress bookstore, Amazon, Chapters|Indigo, Barnes & Noble, and most major online retailers ($20)

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Inclusion/ Exclusion Criteria: Q2

- 2007-2018
- Population:
  - Women, girls, men, boys, trans people/ gender diverse people
  - Excludes studies on prenatal exposure/ SU during pregnancy
- Intervention:
  - Harm reduction, health promotion, prevention, treatment responses to tobacco/ e-cigarettes including some sex, gender and/or gender transformative elements
- Comparator:
  - No intervention or usual practice; the comparison of two intervention types; or no comparator (e.g. qualitative sources)
- Outcomes:
  - Changes in substance use
  - Changes in client or service provider perceptions/ attitudinal change
  - Changes in retention/ treatment completion
  - Increased use of services
  - improved health and quality of life outcomes