Examining Attitudes towards a Proposed Sugar-sweetened Beverage Tax among Urban Indigenous Adults using a Decolonizing Lens

By

Maria Kisselgoff

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Department of Food and Human Nutritional Sciences

University of Manitoba

Winnipeg

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Abstract

Background: Taxation of sugar-sweetened beverages (SSB) is a leading public health tool to reduce consumption and associated health outcomes. Compared to other racial/ethnic groups in Canada, off-reserve Indigenous populations consume SSB at higher frequencies and quantities. Indigenous populations are also disproportionately affected by type 2 diabetes and food insecurity, which are attributable to colonial policies. Governments have been called to action by the Truth and Reconciliation Commission to close gaps in these health disparities. Given the regressive nature of a tax on SSB, we need to hear the voices of Indigenous people who are targeted by such a policy.

Objectives: The objectives of this thesis were to examine (1) experiences and determinants of purchasing SSB, and (2) the acceptability and anticipated impact of the proposed SSB tax among urban Indigenous adults.

Methods: In partnership with the National Indigenous Diabetes Association and Fearless R2W, we conducted 20 semi-structured interviews (Nov 2019-Aug 2020) with Indigenous adults residing in Winnipeg's NE neighborhood. Interviews were audio recorded, transcribed verbatim, organized in NVivo-12-Pro, and thematically analyzed.

Results: All 20 participants (Female=12; Male=8; Two-Spirit=2) consumed SSB on a regular, daily basis at the time of the interview or prior at some point in their lives; three-quarters were unemployed. Objective 1: Participants' experiences of shopping for SSB were characterized by the overarching theme of *balancing on the redline*, specifically (1) *balancing SSB purchasing constraints and facilitators with savvy shopping approaches* and (2) *balancing (stereo)typical reactions with resilient coping approaches.*

Objective 2: Overall, most participants were strongly opposed to a SSB tax because of inter-related themes of (1) *government not trustworthy,* (2) *taxes are ineffective and lead to inequitable outcomes,* and (3) *Indigenous self-determination critical.*

Conclusions: Results indicate that SSB represent a considerable expense to urban low-income, Indigenous residents. Finding also reveal that SSB is a source of judgment in predominantly non-Indigenous food-carrying establishments, intersecting racial prejudice and weight stigma. Low support for the tax among urban Indigenous people is characterized by concerns regarding the tax, as well as the policy makers themselves. Findings underscore the importance of Indigenous Peoples' self-determination in informing and designing health policies that are equitable and non-stigmatizing.

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List of Abbreviations

SSB – Sugar Sweetened Beverage

CCHS – Canadian Community Health Survey

FPIC – Free, Prior, and Informed Consent

NE – North End

UNDRIP – United Nations Declaration on the Rights of Indigenous Peoples

WRHA – Winnipeg Regional Health Authority

Chapter 1: Introduction

Background

Indigenous people[1] residing in Canadian urban centers are disproportionately affected by type 2 diabetes (Government of Canada, 2011; Public Health Agency of Canada, 2018) and food insecurity as compared to non-Indigenous people (Skinner, Pratley & Burnett, 2016; Tarasuk, Mitchell & Dachner, 2014; Tarasuk et al., 2020). These disparities are the result of historical and contemporary colonial policies – increasing the reliance on non-traditional market foods, and limiting affordable, nutritious options (Truth and Reconciliation Commission [TRC], 2015a; TRC 2015b). In Canada, Indigenous people (Garriguet, 2008; Jones, Kirkpatrick & Hammond, 2019), as well as populations who are food insecure[2] (Warren et al., 2022), consume sugar-sweetened beverages (SSB) at higher frequencies and quantities. SSB intake is associated with the development of chronic diseases such as type 2 diabetes, weight gain, and cardiovascular disease (Malik et al., 2010; Malik & Hu, 2022). Several health authorities and governments have recommended the implementation of fiscal policies on SSB as a public health measure to reduce their consumption. These proposals were informed by endorsements from Heart and Stroke Foundation (Heart and Stroke Foundation, 2017), Diabetes Canada (Diabetes Canada, 2018), and the World Health Organization (WHO, 2016), among others. The province of Newfoundland and Labrador has become the first in Canada to introduce an excise tax on sugary beverages at 20 cents per liter (Department of Finance Newfoundland and Labrador, 2022). However, proposals

[1] 'Indigenous People' in Canada are composed of First Nations, Métis, and Inuit, as defined in Section 35 of the Canadian Constitution of 1982. Where applicable we have used the most specific name to refer to the Indigenous group or population

[2] 'Food security' "is defined as "inadequate or uncertain access to food because of financial constraints" (Health Canada, 2017, p 13).

for SSB taxation were made without prior consultation with Indigenous groups, key stakeholders of the policy, even in this era of reconciliation. Concerns have been raised regarding price-based policies which target behavior change at the consumer level rather then addressing determinants that shape food consumption habits (Riediger & Bombak, 2018).

The proposed SSB tax policy poses potential health and socio-economic burdens on Indigenous groups in Canada. The urban Indigenous population[3] is one such group, given that over 50% of Indigenous people in Canada live in off-reserve, metropolitan areas (Anderson, 2019). Urban Indigenous people are more likely to experience food insecurity, live separately from non-Indigenous people (Anderson December 20, 2019) in 'inner-city[4]' neighborhoods with limited number of full-service grocery stores. Due to the intersectionality of poverty and high cost of food in urban Indigenous communities (Skinner, Pratley & Burnett, 2016), the behavior modification intended by the proposed tax may be challenging. Urban Indigenous populations face social and structural challenges that differ from those encountered in rural and on-reserve settings. In comparison to rural and remote populations, urban Indigenous communities are typically more culturally diverse (Hill & Cooke, 2013). Food environments also differ between urban and rural Indigenous communities in terms of food cost, proximity to food-carrying stores, and store hours (Skinner, Pratley & Burnett, 2016). Implementation of the tax in an urban setting

[3] Within the Canadian context, Indigenous people are also classified as either 'urban-based' if reside off-reserve in metropolitan centers, or as 'reserve-based' if reside within reserves (land "reserved" for Indigenous people) which is traditionally located in rural and remote areas, though increasingly urban reserves are being developed (Congress of Aboriginal Peoples, 2019).

[4] Inner-city neighborhoods in the Canadian context is "characterized by lower average family incomes and higher rates of single parent families, unemployment, Aboriginal people, and recent immigrants compared to suburban areas" (Heaman et al., 2014) (MacKinnon, 2020).

may be especially damaging because of the lack of full-service grocery stores, and abundance of convenience stores with elevated food prices (Skinner, Pratley & Burnett, 2016).

As observed in jurisdictions that have already imposed the tax, evidence regarding its effectiveness is limited and inconclusive, particularly among low-income (Teng et al., 2019; Sacks, Kwon & Backholer, 2021) and Indigenous populations (Browne et al., 2020). Existing evidence however does indicate that response to the tax varies among different segments of a given population. Such differential outcomes are in part influenced by socio-economic factors and existing consumption patterns of a given group (Teng et al., 2019; Andreyeva et al., 2022). Policy makers should be especially cautious given that like other sin taxes, the proposed SSB tax is regressive (Ross & Lozano-Rojas, 2018), and may be stigmatizing among already marginalized populations (Riediger & Bombak, 2018). Those who do not reduce their SSB consumption if the proposed tax is implemented, may be adversely affected financially by having less available income, as well as socially, considering the increased stigma surrounding consumption of sugary beverages (Waugh, 2022; Bombak et al., 2019).

It is crucial to examine how the proposed SSB taxation may enact or perpetuate stigma. Stigma is an insidious process that among Indigenous people is driven in part by unequal racial power dynamics rooted in colonialism and is intersected by other social identities such as gender and socio-economic status (Public Health Agency of Canada, 2019). Stigma in the context of health care may result in worse mental health outcomes, healthcare avoidance, and adverse physical health outcomes, such as diabetes (Public health Agency of Canada, 2019).

Given concerns raised over the ethical merit of a proposed SSB tax, its regressive nature, potential negative social implications, inequities in SSB intake, and existing health disparities, it is critical to explore the acceptability of SSB taxation among urban Indigenous peoples to inform

discussions regarding its proposed implementation. Furthermore, the existing disparities experienced by Indigenous people are a direct result of colonialism, as reported in the Truth and Reconciliation Commission (2015), and as such, a critical inquiry should be conducted through a decolonizing lens. Therefore, considering the socially constructed nature of the proposed SSB tax policy – the objectives of this study were to examine:

(1) experiences of purchasing SSB; and

(2) the perceptions of the proposed taxation of SSB among urban Indigenous adults living in Winnipeg's North End (NE).

Exploring experiences purchasing SSB and acceptability of taxation is a necessary step in informing health policies and predicting unintended consequences. Specifically, addressing these research objectives will provide insight into whether Indigenous people already experience, internalize, or elicit stigma associated with SSB intake. Experiences shape attitudes, while attitudes influence the perceived impact and acceptability towards the tax. Given that taxes carry strong social connotation, taxing SSB may then perpetuate the already existing attitudes and associated stigma.

This thesis is structured as a "sandwich thesis", containing a literature review, methods, two manuscripts to be submitted for publication, and a general discussion. The results are presented here as two separate manuscripts: chapter 4 addresses the first objective to explore experiences purchasing SSB. Chapter 5 addresses the second objective to explore acceptability of the proposed SSB tax. I conclude the thesis with an overarching discussion of the study findings, knowledge translation, implications, strengths and limitations, and future directions.

Contribution of Authors

The manuscripts included here are the result of input from numerous other individuals who will be included as co-authors when manuscripts are submitted for publication. MK will be first author. The following other individuals have contributed to the manuscript development.

NR – Co-developed study concept and acquired study funding; co-interviewer; supervised MK; assisted with drafting

JL – Co-developed study concept

MC – Co-developed study concept, oversaw research, and granted access to community

RD – Led participant recruitment and participated in data interpretation

LT – Advisory committee member

AS – Advisory committee member

AB – Involved in developing study concept, developed initial interview guide

Chapter 2: Literature review

Sugar sweetened beverages

Definition

The most commonly used definition of "sugar-sweetened beverages" includes drinks sweetened with added sugar such as pop, energy drinks, and vitamin water. The term "beverages containing naturally occurring sugars" refers to drinks containing intrinsically occurring sugar such as 100% juice and unsweetened milk. The term "sugary beverages" or "sugary drinks" is used to refer to drinks that contain naturally occurring sugar (e.g. 100% juice, milk), those with added sugar (e.g. pop), or both (e.g. flavoured sweetened milk) (Jones, Veerman & Hammond, 2017).

Some variation exists in the definitions and inclusion criteria of sugary beverage categories in research studies, population nutrition surveys, and policies. Sweetened alcoholic beverages, beverages sweetened by consumer, or to order (i.e., sweetened tea or coffee, or Frappuccino's), infant formula, and diet beverages tend to be excluded. Additionally, beverages included in the "sugar-sweetened beverage" taxation policies vary between jurisdictions (Riediger, Neufeld, Tait, Turnbull, Bombak, in press; Forberger et al., 2022). For example, some jurisdictions such as Philadelphia, PA, do consider and include artificially sweetened beverages (i.e., diet drinks) to be taxed (Forberger et al., 2022). Due to this variability, in this thesis, the term "sugary beverage" will be used as an umbrella term including all sweet beverages without strictly defined boundaries with regards to the origin of the sugar, while "sugar sweetened beverages" will specifically refer to drinks with added sugar. Where possible, we refer to specific beverage types (e.g. pop, energy drinks, sweetened coffee, etc) when referenced in cited studies or the present study.

Sugar-sweetened beverage intake

A growing body of evidence suggests that off-reserve Indigenous people are consistently found to have higher SSB intake across a range of regions and age groups as compared to the general Canadian population (Jones et al., 2019; Garriguet, 2008; Statistics Canada, 2015). Prevalence of SSB consumption is significantly higher among off-reserve Indigenous children and youth, compared to their non-Indigenous counterparts. Data from Canada's 2006 Aboriginal Children's Survey reported that more than half of Indigenous children ages 2 to 5 drank soft drink or juice beverages at least twice a day (Statistics Canada, 2015). In a study conducted in Ontario, consumption of energy drinks was higher among Indigenous versus non-Indigenous students attending secondary school off-reserve (Reid, Hammond, McCrory, Dubin & Leatherdale, 2015). A study conducted in Edmonton, Alberta, reported that frequency of soft drink and fruit juice consumption was significantly greater among Indigenous youth compared to other racial/ethnic groups (Kolahdooz et al., 2018).

Evidence also suggests that Indigenous adults have higher intake of SSB compared to other racial/ethnic groups in Canada. Analysis of the 2015 CCHS, the most recently collected dietary data on a representative sample of off-reserve Canadians, revealed that compared to all other racial/ethnic groups, Indigenous people consumed more SSB both in volume and calories (Jones et al., 2019). According to the 2004 (CCHS), among females ages 19-30 years old, 61.1% of Indigenous women and only 26.3% of non-Indigenous women reported daily consumption of SSB (Garriguet, 2008). Among men ages 31-50 years old, 56.2% of Indigenous men compared to 29.4% of non-Indigenous men reported daily consumption of SSB (Garriguet, 2008). Highest intake of alcohol by volume was reported by white Canadians and those in the highest income quartile (Jones et al., 2019). Water consumption was greatest among the highest-income quartile,

and significantly lower among the lowest-income quartile (Jones et al., 2019). Analysis of the 2015 CCHS comparing diet quality reported significantly lower health eating index scores among Indigenous compared to non-Indigenous populations, that continue to persist as compared to data from 2004 (Riediger, LaPlante, Mudryj & Clair, 2022a). Notably, the same analysis revealed that consumption of 'other' foods, which include SSB, decreased between 2004 and 2015 in the Indigenous sample (Riediger et al., 2022a).

Furthermore, national SSB consumption patterns in Canada are not static and have changed considerably over time, notably without the implementation of a SSB tax. Between 2004 and 2015 in Canada, consumption of sugary sweetened beverages decreased significantly ($p<0.0001$) in volume and energy by 26% and 20%, respectively (Jones et al., 2019). Furthermore, the consumption of 100% juice, plain milk, other unsweetened beverages, and diet or light beverages also decreased significantly by volume and energy (except for diet or light drinks volume $p=0.0557$) (Jones et al., 2019). On the other hand, energy drinks, sweetened coffee, and flavoured water were reported to have increased per-capita volume sales of 638%, 579%, and 527%, respectively, during the same time period (Jones, Veerman & Hammond, 2017). Data on changes in SSB intake among Indigenous populations between 2004 and 2015 is not yet available, but is a focus of the larger study from which this is thesis is derived.

Determinants of sugar-sweetened beverages consumption

Sociodemographic factors, life circumstances, food security, health and well-being, and quality of life have considerable influence on the consumption prevalence of SSB among Indigenous people. Studies conducted with Indigenous Australian parent-child dyads, reported that SSB consumption prevalence was lower among those living in advantaged neighborhoods, children in the custody of caregivers who were employed, and in the care of families with

financial security (Thurber et al., 2014; Thurber et al., 2020), as well as children whose mothers were 21 years of age or older compared to under 21 at the time of their birth (Thurber et al., 2020). Financial instability was demonstrated to have long lasting effects on the consumption of SSBs. A longitudinal study in Quebec revealed that income trajectories have a lasting impact on children's SSB consumption patterns (Kakinami et al., 2014). Children who were intermittently exposed to poverty continued to consume more SSB compared to children who never experienced poverty (Kakinami et al., 2014). Indigenous children whose caregiver had lower educational attainment had higher intake of SSBs (Thurber et al., 2014). In Canada, lower level of educational attainment was associated with higher consumption of soft drinks, primarily among men (Nikpartow, 2012). Analysis of the 2015 CCHS reported that greater consumption of SSBs is associated with socio-economic status, but varies with sex and specific socio-economic indicators such as education (Warren et al., 2022).

Food insecurity is also associated with greater intake of SSB and is more prevalent among Indigenous people (Jernigan, Huyser, Valdes & Simonds, 2017; Batal et al., 2021; Skinner, Pratley & Burnett, 2016). Food insecurity is defined as "inadequate or uncertain access to food because of financial constraints" (Health Canada, 2017, p 13). A study conducted with Indigenous families from food insecure households in the United States, reported a significantly higher intake of 100% fruit juices and SSBs among adults, and a significantly higher intake of soda and sports drinks among children (Tomayko et al., 2017). Among Australian Indigenous people living in an urban setting, consumption prevalence of SSB was significantly higher as compared to rural Indigenous people (Thurber, Bagheri, Banwell, 2014).

Analysis of the 2015 CCHS revealed that food insecurity and low income are associated with higher prevalence of SSB intake among female adults; lower educational attainment was

associated with greater mean caloric intake of SSB on a given day among adult males (Warren et al., 2022). However, an analysis of overall diet quality revealed diet quality is lower among Indigenous adults compared to non-Indigenous independent of food security – highlighting additional factors influencing diet quality (Riediger et al., 2022). Food insecurity is also associated with poorer mental health outcomes (Davison et al., 2017), injuries, infectious diseases, and mortality (Men et al., 2020) which are experienced disproportionately by Indigenous people in Canada due to the ongoing impacts of colonialism (TRC, 2015). Importantly, this research demonstrates that food insecurity impacts health through pathways other than nutrition, which needs to be considered in assessments of a tax targeting beverages disproportionately consumed by food insecure individuals.

Mental health problems have been strongly and positively associated with the consumption of SSB among children and adults (Kadel, Schneider & Mata, 2020; Wang et al., 2022). Longitudinal evidence suggests that SSB consumption increases and is used as a coping mechanism in response to poor mental health. Specifically, increased intake of SSB has been linked to post-traumatic stress disorder symptoms (Hirth et al., 2011; Vilija & Romualdas, 2014), exposure to violence (Piontak et al., 2017), as well as experiences of bullying in school (Park et al., 2013). Indigenous people in Canada continue to grapple with the impact of colonialism evidenced by higher rates of depression (Firestone., 2015), suicide (Pollock et al., 2018), post-traumatic stress and inter-generational trauma (Hajizadeh, Bombay & Asada, 2019; Gone et al., 2019).

Furthermore, social networks and family support are important mediators between broader social determinants and SSB consumption. For instance, SSB consumption prevalence was significantly lower among children whose caregivers had stronger social and emotional

support, as well as large networks of family and friends (Thurber et al., 2020). SSB consumption prevalence was significantly lower among children belonging to families who were exposed to fewer financial and life stressors, as well as prejudice and discrimination (Thurber et al., 2020). The association with discrimination suggests more research is required to examine *how* discrimination may influence SSB intake. SSB consumption prevalence was significantly lower for children whose families had sufficient access to health care services, born to mothers who regularly attended parental check-ups, and whose caregivers were in good social, emotional, and physical health (Thurber et al., 2020).

Consumption of SSB is also socially influenced, through attitudes, norms, and beliefs of those closest to us. However, other people's influence may be further mediated by their racial/ethnic group, nature of the relationship, personal attitudes, and age of consumers. For example, social support for healthy eating was also demonstrated to influence SSB intake (Lemacks & Greer, 2020). Lower SSB intake was associated with greater social support for healthy eating levels among Indigenous people, but not white people, living in South Louisiana and Mississippi (Lemacks & Greer, 2020). In a study conducted with white, American parent-adolescent dyads, consumption of SSBs was independent of parental attitudes towards SSB (Imoisili, Park, Lundeen, Yaroch, & Blanck, 2020). Instead, adolescents' own feelings were a better predictor of their SSB consumption patterns (Imoisili et al., 2020). For instance, adolescents who agreed with the statement of feeling confident about their ability to regulate their SSB intake, and or disagreed with the statement of feeling bad for not limiting SSB consumption – were more likely to consume SSB (Imoisili et al., 2020). However, parental consumption of SSBs did influence their children's intake, as adolescents were more likely to consume SSB daily if their parents were also consuming SSB (Imoisili et al., 2020). A study

exploring attitudes towards SSB among low-income minority families in America, revealed that young children, whose parents had more negative attitudes towards SSB, were less likely to consume SSB in the first years of life (Woo Baidal et al., 2018). In the same study, parents who had more negative attitudes towards SSB, also consumed fewer SSB (Woo Baidal et al., 2018).

Public attitudes toward sugar-sweetened beverages

With the aim of mitigating the health complications associated with SSB and discouraging their consumption, the World Health Organization has recommended SSB taxation as a public health measure (World Health Organization, 2016). Following suit, numerous countries, including Mexico, Chile, United Kingdom, and several American counties, have already introduced taxation of SSB. The combination of these health messages and policies inevitably influence and reflect the general public's attitudes and social narratives regarding SSB.

Researchers examining attitudes among the general public, including health care professionals, reported that SSBs carry an overall negative connotation among participants. A study examining attitudes in rural Michigan, reported that while SSB consumption was largely normalized, SSBs and consumers were stigmatized (Bombak, Colotti, Riediger, Raji & Eckhart, 2019). A majority of participants reported expressing, witnessing, and or experiencing judgment during the purchasing or consumption of SSBs (Bombak et al., 2019). Children consuming SSB, and especially their parents, were judged for their beverage choice (Bombak et al., 2019). Female caregivers were frequently highlighted when a parent was identified by gender, reflecting the social expectation put on mothers (Bombak et al., 2019). Participants also associated SSBs with individuals of higher weight and lower income (Bombak et al., 2019). Individuals with higher weight were scrutinized more for SSBs intake than those perceived to be thinner (Bombak et al.,

2019). Interestingly, certain sugary drinks carried different connotations. For example, Starbucks beverages, were described as belonging to a particular gender, race, and class – identified by participants as the "basic white girl" drink. Coffee was considered by participants as a healthier alternative (Palmedo & Gordon, 2019), or simply not identified as a SSB when sweetened (Bombak et al., 2019).

A study examining attitudes towards SSB among patients, caregivers of patients, and employees at a community health clinic in New York, similarly reported that some participants reported soda consumption was normal, something they grew up with (Palmedo & Gordon, 2019). Some participants expressed health concerns over their family members drinking SSBs, and one participant refused to buy his relative pop when they came to visit (Palmedo & Gordon, 2019). Participants who consumed SSBs expressed perceiving SSB as unhealthy but drank anyways, reflecting a cognitive dissonance (Palmedo & Gordon, 2019).

Sin taxes

Social meaning of taxes

Taxes have the power to assign and represent social meaning (Carruthers, 2015). For example, positive meaning was applied by the tax system to reward paid labor in the form of tax credits and home ownership in the form of tax deduction (Carruthers, 2015). Other favorable activities such as entrepreneurship, charitable contributions, savings, and capital gains are also rewarded through income tax means (Howard, 1993). On the other hand, activities that are considered harmful such as tobacco and alcohol consumption are highly taxed. Such activities although not illegal, carry strong moral disapproval and stigmatization (Carruthers, 2015). As a result, this disapproval transcends public attitudes and behaviors and is expressed through public policy (Carruthers, 2015).

Consequently, taxes known as “sin” or “sumptuary” taxes are imposed by a government or proposed by political figures on products that are believed to warrant corrective action (Hoffer, Shughart & Thomas, 2014). “Sin taxes” are used as an instrument to reduce the consumption of products that are believed to have negative effects on health or otherwise. The objectives of such measure is to (1) reduce or eliminate their consumption, as well as (2) generate revenue to offset the health cost of consuming “sinful” products (Carruthers, 2015; Hoffer, Shughart & Thomas, 2014). Sin tax is a paternalistic tool, justified by the premise that it will make it harder for citizens to consume undesirable products that are “bad for them” and that they “cannot abstain from themselves” (Juul Nielsen & Jensen, 2016).

A distinct aspect of excise taxes, as opposed to price increases by industry, is the ‘signaling’ effect (Licari & Meier, 2000; Álvarez-Sánchez et al., 2018). Instead of simply raising prices, policy makers extensively publicize the reason behind the policy and consequences of noncompliance, because it is assumed that “if citizens understand the justification for a new disincentive, they are apt to act not only upon the disincentive itself, but also on the extra information they receive from government” (p 875-6) (Licari & Meier, 2000). Effective communication of the information is vital to successful compliance, and thus a crucial role of the government (Licari & Meier, 2000). In this regard, even the discussion of proposed implementation of a SSB tax has the capacity to change behavior (Stacey et al., 2021; Taylor et al., 2019).

Efficacy and equity of ‘sin’ taxes

Taxation of SSB raises an equity concern as it runs the risk of exacerbating economic burdens among Indigenous and low-income groups due to its regressive nature. SSB is regressive due to expenditure patterns associated with consumption goods (Ross & Lozano-Rojas, 2018).

As income increases, spending on sugary drinks as a proportion of income declines, and vice-versa. Given that the proposed tax will be applied irrespective of one's income level, the average tax burden will increase with lower income, leaving less money for other expenses among lower-income households (Ross & Lozano-Rojas, 2018). For instance, Ross and Lozano-Rojas (2018) estimated that if a SSB tax were implemented in America, households with an annual income below $100,000 would generate approximately three-quarters of the revenues. Combined with the evidence that SSBs are consumed at a greater frequency, volume, and energy among Indigenous and lower-socioeconomic groups in Canada, these populations will disproportionately incur the greatest economic cost, which must be considered as a pathway by which a SSB tax may negatively influence health.

As high consumers, people with lower-incomes who already spend proportionally more on SSB, are less likely to respond strongly to price increases due to the tax (Ross & Lozano-Rojas, 2018). There must be other underlying reasons for consuming high levels of SSB, as previously reviewed. A study that presented participants with price increase of SSB scenarios, found that the lowest income quintile group versus the highest, was consistently the least likely to decrease SSB purchases in response to all price increases (Blake et al., 2018). In all SSB pricing scenarios, higher frequency consumers had a lower predicted reduction of SSB purchasing when compared to the lower SSB consumption frequency group (Blake et al., 2018). The authors concluded that price elevation strategies may result in the reduction of SSB consumption among un-intended segments of the population, rather than in the high frequency consumers and lower income groups.

Furthermore, as with tobacco taxes, such regressive taxes have not been demonstrated to be effective at reducing smoking rates among lower-income and Indigenous populations. For

instance, following the implementation of a tobacco tax in the United States, counties belonging to the higher income quantiles experienced greater rate of decline in smoking prevalence, compared to counties in the lower income quantiles (Dwyer-Lindgren et al., 2014). The same study also reported that counties with large population of Indigenous people experienced lower rate of decline in smoking prevalence and were among those with the highest cigarette smoking rates (Dwyer-Lindgren et al., 2014). Similarly, despite the heavy tobacco taxation in New Zealand, the Indigenous Māori people spend considerably more on tobacco tax compared to all other ethnic groups, reflecting the higher prevalence of tobacco use (Siddharth, 2019).

In addition to the financial burden of "sin" taxes, there are also potential social implications. In a qualitative study, participants who consumed tobacco found the tax to be a burden, challenging their personal freedom and complicating their financial situation (Hoek & Smith, 2016). Participants also interpreted the tax as having an underlying paternalistic message telling them they should not smoke (Hoek & Smith, 2016). The tax was described by participants to inflict psychological pressure and stress, especially in cases where cigarettes were a coping mechanism, and often one of the few pleasures participants had in their life (Hoek & Smith, 2016). Researchers found that among those who could not afford cigarettes, many internalized feelings of disgust and stigma, diminishing their self-worth (Hoek & Smith, 2016). Participants who partook in butt recycling expressed similar feelings and were criticized by other participants (Hoek & Smith, 2016). Those who could not afford tobacco switched to coping behaviors such as collection of cigarette butts off the street (Hoek & Smith, 2016). In response to the increased cost of tobacco, participants reported displacing other purchases and employing conservation strategies – saving more on food and electricity to afford tobacco (Hoek & Smith, 2016). In some cases, participants had to make a choice between putting gas in their car to see their friends or

affording tobacco (Hoek & Smith, 2016). Overall, the policy and its effects were described in punishing and violent terms such as “slapping of the tax”, “punitive measure”, and “psychological pressure” (Hoek & Smith, 2016).

Sugar-sweetened beverage taxation

Not all SSB tax policies are created equal. Policies can vary based on the type of tax imposed, categories of drinks included, and whether it is a price-based, volume-based, calorie-based, or nutrient-specific tax. For example, SSB taxes may be levied as excise, import, value-added, and/or sales tax, to name a few. In Canada, soft drinks are taxed under the Federal Goods and Services Tax (GST) and the Harmonized Provincial Sales Taxes (HST) in Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, and Ontario, while Manitoba applies a provincial sales tax instead of the HST (Government of Northwest Territories, 2019). Most recently, Newfoundland and Labrador, has implemented Canada’s first excise tax on SSB (Department of Finance Newfoundland and Labrador, 2022). The tax constitutes an increase of $0.20 per litre on ‘ready-to drink’ packaged beverages, as well as fountain drinks (Department of Finance Newfoundland and Labrador, 2022). In 2020, British Colombia implemented a sales tax on SSB, as well as beverages with natural or artificial sweeteners (Government of British Colombia, 2020). The B.C. sales tax also includes beverages dispensed through soda fountains and vending machines, but excludes machines dedicated to dispensing coffee and/or water. Interestingly, according to the 2015 CCHS, B.C. had the lowest mean SSB and diet drink intake, despite being one of the only provinces without a sales tax on SSB (Jones et al., 2019).

Among other jurisdictions, the types of SSBs taxed differ significantly. For example, New York State levies tax on mixed alcoholic beverages, bottled water, coffee and tea sold or

served in a cup or container, while exempting diet drinks, soy milk, coffee creamers, and dairy products (New York State, 2020). On the other hand, while Berkley, California, also exempts non-dairy milks or 100% juice from taxation, it does not impose taxes on bottled water or beverages containing alcohol (City of Berkley, n.d.).

The efficacy of SSB taxes at reducing purchasing and consumption of SSB varies due to factors such as socioeconomic position, Body Mass Index[5] (BMI), pre-tax frequency of purchasing, place of residence (i.e., rural or urban), as well as existing beverage prices. Seiler and colleagues (2019) reported that low income and higher BMI households in Philadelphia were less responsive to the tax, reporting to have a smaller decrease in purchasing of SSB. Similarly, Aguilar (2019) and colleagues reported a larger decrease of caloric intake from SSB among higher income households in Mexico, although Colchero (2017) and colleagues reported the opposite, likely due to differences in sales data collected. In Chile, high socioeconomic households purchased significantly less compared to low socioeconomic households (Caro et al., 2018; Nakamura et al., 2018), which showed no change in SSB purchasing habits following the tax implementation (Caro et al., 2018).

Attitudes and acceptability of taxation of sugar-sweetened beverages

Public acceptability is an important aspect of the development and implementation of health interventions (Sekhon, Cartwright, & Francis, 2017). Evidence suggests that acceptability among the target population is necessary for the effectiveness of the policy in changing behavior and benefiting overall health (Sekhon, Cartwright, & Francis, 2017). In the health care setting,

[5] Body Mass Index is a formula used to estimate individual leanness based on their height and weight, measured as weight (kg) divided by height $(m)^2$

patients were more likely to follow their treatment plan if they considered it to be acceptable (Sekhon, Cartwright, & Francis, 2017). The theoretical framework of acceptability defines acceptability as the extent to which interventions are perceived it to be appropriate based on prospective (anticipated), concurrent and or retrospective (experienced) responses to the intervention (Sekhon, Cartwright, & Francis, 2017). Perceived effectiveness, ethicality, self-efficacy, affective attitude, intervention coherence, opportunity costs, and burden (Sekhon, Cartwright, & Francis, 2017).

Experiences shopping for food in urban food deserts

A growing line of evidence suggests that consumer experience shopping for food is a key determinant of overall diet quality, particularly among minorities and low-income residents of urban food deserts (Cannusico et al., 2014; Hill, 2021; Alkon et al., 2013; Miewald & McCann, 2014). In-store experiences act as reinforcements or deterrents, shaping store preferences and shopping patterns. The grocery outlets people choose to shop in may consequently shape the type of food, including the quality, variety, and affordability, they have access to (Pittman, 2020; Bennett et al., 2015; Cannusico et al., 2014). These patterns are part of personal and community "foodways", defined as "the cultural and social practices that affect food provisioning, how and where people purchase food, and what motivates their food access preferences" (Alkon et al., 2013). However, most public health research fails to account for these nuances by focusing on quantitative parameters such as the number and distance to grocery stores, availability of certain foods, and or food prices (Cannusico et al., 2014). Several studies examining procurement of food in urban, food deserted spaces urge researchers to expand their inquiry beyond geographic and economic parameters to also consider socio-cultural aspects when investigating and designing health policies addressing food insecurity (Cannusico et al., 2014; Hill, 2021). Food

carrying outlets are sites of social exchange, and we thus must acknowledge the social, relational, and political aspects of food provision and power structures in the urban context (Miewald & McCann, 2014; Hill, 2021). The organization of the foodscape reflects political and power structures (Miewald & McCann, 2014). Local and municipal governments have the power to encourage and sponsor the development of various infrastructures to promote gentrification for example (Miewald & McCann, 2014). Chain grocers also have the power to decide in which neighborhoods to open new or close existing grocery stores. Locating supermarket chain stores in high-income suburbs instead of inner-city neighborhoods leads to "spatial supermarket redlining" which make full-service grocery stores less accessible to residents of low-income urban areas (Zhang & Ghosh, 2016; Eisenhauer, 2001; Shaker et al., 2022).

Food and grocery outlets are social hubs and are not exempt from socio-economic and or racial discrimination. Studies examining in-store experiences reported that social characteristics such as roles (customer vs cashier), socio-economic status and stratification, education level, and race influenced the nature of interactions (Pittman, 2020; Bennett et al., 2015; Cannusico et al., 2014; Reese, 2019; Zenk et al., 2014). Customer experiences include treatment, customer service, and interactions with other patrons. Specifically, the degree of attention, assistance, friendliness, and reactions received from staff and other shoppers, as well as perceived belongingness influenced how welcomed patrons felt (Cannusico et al., 2014; Hill, 2021). These have considerable influence on how shoppers maneuver within and beyond their immediate retail and food environments given that positive encounters were actively sought after, while unpleasant interactions were minimized (Cannusico et al., 2014: Hill, 2021).

Studies examining how racial discrimination is manifested and perceived in a retail context reported that minorities encounter differential treatment and racially motivated consumer

discrimination (Grier, Johnson & Scott, 2022; Pittman, 2020). Specifically, African, Asian, and Hispanic American shoppers reported being suspected as thieves and monitored by store staff, questioned when purchasing items perceived to be outside of their budget, and encountered longer check-out or assistance times (Bennett, Hill, Daddario et al., 2015; Pittman, 2020). Further research is required to understand the prevalence, type, and impact of racially motivated consumer discrimination on food shopping and overall diet quality, though discrimination is established as a predictor of adverse health outcomes (Paradies et al., 2015).

Limited yet growing evidence shows that shoppers actively avoid specific stores where they experienced negative interactions. Shoppers in urban Philadelphia reported avoiding grocery establishments where they received derogatory reactions associated with their gender or race (Cannuscio 2014). The same study reported that customers felt more comfortable among those they perceived to belong to the same socio-economic status group (Cannuscio 2014).

Grocery and food establishments carry symbolic socio-economic meaning. For instance, store inventory as well as how food is displayed reaffirms that there is a class difference (Cannuscio et al., 2014). In one study, some expressed wanting to shop in more established food stores because it brought them closer to the class they aspire to be a part of (Cannuscio et al., 2014).

Furthermore, social stratification is actively perpetuated by the urban food landscape (Cannuscio et al., 2014). Social interactions are of great concern given that Indigenous and low socio-economic groups already disproportionately experience worse health outcomes and barriers to food access. If consumers are deterred from stores carrying healthful food or stocking a variety of options that are typically situated and available to higher income groups, this may

mean lower SES consumers resort to shopping in grocery stores carrying less healthful foods, limiting their food access, and perhaps reinforcing their social disadvantage or lower class.

A systematic scoping review of retail food sector and Indigenous people in high-income countries reported common issues of: limited grocery store availability; heightened exposure to unhealthy food environments; inadequate market food supplies (high prices, poor quality and availability); and common socio-economic inequities associated with colonialism (Kenny et al., 2020). Poor quality includes damaged food, close or exceeding expiry date, etc. (Kenny et al., 2020). Of note is the "socially patterned" and heterogenous access to food outlets among different groups (Kenny et al., 2020).

Public health policy in the context of (de)colonization

Despite the robust evidence that SSB consumption leads to chronic disease such as type 2 diabetes (Malik, 2010), food consumption patterns do not develop in a vacuum. Instead, it is important to consider the social contexts that lead to such consumption habits (Liburd, 2003). Type 2 diabetes has long been considered a disease of modernization and industrialization due to its rapid increased prevalence among colonized, Indigenous societies (Eaton, Konner & Shostak, 1988; Liburd, 2003). Factors such as loss of political autonomy, traditional ways of subsistence, and cultural changes have been hypothesized to increase the burden of diabetes (Liburd, 2003).

Indeed, the Truth and Reconciliation Commission (TRC) states that prior to the introduction of the settler regime and residential schools, such chronic diseases did not exist (TRC, 2015c). This notion is emphasized in TRC call to action number 18, which calls "upon the federal, provincial, territorial, and Aboriginal governments to acknowledge that the current state of Aboriginal health in Canada is a direct result of previous Canadian government policies, including residential schools" (TRC, 2015c, p. 2).

Colonial invasion has directly impacted health and food security among Indigenous peoples in Canada and Manitoba. Historical, as well as contemporary, policies and structures put in place continuously exacerbate health inequalities of Indigenous peoples. Settlers brought with them new illnesses, wiped out important animal food sources, as well as displaced Indigenous peoples from their traditional lands into reservations (TRC, 2015). Assimilation was at the forefront of many government initiatives such as residential schools. However, the impacts of Residential Schools on Indigenous peoples' dietary patterns and health are still felt strongly today because they carry tremendous intergenerational trauma.

The Indian residential school system was a government funded program which operated across Canada between 1883 and 1996. The school system was run by various religious denominations and comprised of boarding schools for Indigenous children. Despite the title, the main goal of residential school was not education but rather the disconnection of children from their community and traditions (TRC, 2015b). Children were forced to leave their parents, traditional ways of life, as well as be subjected to constant hunger and low-quality food, with full knowledge of the government (TRC, 2015b). The assimilation process was evident in the dietary regime implemented in schools (TRC, 2015a). Many residential school survivors describe their experience in school as a state of constant hunger, and the food provided as foreign, flavourless, or rotten (TRC, 2015d). Some schools prohibited students from foraging for wild foods (TRC 2015a). Robbed of traditional food gathering knowledge and having only received elementary level education (TRC, 2015a), many Indigenous young adults were left without the required self-subsistence skills. Many had trouble fitting back in with their communities and having the opportunity to learn hunting and fishing skills (TRC, 2015b). Due to the poor education provided

to Indigenous adults, many had a hard time finding employment, which further contributed to poverty and food insecurity (TRC, 2015a).

There is a need to not only recognize and incorporate Indigenous health determinants into the policy, but also ensure that it leads to measurable change (George et al., 2019). Analysis by George et al (2019) identified several systemic factors that underline the course of policy making and its impact on Indigenous health. The "role of the government" has been identified as a central theme defined by present-day policy making. Government has control over how policy targets are identified, framed, and implemented. Policy outcomes tend to be poorly implemented due to the fragmented nature of the governance bodies and departments (federal, tribal, Indigenous, provincial, etc.). Reflecting their power and privilege, policy makers tend to frame Indigenous people as the problem, as "other", which historically and presently led to assimilatory, patriarchal measures. It is worth noting that SSB are also categorized as "other" food in Canadian Food Guidelines. These measures continue to undermine Indigenous self-determination and incorporation of Indigenous knowledge and perspectives in policy making.

Indigenous health inequities and food determinants

Indigenous people worldwide are disproportionately affected by worse diet-related health outcomes compared to respective settler populations, such as obesity and type 2 diabetes (Anderson et al 2016; Maple-Brown, & Hampton, 2020). Compared to national estimates in Canada, Indigenous populations experience greater socio-economic inequities (Robson et al, 2016), higher rates of child malnutrition (Anderson et al, 2016), poorer diet quality and food security (Kenny et al., 2020; Luongo et al., 2020; Riediger, LaPlante, Mudryj & Clair, 2022a; Riediger, LaPlante, Mudryj & Clair, 2022b), and higher rates of diet-related chronic conditions such as type 2 diabetes (Harris, Tompkins & TeHiwi, 2017). Compared to Canada's national

averages, diabetes is more prevalent among Indigenous people, although it varies within and between the three groups (i.e. First Nations, Métis, and Inuit), off vs on-reserve context (PHAC, 2018), provinces and communities (Randall et al., 2019; Green et al., 2019). Among First Nations, diabetes is more prevalent in women compared to men (Green et al., 2019; Ruth, 2020), which corresponds to respective scores of diet quality (Riediger et al., 2022).

Evidence suggests that commercially sourced, prepared, and sold foods contribute the greatest proportion of calories to Indigenous peoples' diets, leading to higher intake of energy, sodium, saturated fat, and processed carbohydrates dense foods (as reviewed by Luongo et al., 2020). Specifically, greater SSB intake and related health outcomes among Indigenous versus non-Indigenous populations have been reported in high-income counties, including the USA (Tomayko et al., 2017), Australia (Australian Bureau of Statistics, 2015), and Canada (Garriguet, 2008; Jones et al., 2019).

Urban Indigenous people

For the purposes of this thesis, the term "urban Indigenous people" refers to First Nation, Inuit, and Metis people residing in a census Metropolitan area (CMA) or census agglomeration (CA). CMAs are area large enough to be divided into neighborhoods, also known as census tracts. According to the most recent 2016 census, 1.67 million people or 4.9% of total Canadian population, reported an Indigenous identity. Among the Indigenous population, 51.8% or 867,415 people, lived in a CMA of 30,000 people or more (Statistics Canada, 2017).

According to the 2016 Canadian Census of Population, approximately 24% of urban Indigenous adults and 30% of children and youth under 18, lived below Canada's official poverty line compared to only 13% of urban non-Indigenous people, as measured by the Market

Basket Measure[6], (Arriagada, Hahmann & O'Donnell, 2020). Percentage of urban Indigenous children and youth experiencing poverty were higher among those living with a lone parent at 51% (Arriagada et al., 2020). Percentage of those living in low-income households off reserve, is highest among First Nations at 29.3%, followed by Inuit at 22.1%, and Metis at 17.3% (Harding & St-Denis, 2021). Prevalence of food insecurity is nearly three times higher among Indigenous (28.2%), compared to non-Indigenous (12.6%), households (Tarasuk, Mitchell, Dachner, 2014). In the urban context, food insecurity appears to be even more prevalent with 38% of Indigenous adults, and specifically 41% of women and 34% of men, residing in a food insecure household (Arriagada et al., 2020).

Food Security in urban Indigenous context

In Canada, some populations experience more food insecurity than others (Tarasuk, Mitchell, Dachner, 2014). For example, Indigenous (28.2%), low-income (29.0%), and single mother (34.3%) households were more food insecure compared to the general Canadian population (12.6%) (Tarasuk, Mitchell, Dachner, 2014). In a review examining food insecurity among Indigenous people living in urban settings, low-income and the high cost of food were identified as the greatest barriers to obtaining healthy food (Skinner et al., 2016). Food insecurity is exacerbated in impoverished conditions, where there are competing obligations and insufficient budgets. When unexpected household costs are incurred, food budgets fall in priority and are often used in reconciling other financial responsibilities (Foley, 2005). Likelihood of

[6] "Market Basket Measure refers to the measure of low income based on the cost of a specific basket of goods and services representing a modest, basic standard of living developed by Employment and Social Development Canada (ESDC). The threshold represents the costs of specified qualities and quantities of food, clothing, footwear, transportation, shelter and other expenses for a reference family of two adults and two children."

food insecurity in an urban setting in Indigenous families increased with higher number of children in the household and decreased with greater traveling distance to food carrying stores because Indigenous families in close proximity to food outlets tended to shop more frequently and ended up spending more on food than intended (Tomayko et al., 2017).

Indigenous food sovereignty has been put forth as a framework to resist food insecurity in urban communities (Cidro et al., 2015). Indigenous food sovereignty involves the ability to exercise agency over food systems, production, and consumption (Morrison, 2011). Particularly, Indigenous food sovereignty outlines the importance for Indigenous people to reconnect with their food systems (Morrison, 2011). Considering food sovereignty in the Indigenous context and the proposed policy are important because of the inherent power imbalances within our food system (Martens, Cidro, Hart & McLachlan, 2016). Historically, Indigenous people's food management and access were heavily manipulated, leading to present day food insecurity in Indigenous communities (Martens et al., 2016). Reclaiming self-determination over food systems, including informing food policy, such as taxation, is an important aspect of food sovereignty (Martens et al., 2016).

Positionality

Similar to other researchers, I approached my project holding certain assumptions and beliefs shaped by my background and experiences. Acknowledging how my background and social position influenced my approach and decision-making is an important aspect of conducting qualitative research. Due to the interpretive nature of qualitative research, I actively made decisions and interpretations based on my personal epistemologies – a concept known as "researcher as instrument" (Carter, Lapum, Lavallée & Martin, 2014). Furthermore, as a non-Indigenous person conducting research with Indigenous individuals, I must also reflect on my position in relation to the research, community partners, and participants. By discussing my positionality, I reveal my personal history and identity to others, acknowledge my motivations, and hopefully, foster accountability and trust (Absolon & Willett, 2005).

As a Russian, Israeli newcomer born to a Jewish father and an 'ethnic' Russian mother (Tatar and Bashkir origin), I have experienced life differently to Canadian Indigenous people. Moving to Israel, and later to Canada I have been exposed to different cultures and ways of thinking. I believe my international, multicultural background has allowed me to be open-minded throughout the research process and engagement with community. Although I did not personally encounter the discrimination and loss faced by my dad's side of the family, stories of the Holocaust and racist encounters in Soviet Russia were imminent within our home. These stories have influenced how I think about other people's well-being, and the profound consideration I give to health determinants that lay deep to socially constructed narratives.

Before coming to Canada as a teenager, I never met or heard of Indigenous people. Through socialization in the Canadian society, I encountered negative social narratives and or romanticization of Indigenous people both in my personal and academic circles. I first moved to

Thunder Bay, Ontario, which similar to Winnipeg, has a high proportion of Indigenous people, anti-Indigenous racism, and corresponding wider health disparities. Throughout my undergraduate studies in psychology and nutrition, Indigenous people were often described in stereotypically racist terms as “vulnerable” people who follow unhealthy diets, are addicted to sugar, and have poor coping mechanisms. Later, thanks to courses taught by Indigenous scholars I learned about Indigenous strengths, as well as how colonialism, social determinants of health, and policies continue to influence Indigenous health and food patterns.

By undertaking this thesis project, I wanted to explore these factors and how they can be harnessed to foster decolonization in the context of the proposed policy. My primary goal was to build relationships with our research partners, and explore Indigenous people’s perceptions and acceptability of the proposed SSB tax. Through this inquiry I also hope to better understand Indigenous people’s attitudes and experiences with regards to the consumption and purchasing of SSB. My hope is that this work will facilitate and encourage future inclusion of Indigenous perspectives and ideologies in public health nutrition policy making.

Chapter 3: Methodology

Paradigm

Urban Indigenous people's attitudes towards SSB and the corresponding proposed tax have not been explored in the literature or by policy makers. The potential impact of a SSB tax for Indigenous people is a multifaceted phenomenon requiring thorough examination of contextual determinants and covert perceptions. To date, the global topic has been predominantly explored through quantitative approaches, focused on measuring or simulating the potential effectiveness of the tax at reducing population SSB consumption patterns, and the policy's potential to generate revenue. However, such deductive approaches fail to account for covert perceptions, experiences, and potential negative unintended consequences. In order to account for these nuanced phenomena, and address the research questions, a qualitative research approach is required. Qualitative research is characterized as an inductive approach aimed at understanding how individuals or groups ascribe meaning to a social or human problem (Creswell, 2014).

Theoretical frameworks

The qualitative design of this study was constructed on the principles of transformative and decolonizing frameworks. Transformative framework is based on the notion that knowledge is a reflection of society's power relationships and should be applied with the purpose of aiding marginalized individuals (Creswell, 2014). This framework dictates that a qualitative research design should include an action agenda that has the potential of changing participants' lives. This can be achieved by providing a voice to those who are typically silenced or whose voices are not considered in policy-making, or by directly improving participants' circumstances (Creswell, 2014). By employing this approach, we were able to provide participants with a platform to

voice their perspectives, and our community partners with the knowledge to inform their own advocacy efforts.

A decolonizing framework seeks to incorporate Indigenous perspectives and approaches to research, as well as recognize, decenter, and dismantle oppressive colonial systems and policies (Mlcek, 2017). Specifically, we were interested in addressing the main themes of settler colonialism – spatial structures, power structures, and social narratives – as they relate to the proposed tax on SSB (Barker & Battell, n.d.). Given that policy making is a socially constructed phenomena, it is important to understand social narratives and discourse around SSB, its consumers, and how the problem has been framed and constructed. Additionally, this project explored Indigenous people's perceptions of spatial and power structures with regards to the proposed SSB tax. Spatial structures are important when we consider how we grow sugar, where people purchase drinks (and associated costs) – especially in urban setting where the abundant convenience stores are significantly more expensive. Power structures, in the form of law and policy making, also brings about the questions of who has the ability to decide what we tax and what we do with the revenue. As seen with residential schools, a number of particularly harmful policies are directed at Indigenous children with corresponding negative social narratives regarding Indigenous parenting (e.g. Baskin, Strike & McPherson, 2015; Jacob, 2015). Furthermore, the moralistic nature of taxation of sumptuary goods has assimilatory undercurrents. Three main goals of Canadian 'Indian Policy', have been protection, civilization, and assimilation (Miller, 1991). Protect from exploitation, civilize by training in European values, and ultimately assimilate until total cultural eradication (Miller, 1991).

Overall, in the context of this study, decolonization involved actively seeking out and acknowledging colonial aspects of policies and dismantling them by incorporating Indigenous perspectives to challenge the corresponding spatial, power, and social constructs.

Design

Informed by the transformative and decolonizing frameworks, we employed a Community-Based Participatory Research (CBPR) design in partnership with National Indigenous Diabetes Association (NIDA) and Fearless R2W. Fearless R2W is an Indigenous-led community group in Winnipeg's North End (NE) focused on family welfare. CBPR is characterized as an approach to research where all partners equitably partake in decision making, sharing of knowledge and responsibilities in all phases of the research (Israel et al., 2005; Minkler & Wallerstein, 2008). The primary goal of CBPR is to generate knowledge that can be utilized to develop interventions and or policy changes that can improve community members' health and eliminate healthy inequities (Israel, 2005). As outlined and summarized by Israel and colleagues (2008) CBPR has 9 general principles. However, the unique context, purpose, and partners involved in the research will dictate what combination of elements will be employed. The central principles of CBPR are that:

> (1) CBPR recognizes community as a unit of identity; (2) CBPR builds on strengths and resources within the community; (3) CBPR facilitates collaborative, equitable partnership in all research phases and involves an empowering and power-sharing process that attends to social inequalities; (4) CBPR promotes co-learning and capacity building among all partners; (5) CBPR integrates and achieves a balance between research and action for the mutual benefit of all partners; (6) CBPR emphasizes public health problems of local relevance and also ecological perspectives that recognize and attend to the

> multiple determinants of health and disease; (7) CBPR involves systems development through a cyclical and iterative process; (8) CBPR disseminates findings and knowledge gained to all partners and involves all partners in the dissemination process; and (9) CBPR requires a long-term process and commitment to sustainability. (p. 49-52)

In line with the CBPR principles, we worked closely with our community partners on formulating research objectives, developing research instruments, collecting and interpreting data, knowledge translation, publication, and developing policy recommendations.

My supervisor, Dr. Natalie Riediger, has been working with NIDA, the main partner on the overarching project, to address concerns regarding SSB taxation. In 2017 NIDA was approached by a coalition of 25 health organizations to support a SSB tax. However, due to the potentially negative, regressive consequences of a SSB tax, NIDA declined the offer. Together, NIDA and Dr. Riediger discussed the problematic implication of a 'pop tax', how a tax on food fits with Indigenous food sovereignty values, as well as the importance of hearing Indigenous people's perspectives on the policy. Through these discussions, NIDA and Dr. Riediger developed the overarching study and CIHR funded grant: "Sticky money: Exploring the acceptability of a SSB tax among Canadian Indigenous populations". Given the heterogeneity among Indigenous communities, local partnerships with Indigenous communities were sought. For the present study, Dr. Riediger approached then Aboriginal Youth Opportunities (AYO!) – now our official partner is Fearless R2W.

Through her relationship with NIDA, AYO, and Fearless R2W, Dr. Riediger vouched and introduced me to these organizations/movements. I met the Executive Director of NIDA, in May of 2019; and members of Fearless R2W, including the co-founder, Michael Champagne, in August of 2019. Our partnerships with these organizations are central to this work as it informs

both the focus and course of this research, as well as facilitates access to study participants via community consent. Both NIDA and Fearless R2W have strong connections to the Indigenous community in Winnipeg.

Setting

This study was conducted with Indigenous participants residing in the NE neighborhood, located in Winnipeg, Manitoba, Treaty One Territory, and the homeland of the Métis Nation. According to the 2016 census data, Winnipeg has the largest Indigenous population (by number) of any metropolitan area in Canada, which constitutes approximately 12% of the urban population (City of Winnipeg, 2018). The vast majority of Indigenous people in Winnipeg identify as Métis (54%) or First Nations (44%) (City of Winnipeg, 2018). The Indigenous population is a young and fast-growing demographic, with 46 percent aged 24 years and under. Winnipeg's NE community, where study recruitment efforts were focused, is a low-income neighborhood with a large (28%) self-identifying Indigenous population (Winnipeg Regional Health Authority, 2015). Residents of the NE experience greater social and health disparities compared to the rest of Winnipeg—including higher unemployment rates (9.5% vs. 5.9%), diabetes prevalence (13.2% vs. 9.2%), percentage of overweight adults (65% vs. 54%), and current smokers (39% vs. 19%) (Winnipeg Regional Health Authority, 2015).

Sample

We recruited 20 Indigenous adults who identify as current residents of Winnipeg's NE neighborhood, or past residents, who maintain strong connection to the community. In order to be eligible for the study, participants had to meet the following inclusion criteria: (a) self-identify as Indigenous (First Nations, Metis, or Inuit), (b) be 18 years of age or older, (c) be comfortable speaking English, (d) live in the NE, and (e) be able to attend a one-hour interview. We

purposefully recruited participants who self-identified as regular SSB consumers, food insecure, mothers, and Elders.

Sampling procedures and recruitment

We employed a purposive sampling strategy using the inclusion criteria previously described. Purposive sampling is a procedure designed to identify and select participants who are especially knowledgeable about a phenomenon of interest (Palinkas et al., 2015). Purposive sampling aligns with the proposed study because it enabled a detailed exploration of information-rich cases belonging to specific social contexts (Ritchie & Lewis, 2013). Recruitment was led by a community research assistant through personal relationships and word-of-mouth. Additional recruitment efforts were directed through social media poster advertisements, and community events in partnership with Fearless R2W.

Ethics

The larger study obtained approval from the University of Manitoba Health Research Ethics Board (HREB) HS21878 (H2018:234) and the Master's student, the lead author, received approval for secondary data analysis HS24317 (J2020:065). NIDA and Michael Champagne also both entered into a formal research agreement with Dr. Riediger, including the provision for a graduate student thesis project. Myself and the community RA completed the Tri-Council Policy Statement: Course on Research Ethics TCPS (2014), and The Personal Health Information Act (2019) (Appendix A). All participants provided their informed consent prior to the commencement of the interview (Appendix B). Each participant received $50 cash or e-transfer honorarium, as suggested by community partners.

To ensure that the study aligned with the values and priorities of Winnipeg's Indigenous community, the course of the study evolved through a close collaboration with NIDA and

Fearless R2W. The study followed the principles of Ownership, Control, Access, and Possession (OCAP®) as designed for research conducted with First Nations (First Nations Information Governance Centre, 2014), and TCPS2: Chapter 9 of the Tri-council Policy Statement for Research involving the First Nations, Inuit and Metis peoples of Canada (Government of Canada, 2018). Given that this research project was conducted with an urban, off-reserve community, we also incorporated principles from "The Urban Indigenous Health Research Gathering" report completed in Winnipeg, Manitoba (Morton, 2019).

Fearless R2W and NIDA, prominent organizations in Winnipeg's Indigenous community, oversaw the research and granted access to community (Morton, 2019). As per TCPS 2 article 9.11 and OCAP, a formal research agreement was signed with NIDA and Michael Champagne outlining each party's responsibilities, plans for analysis, as well as access and ownership of the data. While the data will be stored by Dr. Riediger, Fearless R2W and NIDA will have access to aggregated findings. As per TCPS 2 articles 9.12-3 we applied a participatory approach to research that strives to benefit the priorities of the community. We recognize the diverse interests that exist within communities (article 9.6) by interviewing individuals from diverse backgrounds, Elders, as well as special interviews with small business owners in another sub-study (Quayyum et al, in press). To ensure reciprocal transfer of knowledge and skills, a community research assistant was hired as part of capacity building (Article 9.14 in TCPS2). The community research assistant completed training in TCPS-2 and PHIA, and assisted with recruitment, interviewing, revision of the interview guide, and interpretation of data.

Data collection

We collected data through qualitative, semi-structured interviews as this style provides the necessary structure to address the specific questions of the proposed study (Seidman, 2006).

Prior to all interviews, participants complete a demographic questionnaire to describe sample characteristics (Appendix C). The first 6 interviews were conducted in person at the University of Manitoba's Inner-City Social Work Campus, located in the NE neighborhood. Due to the COVID-19 social-distancing orders, remaining interviews were moved to over the phone. Once COVID-19 measures were put into effect, we switched to a phone interview protocol with the approval of the Research Ethics Board. In most cases, the community Research Assistant (Riel Dubois) contacted the participant and introduced us via email. In a minority of cases, participants emailed with interest to participate to the contact email listed on the recruitment poster. The consent form and eligibility questionnaire were sent to participants via email. Once participants confirmed eligibility and informed consent, an interview was scheduled. When calling the participants for interview we confirmed consent and eligibility verbally once again. The phone interviews were conducted in a 3-way phone call, with the participant, myself (Maria Kisselgoff), and the Principal Investigator/supervisor (Dr. Natalie Riediger) who also audio-recoded the interview. The $50 honorarium was transferred electronically.

The interviewer followed the interview guide, which was iteratively updated following discussions with Dr. Riediger, community research assistant, and participants (Appendix D). The community research assistant was present during the in-person interviews in order to ensure a safe environment for the participants and receive Capacity Building in the form of interview training as outlined by CBPR principles and TCPS2 chapter 9. Responses to questions were elicited via open ended questions, and prompts, as exemplified in the interview guide. The interviews were audio recorded and transcribed verbatim. During and following the interview, one of the interviewers took field notes. The notes consist of general impressions regarding how the interview went, the interviewee (i.e., talkative, dress), and impressions of the interview (i.e.,

did it provide new insights) (Seidman, 2006). These notes were used to provide better understanding of the participant in the analysis phase.

Data analysis

I approached data analysis using a theoretical thematic analysis as outlined by Braun and Clarke (2006). This type of analysis provides a rich, detailed account of select aspects of the data, rather than a description of the data set as a whole (Braun & Clarke, 2006). When using a 'theoretical' thematic approach, the researcher's questions, interests, and theories drive the course of analysis (Braun & Clarke, 2006). This approach allowed me to explore questions and themes informed by a decolonizing theory. In line with the theoretical thematic method, I approached analysis with prior engagement with the literature in order to relate findings to the theoretical framework and published knowledge (Braun & Clarke, 2006). Once data collection was completed, I began to conduct *active* and *repeated* readings of the data to identify significant patterns and themes (Braun & Clarke, 2006). Following the initial readings, the preliminary research questions were re-focused. Preliminary analysis began concomitantly following interviews, during debriefing, and reflection to capitalize on emerging themes.

Thematic analysis of the transcripts was completed in two steps – first, coding and then grouping codes into themes. I organized and coded the data using NVivo 12 Pro software following both *In-Vivo* and *Descriptive* coding processes. In-Vivo coding is a process designed to capture specific words and phrases directly used by the participant during the interviews that represent individually coded chunks of data (Saldana, 2011), known as data *extracts* (Braun & Clarke, 2006). Descriptive coding involves synthesizing the meaning within each relevant data extract into words or short phrases (Saldana, 2011). All codes were later clustered into themes. Together with the community research assistant, themes were finalized through a series of

discussions. During and following discussions with the community research assistant, I took detailed notes of their ideas and interpretations. The established themes were articulated in brief Analytic Memos outlining the codes constituting each theme, and the reasoning behind them (Saldana, 2011).

Braun and Clarke (2006) define a theme as "something important about the data in relation to the research question and represents some level of patterned response or meaning within the data set" (p. 82). Given the unpredictable nature of qualitative data – what constitutes a theme was determined in an inductive fashion following immersion into the collected data. The meaningfulness of a theme can be measured both in quantitative terms, such as prevalence, and/or qualitative means such as the degree to which a theme captures key information in relation to the research questions (Braun & Clarke, 2006).

We identified themes on a 'latent' level, using a decolonizing epistemology/lens. Analysis at the latent level explores the underlying assumptions, ideologies, structures, and or meanings that underpin the explicit content articulated by participants (Braun & Clarke, 2006). Approaching analysis through a decolonizing and transformative worldview allowed me to account for the social, structural, and contextual conditions that lead to the responses and reaction of individual participants (Braun & Clarke, 2006). I followed Braun and Clarke's (2006) six phases of thematic analysis, including (1) familiarizing yourself with your data; (2) generating initial codes; (3) searching for themes; (4) reviewing themes; (5) defining and naming themes; and (6) producing the report. During these phases, we paid particular attention to the language and tone used by the participants relating to the three main components of settler colonialism in the context of SSB and its proposed taxation. By doing so, we bring attention to

the extent power, spatial, and social norms influence the types of stores and foods that are regularly accessible to the residents of the NE financially, geographically, and socially.

Trustworthiness

Trustworthiness, a parallel concept to the conventional 'rigor', refers to the integrity of the methods used to ensure the quality, usefulness, and meaningfulness of the study's data and findings (Connelly, 2016). While researchers agree that it is necessary to establish trustworthy protocols for each study, there are no agreed upon criteria set within the qualitative research paradigm (Rolfe, 2006). Depending on the nature of the research, including the study's theoretical, philosophical, and methodological considerations, the procedures followed will differ (Rolfe, 2006).

In order to achieve trustworthiness in this study, the community Research Assistant, Riel Dubois, conducted a review of the information collected and interpreted, as a form of member-checking. The community research assistant shares a similar context to the participants, as a resident of the NE community who self-identifies as Indigenous, and thus was able to provide a valuable perspective and insight. When using member-checking, researchers often present participants with both raw and analyzed data so that they can comment on the credibility of the data collected and interpreted (Creswell & Miller, 2000). In our case, we presented analyzed data. During this process the community research assistant was able to ensure accurate interpretation of the language, soundness of the codes and themes generated, as well as whether sufficient evidence was used to establish them (p. 127). The resulting comments and insights were then integrated through an iterative process that contributes to the credibility of the findings (Creswell & Miller, 2000). Results were also shared with research partners individually and

through two community events with Fearless R2W (one virtual and one in person) to further receive feedback.

Chapter 4: Manuscript 1

Balancing on the redline: a qualitative study of the experiences purchasing SSB among Indigenous adults in a Canadian urban neighborhood

Abstract

Background: Procurement of sugar-sweetened beverages (SSB) in urban food deserts is regularly assumed to be passively shaped by the limited access to nutritious food options and the relatively lower price of SSB. However growing evidence suggests that inner-city residents actively navigate their proximate and distant food landscape to meet wide a range of socio-economic needs. Compared to other racial/ethnic groups in Canada, off-reserve Indigenous people consume SSB at greater quantities and frequencies, and experience higher prevalence of food insecurity.

Objective: This study examined urban Indigenous adults' SSB shopping behavior and experiences.

Methods: We conducted 20 semi-structured interviews with a purposive sample of Indigenous adults (≥18 years old) from the North End (NE) neighborhood of Winnipeg. Interviews were audio recorded, transcribed verbatim, and thematically analyzed using Nvivo-12-Pro.

Results: Among the 20 participants (Female=12; Male=8; Two-Spirit=2) all consumed SSB on a regular, daily basis either at the time of the interview or at a prior period in their lives; 15 of whom were not employed; and 15 who were taking care of dependents. Themes defining residents' SSB shopping behavior and experiences of shopping for SSB included: *balancing on the redline*, specifically (1) *balancing SSB purchasing constraints and facilitators with savvy shopping approaches* and (2) *balancing (stereo)typical reactions with resilient coping approaches.*

Conclusion: Findings indicate that residents procure SSB in various locations and stores within and beyond the boundaries of the NE neighborhood. SSB is a considerable, reoccurring expense, requiring savvy price balancing strategies. Indigenous adults experience judgement and stereotyping when purchasing SSB, including intersecting racial, poverty, and weight stigma.

Background

Indigenous[7] Peoples worldwide are disproportionally affected by diet-related health inequities compared to respective settler populations (Anderson et al., 2016). In Canada, Indigenous peoples, including First Nations, Métis, and Inuit, experience overall greater prevalence of poverty (National Collaborating Centre for Indigenous Health, 2020) and food insecurity (Batal et al., 2021; Skinner, Pratley & Burnett, 2016), and consume a poorer quality of diet relative to the general population (Riediger et al., 2022). These disparities are attributable to historical and contemporary colonial policies – increasing reliance on non-traditional foods, and limiting affordable, nutritious options (Batal, 2022; Truth and Reconciliation Commission (TRC), 2015a; TRC, 2015b). Consequently, compared to national estimates, Indigenous people face higher prevalence of type 2 diabetes and obesity (Batal et al., 2021; Public Health Agency of Canada (PHAC), 2018; Batal & Decelles, 2019).

Of growing concern is higher intake of sugar-sweetened beverages (SSB) reported among Indigenous people living off-reserve compared to the general Canadian population (Jones et al., 2019; Garriguet, 2008; Statistics Canada, 2015), given its contribution to the development of type 2 diabetes (Malik et al., 2010). Intake of SSB has been the focus of international (Malik & Hu, 2022) and national (Gushue, 2021) fiscal policy efforts (namely taxation) aimed at deterring its purchasing. SSB taxation policies implicitly target Indigenous and low-socioeconomic groups due to disparities in SSB intake and prevalence of associated non-communicable disease (Hervik et al., 2021). However, research into the determinants that shape SSB purchasing patterns among

[7] Indigenous People' in Canada are composed of First Nations, Métis, and Inuit, as defined in Section 35 of the Canadian Constitution of 1982. Where applicable we have used the most specific name to refer to the Indigenous group or population

consumers and their response to taxation measures is inconclusive and limited, especially among lower socio-economic (Sacks et al., 2021) and Indigenous populations (Sacks et al., 2021). The off-reserve context is of particular importance given that over half of all Indigenous people in Canada live in urban centers, with the proportion predicted to continue increasing (Anderson, 2019). Urbanization is a key determinant that has been linked with nutrition transition and increased consumption of SSB (Malik et al., 2013; Lipus et al., 2018). Therefore, it is imperative we better understand the factors and experiences that underline urban Indigenous people's procurement of SSB in the context of proposed and new taxation policies in Canada (Department of Finance Newfoundland and Labrador, 2022).

Prevalence of SSB consumption and type 2 diabetes in Canada vary considerably within, and between, Indigenous and non-Indigenous groups. For the purposes of this study, 'sugar-sweetened beverages' will specifically refer to drinks with added sugar; beverages containing naturally occurring sugars (e.g., 100% juice and milk), as well as diet beverages are not included. Compared to all other racial/ethnic groups in Canada, Indigenous people living off-reserve consume SSB at higher frequencies and quantities (by volume and calories) across regions (no data available for on-reserve) and age brackets (Jones et al., 2019; Garriguet, 2008; Statistics Canada, 2015). Compared to Canada's national averages, type 2 diabetes is also more prevalent among Indigenous people, although varies between the three Indigenous groups, off vs on-reserve context (PHAC, 2018), provinces, and communities (Randall et al., 2019; Green et al., 2019). Among First Nations, type 2 diabetes is more prevalent among women, which mirrors respective scores of diet quality (Riediger et al., 2022).

Patterns of SSB intake and purchasing among Indigenous people are shaped by a variety of structural and social determinants that correspond to the legacy of settler colonialism. Settler

colonialism operates across three inter-related pillars including power structures (legal, political, and economic systems and regulations), spatial structures (food environments, segregation, reserve systems), and social narratives (prevailing stereotypes and racism) that permeate the lived experiences of Indigenous people (Barker & Battell, n.d.). These determinants shape where and how Indigenous people live, work, access food, and feed their families.

Evidence suggests that greater intake of SSB is associated with lower socioeconomic status (Drewnowski & Rehm, 2015; Han & Powell, 2013) and food insecurity (Warren et al., 2022). Food insecurity is defined as "inadequate or uncertain access to food because of financial constraints" (Health Canada, 2017, p 13). Among the urban Indigenous population, approximately 24% of adults and 30% of children and youth under 18, live below Canada's official poverty line (Arriagada, Hahmann & O'Donnell, 2020). Prevalence of food insecurity is more than two times higher among Indigenous (28.2%), compared to non-Indigenous (12.6%), households (Tarasuk, Mitchell, Dachner, 2014). In the urban context, 38% of Indigenous adults, and specifically 41% of women and 34% of men, live in a food insecure household (Arriagada et al., 2020). Analysis of the 2015 Canadian Community Health Survey, the most recently collected dietary data on a representative sample of off-reserve Canadians, revealed that food insecurity and low income are associated with higher prevalence of SSB intake among female adults; lower educational attainment was associated with greater mean caloric intake of SSB on a given day among adult males (Warren et al., 2022). However, an analysis of overall diet quality among Indigenous adults revealed disparities in diet quality compared to non-Indigenous adults is independent of food security – highlighting the need for a more comprehensive investigation into the determinants that shape Indigenous peoples' present-day foodways (Riediger et al., 2022). Food insecurity is also associated with poorer mental health outcomes (Davison et al., 2017),

which are experienced disproportionately by Indigenous people in Canada due to the ongoing impacts of colonialism (TRC, 2015).

Growing lines of inquiry suggest that in-store consumer shopping experiences is a key determinant shaping food purchasing patterns and ultimately consumption (Cannuscio, Hillier, Karpyn & Glanz, 2014). Studies report that social interactions, mediated by patrons' socio-economic status (Cannuscio, Hillier, Karpyn & Glanz, 2014) and race (Bennett, Hill & Daddario, 2015; Pitttman, 2020), have considerable influence on the location and store type they choose to shop in. Negative interactions with staff and fellow shoppers reduce consumers' likelihood of returning to certain stores (Cannuscio et al., 2014). These experiences have great impact on the diets and access to certain foods, given that the quality and variety of food differs between stores types and locations (Cannuscio et al., 2014). Retail food establishments are targeted sites of intervention for proposed SSB tax policies; however, there has been no study assessing the in-store customer experiences of Indigenous people shopping for SSB. Overt racism continues to permeate Indigenous people's lives in Canada, with documented discrimination in the Canadian urban context (Benoit et al., 2019; Canel-Çınarbaş et al., 2019). This research is especially relevant given the current policy conversation in Canada around the taxation of SSB (Heart and Stroke Foundation, 2017; Diabetes Canada, 2018), and its first implementation in the province of Newfoundland and Labrador (Department of Finance Newfoundland and Labrador, 2022). It is critical to investigate how and what drives consumption and shopping behaviors before we implement control measures, especially among Indigenous people who have been harmed by colonial policies. Exploring the point of intervention will allow for facilitation of policies that consider the factors that affect food patterns and expand on specific predictors of SSB

purchasing. Therefore, the objective of this study was to explore the structural and social determinants and experiences of urban Indigenous adults purchasing SSB.

Methods

Design

This Community-Based Participatory Research (CBPR) study (Israel, 2005; Minkler & Wallerstein, 2008) was conducted in partnership with the National Indigenous Diabetes Association (NIDA) and Fearless R2W, an Indigenous-led community non-profit in Winnipeg's North End (NE) focused on child welfare, supporting family reunification and youth aging out of care (Fearless R2W, n.d.). Concerned for the implications of an SSB taxation policy on a community largely situated within a food desert and affected by high prevalence of food insecurity, we set out to explore the residents' lived experience of purchasing SSB. This study is part of a larger research project exploring the ethical merit of the proposed SSB tax from the perspectives of Indigenous and non-Indigenous people in Canada. The larger study obtained approval from the University of Manitoba Health Research Ethics Board (HREB) (HS21878 (H2018:234)) and the lead author received approval for secondary data analysis of qualitative interview transcripts for her thesis (HS24317 (J2020:065)). Formal research agreements were signed with community partners outlining the values underpinning our partnership, each party's responsibilities, as well as access and ownership of the data.

Decolonizing framework

We adopted a decolonizing framework which involves actively seeking out and acknowledging colonial aspects of policies and dismantling them by incorporating Indigenous perspectives to challenge the corresponding spatial, power, and social constructs (Smith, 2021; Veracini, 2010; Veracini, 2011). Among Indigenous people, access to food, including its cost,

quality, source, and variety continue to be strongly influenced by colonial power and spatial structures (Warne & Wescott, 2019; Batal et al., 2021; TRC, 2015a; TRC, 2015b). Colonialism has a long legacy of displacing Indigenous people on to reserves, and more recently into urban and inner-city centers (Norris & Clatworthy, 2011). Due to inequalities in the funding of health, housing, resources, as well as limited access to education and employment, urban Indigenous people in Canada are more likely to live in a low-income, subsidized housing, rent rather than own, and in neighborhoods separate from non-Indigenous people (Anderson, 2019). Indigenous people are also more likely to reside in food deserts, grocery redlined and food swamp areas, defined by high concentration of corner stores and greater distance to full-service grocery stores (Bridle-Fitzpatrick, 2015). Social narratives concerning "unhealthy foods", bodies and weight stigma (Cyr & Riediger, 2021), and the criticism of Indigenous parenting (Durey et al., 2017; Poirier et al., 2022; Allen et al., 2022), are also a product of the settler colonial legacy.

Study setting

The NE community area is located centrally in Winnipeg, Manitoba, on Treaty One Territory. Winnipeg has the largest Indigenous population (by number) of any metropolitan area in Canada, constituting approximately 12% of the urban population (City of Winnipeg, 2018). The majority of Indigenous people in Winnipeg identify as Metis (54%) or First Nations (44%) (City of Winnipeg, 2018). The Indigenous population is a young and fast-growing demographic, with 46 percent aged 24 years and under (City of Winnipeg, 2018). Within the NE neighborhood, 29% of residents self-identify as Indigenous (Winnipeg Regional Health Authority, 2019). Residents of the NE experience greater social and health disparities compared to the rest of Winnipeg—including higher unemployment rates (9.5% vs. 6.5%), diabetes prevalence (12.1% vs. 7.9%) (WRHA, 2019), percentage of overweight adults (65% vs. 54%), and people who

smoked tobacco (39% vs. 19%) at the time of data collection (Winnipeg Regional Health Authority, 2015).The NE is largely situated within a food desert, where low-income areas are located far (>500 meters) from Full service or National Chain Food stores (Manitoba Collaborative Data Portal, updated Jan 2, 2020), and heavily populated with small convenience stores and fast-food restaurants (Tursunova et al., 2020).

Study participants and recruitment

We aimed to recruit Indigenous adults residing in or near Winnipeg's NE neighborhood. Eligibility criteria included: (a) self-identify as Indigenous (First Nations, Métis, or Inuit), (b) be 18 years of age or older, (c) be comfortable speaking English, (d) self-identify as residing in the NE, and (e) be able to attend a one-hour interview. We utilized purposive sampling to recruit participants who self-identify as regular SSB consumers, food insecure, and parents or guardians. We also sought the perspective and knowledge of Elders with strong connection to NE regardless of their location of residence, as recommended by research partners.

A community research assistant was hired to ensure reciprocal transfer of knowledge and skills, and to lead the recruitment process. The community research assistant also assisted with interviewing, revision of the interview guide, interpretation of data, and knowledge translation.

The first six interviews were conducted in person, with participants providing written informed consent prior to the commencement of the interview. Once COVID-19 measures were put into effect, we switched to a phone interview protocol with the approval of the Health Research Ethics Board. Individual informed consent was received over email and confirmed on the phone. The phone interviews with participants were conducted by myself (MK) and the Principal Investigator (NR), who also audio-recoded the interview and took field notes. Before beginning all 20 interviews, it was clarified that our research group is conducting the research in

partnership with NIDA and Fearless R2W, not with governments or policy makers, and that we do not have the direct power to implement it. Participants received an honorarium for their time and knowledge.

Data collection and analysis

We conducted in-depth, semi-structured interviews following an interview guide, which was updated iteratively to capitalize on emerging issues. Participants completed a demographic questionnaire to describe sample characteristics. We completed a total of 20 interviews between Nov 2019 and August 2020, with the first six interviews conducted face-to-face in private room at the University of Manitoba's Inner-City Social Work Campus, located in the NE neighborhood. The community RA was present during some of the in-person interviews. Due to the COVID-19 social-distancing orders, remaining 14 interviews were moved to over the phone. Interviews were audio recorded and transcribed verbatim. Following each interview, researchers debriefed and recorded detailed field notes. One-on-one or two-on-one phone interviews with participants were conducted by MK and/or the Principal Investigator (NR). Before beginning interviews, it was clarified that our research group is conducting the research in partnership with National Indigenous Diabetes Association and Fearless R2W. All participants provided their individual informed consent and received an honorarium.

We coded and analyzed transcripts in NVivo 12, following Braun and Clarke's (2006) theoretical thematic approach. We analyzed the data with prior engagement with the literature and the application of the decolonizing theoretical framework. Following active and repeated reading of the transcripts, we generated descriptive codes, which were later grouped into themes. Descriptive coding involves synthesizing the meaning within each relevant data extract into words or short phrases (Saldana, 2011). During the analysis phase, we paid particular attention to

the language and tone used by the participants relating to the three main components of settler colonialism in the context of SSB procurement and food environment. By doing so, we bring attention to the extent power, spatial, and social norms influence the types of stores and foods that are regularly accessible to the residents of the NE financially, geographically, and socially.

The community research assistant (RD) and partners (MC) member-checked and analyzed data together with MK. Both the community RA and partner share a similar context to the participants, as long-term residents of the NE community who self-identify as Indigenous. Through the member-checking process, the community research assistant facilitated an accurate interpretation of what the participants communicated, as well as the soundness of the codes and themes generated (p. 127 Creswell & Miller, 2000). Results were also presented to Fearless R2W through a community event to seek out further feedback and through National Indigenous Diabetes Association newsletters.

Results

Participant characteristics:

We interviewed 20 participants (10 female, 8 male, and 2 two-spirit) with an average interview length of 48 minutes (range 25-94 minutes). The age of participants ranged from 20 to 65. The sample closely represents the Indigenous population in the NE, with 75% self-identifying as First Nation, 20% as Metis, and one participant self-identified as ‘Indigenous’. At the time of the interview, 15 participants were not employed, four were employed part-time, and one full-time. Most participants completed high school (n=11) and four had a college education. When completing the demographic form, 60% reported consuming SSB on a daily basis, however, during the interview, it was determined that 85% (n=17) of participants consumed a SSB at least once daily. The three participants who did not consume SSB, reported drinking diet

beverages. All participants reported consuming SSB on a regular, daily basis at some point in their lives. Most participants rated their health as good, very good, or excellent (85%).

The experience of purchasing SSB among Indigenous adults residing in the NE, an inner-city community area, is defined by the overarching theme, *balancing on the redline*. This theme captures the balancing act residents of the NE engage in when shopping for SSB, having to navigate the financial, social, and geographical challenges within and beyond the boundaries of their neighborhood.

We identified two sub-themes illustrating the experience of balancing on the redline. The first sub-theme '*balancing SSB purchasing constraints and facilitators with savvy shopping approaches'* captures the intersecting, spatial and economic determinants, that shape the NE residents' SSB shopping patterns, and the resourceful strategies residents employ to afford and acquire SSB. The second sub-theme *'balancing (stereo)typical reactions with resilient coping approaches'* describes the social aspect of shopping in-store for SSB, defined by types of reactions participants received, as well as how they felt and coped with them.

Table 1: Demographic Characteristics of Study Participants

Characteristics (n=20)	n (%)
Gender	
Female	10 (50%)
Male	8 (40%)
Two-spirit	2 (10%)
Age Ranges	
50-65	2 (10%)
35-49	6 (30%)
20-34	12 (60%)
Average Age	34
Ethnicity	
First Nation	15 (75%)
Metis	4 (20%)
Indigenous	1 (5%)
Highest Level of Education	
Completed University Degree	0 (0)
Completed trade/technical school or college diploma	4 (20%)
Completed secondary school	11 (55%)
Some secondary school	4 (20%)
Completed primary	1 (5%)
Current Employment Status	
Not working in the labour force	15 (75%)
Working full in time in the labour force	4 (20%)
Retired or Semi-retired, or working part time in labour force	1 (5%)

Table 1: Demographic Characteristics of Study Participants

Theme 1: Balancing SSB purchasing constraints and facilitators with savvy shopping approaches

Participants' SSB shopping habits are shaped by the food options (not) available to them, their personal, family, and community income level, and the strategies they use to balance these barriers and facilitators. The food environment of the NE is characterized as 'redlined'; corner stores are extremely abundant while grocery stores are sparse and often not within walking distance. Available food is regularly poor in nutritional quality, freshness, variety, and marked up in price. SSB is amongst many foods participants describe as not healthy, but readily available to them.

> *"For those that just stay in the area, like obviously just the easy chips, noodles, Pepsi, and just the bread that they need, and everything else that goes with it. When impoverished you have X amount of things you can actually get." (Gavin)*

Participants described SSB and other foods they consume not just as unhealthy, but also as discursively linked to being lower class.

> *"We are living off of scraps of society's leftover from their plates. That's what... We take only what we can get. Um, which isn't, uh, good for us. You know, like, we don't get healthy options food-wise, and when we do, we can't afford it." (Louise)*

A few participants pointed out that food purchasing patterns in the NE have a psychological aspect that has been conditioned by the food environment over generations. One participant suggested that even if presented with novel food options, NE residents will default to the familiar.

> *"It's not only far physically sometimes, but when it's not anymore, like sometimes it's mentally because they the idea that like this is my family, this is the norm, and this is also like the most cheap and efficient way to eat… Again, a lot of times it's just buying into that mentality that what we see in front of us and what we used to eat because of the way in which this area was set up, it's all that we can eat." (Gavin)*

SSB shopping patterns were also influenced by their perception of SSB affordability, which was mediated by their personal financial means, the relative price of SSB to other food products, as well as price discounts. SSB were described in contrasting terms, even among the same participants, as both “cheap” and “expensive” over the course of their interview – while only requiring spare change, was often times still out of reach financially. For example, in comparison to other foods, one participant described pop in the broad context of the NE to be the cheapest, driving high intake, while describing in her personal case, Slurpee’s to be an expensive, big splurge.

> *“So that's why you see the kids around here eating big bags of chips and eating bags of candy and pop because it's cheaper than anything else. It's what we're able to afford.” (Louise)*

> *“I don't really buy pop often. What I do is Slurpees. We do... That would be our, like, our big splurge when I can afford it, is Slurpees.” (Louise)*

Some participants described instances in which they could not afford to buy SSB or a specific quantity of SSB they wanted to buy, particularly bulk because of cheaper price per unit. As a result, those tight for cash end up paying more for SSB over time.

> *Usually when I don't have enough to buy um, a case of pop I would buy three or four to last me through the day. (Shelly)*

Among the participants who discussed SSB cost at different store types, most indicated that SSBs were priced higher in corner stores compared to full-service grocery stores.

> *“When I, okay well say if I go to Walmart or like a superstore or something, I'll buy my Gatorade there, because it's, uh, a little bit cheaper than going to the corner store, definitely.” (Raymond)*

Store SSB pricing practices were described by some participants as influencing how they, or others, perceive the affordability of SSB, and ultimately shopping patterns. SSB pricing

practices include SSB's regular price, sales and discounts, and competitive pricing between stores.

Participants indicated that SSBs were, more often than not, sold as part of a "deal" or "sale", rather than at regular price. SSB deals had an apparent impact on participants' perceptions of SSB affordability, where they chose to shop for SSB, and how much SSB they bought at once. When describing price of SSB sold as a deal, participants referred to SSB as being more affordable, incentivizing them to buy more.

> *"Two-liters take the top spot. Mmm, because it's at every corner store. And it's all- it's 2 for $5, right? (laughs) So, it's a good deal. Can't go wrong with 2 for $5. (Tyler)"*

> *"If there's a deal for two liters of Pepsi or Coke Zero I'll- I'll buy the two for what, uh, two for five or whatever, kind of, thing. (Evelyn)"*

Participants also described how SSB pricing fluctuates, with deals often varying between different stores and change often. A couple of participants raised question regarding the intent behind deals on SSB.

> *"Like if you go to, uh, 7-Eleven or, uh, another store, they jack the the price up to, uh. But if you go to like, uh, Shoppers or stuff, other pla- uh, uh, a pharmacy or type place they are sorta on sale, uh, like 3.99 or 3.50 vs that. And I think, I don't know if there's a- a- a expiry date on these why they put them on sale. (Alan)*

Having to navigate the shared experience of food insecurity and limited budgets many participants described the strategies they employ as savvy, community-oriented shoppers in-order to afford and share SSBs. An undercurrent of this strategy was participants' heightened awareness of SSB prices and deals at multiple different stores, often down to the cent of a dollar.

> *"That's super cheap. And it's like, I think it's like 5.63, and usually if you go to a store that's not promoting Rockstar sales, that's four, eight, 12 bucks. They're usually four bucks. (Carolyn)"*

Being equipped with data on SSB pricing, deals, and stores, participants described how they actively sought out a better price on SSBs. While discounts on SSB may prompt a purchase

or a larger purchase of SSB on the spot, participants also dedicated significant efforts to pre-emptively price shop at certain stores, looking for discounts, deals, value packs, and 2-liter bottles, as well as brand versus no-name SSBs.

> *"You see those little deals. Okay, this one has a better deal than the other store, so maybe I'll go to this store. ... I know some places it [a canned drink] costs a dollar, whereas it... that place is like cheap to get a whole bunch of canned drinks from that store, and also even like two liters. That's the cheapest place I would say to get pop. (Gerry)"*

A few participants described buying SSB products that can be "stretched" such as chocolate syrup and or fruit drink concentrate (e.g. frozen or powdered drinks added to water) as opposed to pop.

> *"But I don't really buy pop that often. Uh, it's more so, it's just juice because it goes... it stretches farther. Like, I can, you know, buy that one bag o' juice and I can make three big jugs out of it. So that's gonna last me a few days, opposed to if I bought, uh, a two liter pop that's gone in, you know, 10 minutes. You get four cups or whatever out of it. Whereas the juice, like, it stretches and goes farther. (Louise)"*

Another strategy to cope with the shared experience of food and financial insecurity among NE residents, involved buying enough SSB to share with other family members and friends. This gesture was described as an unspoken act of care that was expected of everyone. Many participants indicated that when buying SSBs, they would often buy more to share with others or others would share with them.

> *"Cause I mean I think about my family too ... It's like if I buy myself a pop, I'm gonna obviously just get two-liters instead." (Tyler)*

Theme 2: Balancing (stereo)typical reactions with resilient coping approaches

Participants described the typical reactions they received while purchasing SSBs and when negative, the various strategies they used to cope with them. The nature of the reactions was mediated by the type, location, and context of the store, quantity of SSB purchased, as well

as participants' individual characteristics. Stores located within, and in the proximity, of the NE boundaries were generally regarded as safe shopping spaces. Many participants reported receiving virtually no reactions when buying SSB.

Participants who typically bought SSB at corner stores within the neighborhood described forming friendly relationships with store owners and staff. When asked if anybody reacted to him drinking or buying SSB, Shelly answered "*No, because they already know my routine"*. She also went on to say that "*they're like oh hey! You've come back again! Uh …they know me pretty much, because I've been going there since I was little. (Shelly) ….*

Given the social norms underlying SSB consumption in the community, including the frequency of buying SSB at corner stores that carried and sold a lot of pop, a few participants were surprised when we posed the question about reactions to buying SSB. To many participants, buying SSBs was a normal routine, and some questioned why anybody would react in the first place.

> *"Um, well, I don't think I get a reaction at all because it's such a, such a normal thing for somebody to go to the store and buy some sort of beverage. (Diane)"*

A few indicated that the lack reactions by convenience store workers was in the best interest of the business, given that SSB was big part of the cash flow, and the convenience stores are privately owned.

> *"No. Never. They never, they never, they won't give you a reaction because why would they give you a reaction? They want you to buy that product." (Gerry)*

In contrast, some participants described shopping outside of the NE and or in large chain grocery stores as unpleasant. Participants described receiving looks and comments questioning the contents of their shopping carts, specifically by white people. The reactions were referred to by participants as "typical", something they expected when shopping either because of what they

were buying, their race, and or weight. One participant described the comments she received when buying SSB in “large” quantities.

> *“I mean, I don't know, I know one person was like, "What do you need all those drinks for?" And I'm like, "To last me all month." But sometimes, like say if someone gives me a haircut or if she cuts my hair, one two four is for her and her kids, right? So it's usually like I'll have a pack for myself, but I notice I drink, yeah, they always ask me, "You need all that pop?" (Carolyn)*

The quote by Carolyn also exemplifies how shopping practices of purchasing larger quantities of food for the month, which is common for individuals and families receiving social assistance, intersects with poverty. Second, that again, SSB has an important social function as an act of reciprocity.

Some participants also indicated that judgment around SSB was amplified by weight stigma and racism. Participants identified those negatively reacting to be white, or non-Indigenous people – typically cashiers and other store shoppers.

> *"my weights always been a problem. Since I was a little girl my weight fluctuated. And so, um, I'm used to people looking at me with this look of why are you buying sugar when you're already that big, you don't need it type of look" (Janice)*

> *“Um, so, uh, it kind of- it felt like, um, I was being judged because of my weight and because I'm- I'm First Nation. (Janice)*

Participants who experienced weight stigma and racism, indicated that they received negative reactions even when not shopping for SSB or other “junk” food items.

> *“And even if I buy food in general, they look too 'cause ... Like, for me, I am overweight… it's mostly like white, old ladies that look at me and just glance, just like snub me for like having junk food and pop. (laughs) ... I don't know. I feel like people have judgment toward other people of what they, what they eat or drink. They're curious to know. ... Um, mostly like white people. ... Maybe because they're racist and they're judging (laughs). ... Um, it's like say if I bought a whole unhealthy food of junk food, people are looking at, like looking at what I just bought.” (Beverly)*

When shopping outside the NE some participants described being regularly racially profiled as suspected thieves and were followed by security or checked at the door.

> *"like when I am by myself, not so much. But when I am there with my son [name], oh yea! people are so strongly opinionated about kids, its crazy. So my son is 13, and now when he goes to the corner store he's like "mom I need something with shorter sleeves, because when I have things that are too long, then I get checked at the door". He is only 13, and for him to have experiences like that and be normalized it is kinda freaky" (Amanda)*

The boundaries of the neighborhood are not clear cut, however it seemed the further away participants went, the reaction intensify.

> *"Um, when I'm in the North End, even at Giant Tiger here on North Main, or the Safeway down here on McGregor and Mountain, I don't get followed. I don't get stared at. I don't get people watching me to make sure I'm not stealing. But when I go to a store outside the North End, that happens every time, like clockwork. It's like I expect it." (Janice)*

One participant who recently moved out of the NE and shopped for SSB at his new neighborhood's corner store, described feeling judged when the cashier identified him by the foods he regularly bought and that it was linked with his ethnicity.

> *"The- the clerk, my wife went in there and she bought a Pepsi, and she bought a bag of chips for me, and she was going through the line, and then the clerk like asked her, uh, "Who you buying these for?" And, um, my wife said, "My husband," and then the clerk said, "Is your husband, uh, the native guy, the big native guy with tattoos on his neck?" And so my wife laughed and said like, "Yeah, that's, uh, that's my husband," and then sh- they were laughing and the clerk was like, "You know, I know, because he comes in here and he buys the same, he buys the same stuff." (Raymond)*

In order to balance the judgmental reaction participants received while shopping for SSB primarily outside of the NE boundaries, residents employed various coping strategies. Participants who experienced the reoccurring reactions employed various protective, self-regulating, and reframing mechanisms.

The first strategy was of 'armoring-up' in anticipation of reactions when shopping for SSBs in unsafe spaces. Armoring up took the form of intentionally, proactively blocking out reactions, or having a prepared come-back to questioning their purchases or intended purchases.

Although those who completely blocked out reactions also tended to indicate that they did not receive reactions, it was implied that they have experienced stereotypical reactions in the past and or that they continue to take place today.

> *"Um, if they do, I don't notice. I don't really actually pay attention. I don't pay attention. Um, I have no space in my life or head space for, um, ignorance or any of that. And so, I find this past year I've been, um, paying less attention to that kind of stuff when I'm out in those spaces." (Louise)*

One participant described having a prepared response in anticipation of judgment when purchased "large" SSB quantities at once.

> *"Just like a cashier, or a person working asking, "What?" just a regular, typical question. And I was like, "No, I usually..." Usually when someone's starting to chat like that, I just tell them I drink them myself throughout the whole month though, right?" (Carolyn)*

Some coped with negative reactions by actively reframing the messages they received as a reflection of the reactor, and consequently an issue that is outside of the participant's control.

> *"Well, a lot, my mentality on all those kinds of things is that it is what it is. I cannot- I can't change other people's opinions of me when they're just looking at me. Um, I can only control my own opinions and how I deal with things." (Janice)*

When asked about the impact the reactions had on participants, most described blocking and shrugging the negativity off. Participants who were subjected to judgmental reactions shrug them off, so as to not allow judgmental reactions to lead to long term affect and internalization of negative emotions.

Underlying most coping mechanisms discussed by participants was a sense of self-trust and awareness, strengthening the armor against stereotypes and negative reactions around SSBs. Participants described knowing and trusting in the shopping choices that they made, making outside reactions irrelevant and ill informed.

> *"Um, no. Even if I did, I don't think that I would, like, pay attention, because, it's, like, if somebody has a problem with what I'm buying that's their problem,*

> *because they're not the ones that are eating it, or drinking it, so, yeah. I don't really pay attention to, like, people and their reactions on things because I know what I'm doing, or, you know what I mean? So, like, they need to pay attention to themself." (Evelyn)"*

In instances where reactions broke though the armor and caused distress, participants described how they persevered and took back control of their emotions. Participants discussed actively giving and seeking social support in response to stereotypical reactions. In response to being suspected as a shoplifter, Amanda described how they prepared their son to deal with shopping experiences.

> *"well, my son and I have big talks about his experience here because he does not always understand why things are hard for him. Even though everywhere else I take him, it is not hard. The only things that are hard for him are school, and some of the interactions with the neighbors behind the mall area. But um, when I was younger it used to make me feel like I was that "dirty Indian", now that I am older and I feel people judging me, then its just for me, its more a reflection of themselves. That them judging me means that they have enough problems in their life to feel like they could take up some more, you know [laughs]. So like I'm glad they wasted their energy [laughs]." (Amanda)*

Discussion

SSB is a regularly consumed and purchased product among the Indigenous community in the NE. Results describe participants' SSB shopping behaviors and experiences, and how these in turn shape SSB procurement. In this study, participants discuss how they proactively navigated their limited budgets, food environment, cost of SSB, as well as strained in-store interactions when procuring SSB. Experiences of purchasing SSB involved an emotional process to actively balance these constraints and facilitators. Some of these aspects encourage the purchase of SSB while others challenge or shape access in different ways. These findings are consistent with research based on the socio-ecological framework (Stokols, Lejano & Hipp, 2013), which holds that consumers actively interact with their food landscapes by balancing competing individual, environmental, and social determinants to accommodate for a wide array of needs (Cannuscio et al., 2014; Wilson et al., 2021). Considerable thought went into SSB procurement, participants expressed preferences for the size of SSB as well as the type, location, and particular stores where they shopped for SSB, most often in order to maximize value for money, transportation, and familiarity. Importantly, these findings echo the notion that food and SSB purchasing practices extend beyond the relatively lower cost and or abundance of SSB in the consumer's immediate environment (Hill, 2021). Growing research and policy emphasis on the price of SSB in relation to consumer behavior therefore neglects to account for the multi-dimensional process of food shopping practices and preferences, particularly among lower-income and Indigenous groups in an inner-city context.

Findings illustrate that when presented with "healthful" food options, some Indigenous residents of the NE continued to purchase what is familiar and comforting, and easily accessible. Existing evidence shows that food choices are conditioned by a variety of factors and may

remain resistant to external forces for prolonged periods (Kelder et al., 1994). A Canadian study on the long-term effects of financial and food insecurity on the consumption of SSB, found that compared to children who have never experienced poverty, children who were intermittently exposed to it consumed more SSB (Kakinami et al., 2014). Policy makers should take into account the long-term, conditioning aspects of determinants to food access when designing consumer-level interventions.

While SSB were considered by participants as a relatively inexpensive product, SSB were also described as unaffordable and represented a substantial financial expense for the Indigenous community members of the NE. Despite having constrained economic means, residents continued to prioritize purchasing SSB for a variety of reasons. The sharing and gifting aspect of purchasing SSB described by participants aligns with core Indigenous values of reciprocity. It could be considered akin to the middle-class, North American gesture of buying wine to thank someone. While cost is a key factor shaping consumer choice of food and stores (Mytton, Clarke & Rayner, 2012), recent studies have suggested that its influence has been overestimated (Cannuscio, Hillier, Karpyn & Glanz, 2014). Residents of the NE went to great lengths to afford SSB, as demonstrated by their heightened awareness of SSB prices, price shopping, and buying enough to share with members of their community. Price-based policies are largely based on economic theories, where price dictates consumer demand. However, our study results suggest policy makers should exercise caution in deciding to tax SSB as it will likely add to the financial strain among a group that already spends a considerable amount of their limited budget on SSB, while not addressing accessibility of other foods. Findings that residents were incentivized by SSB deals and discounts to purchase greater amounts of SSB, are consistent with previous research showing positive association between SSB promotion and

increase annual purchasing (Zhong, Auchincloss, Stehr & Langellier, 2021; Zohng, 2020). However, as Zhong (2020) pointed out, among lower-income individuals, the amount of SSB purchased is not dictated by exposure to SSB price promotion and remains consistently higher compared to those in higher income brackets. Instances where participants were unable to afford to purchase their desired amount of SSB or in bulk quantity is consistent with research showing that lower-income households, compared to high, in the US tend to make smaller and more frequent purchases of SSBs (Zhong, 2020), leading to greater cost in the long-term.

Our findings also suggest purchasing SSB is a source of overt judgment intersecting with racism and weight stigma directed at Indigenous people, and largely perceived as enacted by non-Indigenous, white people. These findings are consistent with previous research from our team showing considerable judgment for SSB consumption, particularly directed toward individuals of higher weight and parents (Bombak et al., 2019; Bombak et al., 2021; Waugh, 2022). The moralization of SSB purchasing and consumption was particularly intense among a highly educated, middle-class, white sample from another Winnipeg neighborhood (Waugh, 2022). This moralizing undercurrent was also present in a recent response to a letter to the editor in Canadian Journal of Public Health insisting advocating for SSB taxation is “altruistic” (Veugelers et al., 2022). We caution against moralizing a behavior shaped by poverty, colonialism, and adverse childhood experiences, as this moralization has the capacity to contribute to structural and interpersonal stigma towards Indigenous people and other marginalized people. Notably, all the participants were aware of the health implications of consuming SSB.

Stigmatization of food and its consumers due to weight or food choice leads to worse physiological and psychological outcomes (Wu & Berry, 2018). Among Indigenous people in

Canada, this is of particular concern given social narratives and stereotypes of Indigenous parenting and health behaviors (Public Health Agency of Canada, 2019; Boyd, 2019; Gerlach et al., 2017). Participants' experiences of being subjected to racial profiling, suspected as prospective thieves, and followed and monitored echoes evidence among racial minority groups in the US reporting discriminatory treatment when shopping in retail setting (Pittman, 2020; Kamaloni, 2019; Zenk et al., 2014). The stereotype of stealing intersects both race and poverty. Studies have demonstrated that negative social interactions deter consumers from shopping in certain stores, which perpetuate social stratification and segregation (Cannuscio et al., 2014). For instance, participants in a study on health food shopping in an urban American environment indicated that they avoided establishments where they received derogatory reactions associated with their gender and race (Cannuscio et al., 2014). The same study reported that shoppers felt more comfortable when shopping among others they perceived to belong to the same socio-economic status group (Cannuscio et al., 2014). This has strong implications for lower-income, racial minorities given that they tend to live in "grocery redlined" areas and conduct their primary grocery shopping in stores carrying predominantly less nutritious foods (Eisenhauer, 2001; Zhang & Ghosh, 2016; Vilar-Compte et al., 2021). The various coping mechanisms employed by the participants to balance the negative reactions are consistent with previous studies (Crockett, Grier & Williams, 2003). Findings that in-store experiences were more negative further from the NE core, is also consistent with research that found greater incidence of discrimination with greater distance to store residents traveled away from their neighborhood (Zenk et al., 2014).

To our knowledge, this study is the first to document the experience of urban Indigenous people procuring SSB in the context of an inner-city Canadian neighborhood. Our results offer

qualitative insight into a consumer-level phenomenon that is heavily targeted, yet concerningly understudied. One limitation of the study is the extent to which we were able establish the implications these parameters have had on SSB purchasing due to the exploratory nature and primary focus of the study. While our findings allude to the effects of shopping experiences, further research could focus on mapping urban Indigenous people's food and SSB purchasing patterns over time and document their own understanding of why, where, and how much they shop for SSB. Of note is the impact of the COVID-19 pandemic on our study, particularly data collection method and connection with broader community and research partners. While the quality and trustworthiness of the findings were not compromised, the research process was significantly altered. Prior to the start of COVID-19, recruitment and interviewing was conducted in-person, and we regularly met with community research partners and assistant. Once COVID restrictions came into effect, all research was moved to a virtual format, with less opportunity to connect and share knowledge on a consistent basis.

In conclusion, the experience of shopping for SSB for Indigenous people living in the NE is characterized by a delicate balancing act to manage their strained financial situation and risk of being stereotyped outside the community. Experiences are shaped by existing colonial structure: power structures manifest as product prices and limited incomes; spatial structures are represented by location of stores, physical access, and transportation limiting access; and social narratives are marked by dominant discourses about food, health, bodies, and Indigenous stereotypes. Importantly, these structures are intersecting. Health policies targeting SSB through taxation are likely to exacerbate existing colonial structures negatively impacting the health and wellbeing of Indigenous people. Further research is needed to explore participants perspectives

regarding taxation of SSB given the documented experiences and challenges described in the present study.

Connection between manuscripts

The first manuscript explores urban Indigenous peoples' experiences shopping for SSB without an excise tax; specifically, exploring how various structural and social factors of purchasing SSB are experienced and managed by Indigenous people in food carrying establishments, the very sites of the tax policy intervention. The second manuscript explores urban Indigenous peoples' attitudes, level of acceptability, and expected outcomes of the proposed SSB tax. Together, the two manuscripts provide insight into the barriers and facilitators Indigenous residents must balance in order to procure SSB, as well as how the SSB tax may impact these existing routines. Findings suggest that buying SSB is an intricate balancing process, which will be challenged by an untrustworthy government through the implementation of a regressive, ineffective, stigmatizing tax – leaving residents with less money for other obligations and basic needs. Based on prior experiences, participants are also concerned that money that would be siphoned out of the community will not be reinvested in a meaningful way. Ensuring that the potential SSB tax revenue will not be directed to general revenue and having power to decide how it would be instead allocated was important to participants. As key stakeholders of this policy, Indigenous people have the right to free, informed, and prior consent to its design and implementation.

Chapter 5: Manuscript 2

Title: Examining attitudes towards a proposed sugar-sweetened beverage tax among urban Indigenous adults using a decolonizing lens

Abstract

In response to high prevalence of chronic diseases associated with sugar-sweetened beverages (SSB), significant research and public health efforts have been directed towards the promotion and implementation of a taxation policy to discourage SSB consumption. However, no studies to date have explored attitudes towards taxation of SSB among Indigenous people, a key stakeholder of the policy given disparities in diet quality, SSB intake, and diabetes prevalence caused by colonial policies. This study explored the acceptability and anticipated outcomes of the SSB tax among Indigenous people residing in an inner-city Canadian neighborhood. We conducted 20 semi-structured interviews with a purposive sample of urban Indigenous adults who regularly consumed SSB, had experience with food insecurity, and took care of dependents. Interviews were audio recorded, transcribed verbatim, and analyzed in NVivo 12 using theoretical thematic analysis. Most participants were opposed and concerned with the prospect of SSB taxation due to inter-connected themes of (1) *government not trustworthy,* (2) *taxes are ineffective and lead to inequitable outcomes,* and (3) *Indigenous self-determination critical.* Participants discussed government's mismanagement of previously generated tax revenue and lack of prioritization of their community's specific needs. Most participants anticipated Indigenous people in their community would continue to consume SSB but that a tax would make it more difficult and would result in fewer resources for other necessities, including foods deemed healthy. Findings also emphasize the importance of Indigenous people's self-determination in the design and implementation of health policies.

Introduction

Consumption of sugar-sweetened beverages (SSB) is a global public health concern due to its contribution to the development of type 2 diabetes and cardiovascular disease (Malik & Hu, 2022). Health authorities urge governments to implement public health measures to reduce SSB consumption, particularly SSB taxation (WHO, 2022). In Canada, Newfoundland and Labrador were the first, and so far only, province to implement an excise tax on SSB (Department of Finance Newfoundland and Labrador, 2022). Notably, most provinces already apply a sales tax to SSB. Higher provincial sales tax rates in Canada (Men, Urquia & Tarasuk, 2021) and taxation of groceries in the US (Zheng et al., 2021) are associated with greater likelihood of food insecurity, the insufficient access to food due to financial constraints. Food insecurity and lower income have also been linked with greater consumption of SSB (Larson, Laska & Neumark-Sztainer, 2020; Leung et al., 2014; Tomayko et al., 2017; Warren et al., 2022). The proposed SSB tax policy is regressive and threatens to exacerbate socio-economic and health inequities, particularly among regular consumers of SSB experiencing food insecurity.

In Canada, Indigenous people, including the First Nations, Métis, and Inuit, are disproportionately affected by food insecurity (Tarasuk & Mitchell, 2020), poverty (Arriagada et al., 2020), type 2 diabetes (Public Health Agency of Canada, 2018), and lower diet quality (Riediger et al., 2022a) relative to national baselines. Off-reserve Indigenous people also consume SSB at higher frequency and volume compared to other ethnic and racial groups (Garriguet, 2008; Jones, Kirkpatrick & Hammond, 2019). These disparities are attributable to historical, as well as contemporary, government mandated policies and structures, which continuously exacerbate health inequalities of Indigenous Peoples. This notion is emphasized by the Truth and Reconciliation Commission in call to action number 18, which calls “upon the

federal, provincial, territorial, and Aboriginal governments to acknowledge that the current state of Aboriginal health in Canada is a direct result of previous Canadian government policies, including residential schools" (TRC, 2015c, p. 2). Government-led policies tend to have poor implementation and outcomes among Indigenous people because they are designed by non-Indigenous people and ideologies, tend to lack culturally appropriate measures, and utilize a deficit lens (George et al., 2019). Research in tobacco control shows that measures are more effective when led by Indigenous communities (Minichiello et al., 2015; Palmer et al., 2017). Public health policies should be informed and facilitated by Indigenous people in order to support food sovereignty and decolonization as well as uphold TRC's call to action and implementation of the United Nations Declaration on the Rights of Indigenous people (UNDRIP) (United Nations, 2007; Merriam, 2021).

Despite representing a key stakeholder of the SSB taxation policy, Indigenous perspectives have not been sought out by policy makers, researchers, and or health authorities in Canada to date. Public acceptability is an important aspect of the implementation of population-level policies (Diepeveen et al., 2013). Support among the target population is associated with higher effectiveness of health care measures in changing behavior and benefiting overall health (Sekhon, Cartwright, & Francis, 2017). Greater efforts should be made to incorporate the experiences and perspectives of the groups expected to be impacted most into the development of policies. Acceptability of 'sin' and SSB taxation has been shown to be influenced by the policies perceived effectiveness and (dis)trust in the government's intentions behind the tax (revenue vs public health), (Somerville et al., 2015; Bombak et al., 2021; Reynolds et al., 2019). Among Indigenous people, trust in government has been eroded by the legacy of colonialism

(Ryan, 1996; Morden, 2016; Groot et al., 2020). Unintended effects of SSB tax policy may also impact health through less direct pathways.

The proposed SSB tax policy poses potential health and socio-economic burdens on Indigenous groups in Canada. Implementation and the behavior modification intended by the proposed tax in an urban setting may be especially challenging due to the high prevalence of poverty among Indigenous people, lack of full-service grocery stores, and abundance of convenience stores which elevate the price of food significantly (Skinner, Pratley & Burnett, 2016; Arriagada et al., 2020). Evidence concerning the efficacy of SSB taxation is limited and inconclusive, particularly among high consumers, marginalized populations (Teng et al., 2019; Sacks, Kwon & Backholer, 2021) and Indigenous groups (Browne et al., 2020). As observed in jurisdictions that have already imposed the tax, SSB taxation is not uniformly effective at reducing SSB consumption among all segments of a population. Such differential outcomes are in part influenced by socio-economic factors and existing consumption patterns of a given group (Teng et al., 2018).

Given concerns raised over the ethical merit of a proposed SSB tax, its regressive nature, potential negative social implications, inequities in SSB intake, and existing health disparities, it is critical to explore the acceptability of SSB taxation among urban Indigenous peoples to inform discussions regarding its proposed implementation. Furthermore, the existing disparities experienced by Indigenous people are a direct result of colonialism, as reported in the Truth and Reconciliation Commission (2015), and as such, a critical inquiry should be conducted through a decolonizing lens.

Methods

Design

This research is conducted in partnership with the National Indigenous diabetes association (NIDA) and Fearless R2W, two Indigenous-led community organizations based in Winnipeg, MB, focused on diabetes care and prevention, and child-parent welfare, respectively. The study followed the Community-Based Participatory Research principles, to ensure that all partners equitably partake in decision making, sharing of knowledge and responsibilities in all phases of the research (Israel, 2005; Minkler & Wallerstein, 2008). Findings in this publication are part of a larger research project investigating the acceptability and attitudes towards the proposed SSB tax among several Indigenous and non-Indigenous groups in Canada. Ethics approval was obtained from the University of Manitoba Health Research Ethics Board for the larger study HS21878 (H2018:234), and for secondary analysis of the data presented in this publication HS24317 (J2020:065). Agreements outlining values, responsibilities, and access and ownership of data were signed with community research partners.

Research framework

The research process was informed by a decolonizing framework, based on principles outlined by Smith (2021). A decolonizing framework seeks to center Indigenous knowledge, perspectives, and approaches to research, as well as recognize, decenter, and dismantle oppressive colonial systems and policies. The research process and outcomes should aim to be as relevant, practical, and beneficial to the research partners, participants, and broader Indigenous community. The research process was developed with community partners and stakeholders.

Study setting

Participants were recruited from the North End (NE) community area located within the city of Winnipeg, MB on Treaty one territory. Winnipeg is home to the largest number of Indigenous people of any metropolitan area in Canada, with 92,810 residents, or 12.2% of total population, self-identifying as Indigenous (54% Metis; 44% First Nation). The NE community area has long included the largest proportion of Indigenous people, constituting 29% of the area's total population. The NE is the lowest income neighborhood cluster in the city of Winnipeg with considerable health disparities, including higher prevalence of diabetes, cardiovascular disease, single-parent families, and rates of unemployment (Winnipeg Regional Health Authority, 2019). In comparison, the highest income neighborhood cluster in Winnipeg has an approximately 18-year higher life expectancy than the NE (Cui et al., 2019). In addition to these inequities, residents face significant barriers to accessing affordable and nutritious foods because the majority of the NE is characterized as a food desert, where Full service or National Chain Food stores are located 500 meters or more from low-income households (Manitoba Collaborative Data Portal, updated October 28, 2021).

Study participants and recruitment

The study included self-identifying Indigenous people aged 18 years or older residing in the NE neighborhood. Utilizing purposive sampling, we aimed to recruit a diverse group of participants in age, gender, and parenting status. Given the stakes of the proposed SSB tax policy, we purposefully sought the perceptions and acceptability of those who regularly consume SSB, took care of dependents, and experienced food insecurity. As recommended by research partners we also sought the perspective and knowledge of Elders with strong connections to the NE.

Recruitment was led by a research assistant known to community residents and who shares a similar background, as a self-identifying Indigenous adult living in the NE. The research project was introduced to community members at a feast organized together with Fearless R2W at NE's Indigenous Family Center, a common space of gathering within the neighborhood. At the feast, interested community members were invited to sign up for the study with the research assistant. The study was shared again at weekly community events the Indigenous Family Center. The RA also conducted recruitment through personal connections to ensure the inclusion of residents who may have been subject to various barriers of participation. As part of capacity building (TCPS2 Article 9.14) and mutual exchange of expertise and skills, the community research assistant was also involved in the revision of interview guide questions, interviewing, interpretation of data, and knowledge translation.

Due to unforeseen circumstance of COVID-19, we utilized two different informed consent protocols prior to the commencement of each interview. For interviews conducted in person, participants provided both written and verbal consent. Following the enforcement of COVID-19 measures and approval from the Research Ethics Board, we proceeded to conduct interviews over the phone and collect informed consent over email and again verbally. As part of the informed consent process, we clarified that the research was being carried out in partnership with NIDA and Fearless R2W.

Data collection and analysis

Between Nov 2019 and August 2020, we conducted 20 semi-structured interviews, which were audio-recorded and transcribed verbatim. We administered a demographic questionnaire to describe participant characteristics, including age, gender, employment status, SSB intake, and self-rated health. The first six interviews were conducted in-person at the University of

Manitoba's Inner-City Social Work Campus, located centrally within the NE neighborhood across from the Indigenous Family Center. Once COVID-19 social-distancing orders came into effect, the remaining 14 interviews were completed over the phone. Detailed post-interview notes were recoded and incorporated into analysis for situational context.

Interviews were coded in NVivo 12 Pro and analyzed following Braun and Clarke's (2006) theoretical thematic approach, involving prior engagement with the literature. The first seven interviews were actively and repeatedly reviewed to generate an initial list of codes. With further review of all transcripts, codes were refined, expanded, or eliminated and eventually collapsed into themes. Analysis following the decolonization theoretical framework was conducted to explore participants' discourse in relation to the three elements of settler colonialism in the context of proposed taxation of SSB. We assessed how power, spatial, and social structures influence participant's level of trust in government and society, sense of justice, and acceptability of government-led policies.

Results

Participant characteristics

We interviewed 20 Indigenous adults who at the time of the interview identified as current or past resident of the NE with strong connection to the community. In this study we report further findings from a subset of the interview guide. Participants' age ranged from 20 to 65 years, with ten self-identifying as female, eight as male, and two participants as two-spirit. Other demographic results were previously reported (manuscript 1).

Overall limited acceptability of the proposed SSB tax

Thematic analysis of the interviews revealed an overall strong opposition to the proposed taxation of SSB. Participants' unfavorable attitudes and limited acceptance of the policy stem

from three inter-related themes of (1) government not being trustworthy; (2) taxes lead to ineffective and inequitable outcomes; and (3) Indigenous self-determination critical.

We must acknowledge and reflect on participants' potential assumptions regarding our personal and collective stance with regards to the tax. During the first few interviews participants inquired about our research team's position regarding the proposed SSB tax as non-Indigenous researchers from an academic, publicly funded institution, which caused us to reflect on how to mitigate or address these dynamics. Efforts were made to indicate that the study's research team was partnered with local Indigenous organizations and not affiliated with the policy or health authorities who have endorsed or have the power to directly influence the course of SSB taxation in any jurisdiction.

Theme 1: Government not trustworthy

Participants expressed a general sense of low expectations and trust in the government, with their disappointment in government described by Gavin as "the norm". Government's previous actions underscore participants' concerns for the future implementation of any tax. Participants implied that the government has the power to do as they wish with no way of keeping them accountable, while Indigenous people do not have a say.

Some participants were not supportive because they viewed an SSB tax as a "cash grab" and that the government would: "Just put it in their pockets. They always do. Government's greasy, man." (Tyler) Participants were concerned that the true motivation behind the price increase is to generate another stream of income disguised as a health initiative.

> *"Well, apparently, what I've like heard about it is like the- they wanna increase the tax on sugar, right? Apparently, so, but then I'm like, "Why do that?" Right? Like, but I guess they're just trying to do that for more profit, because obviously there's sugar in everything. So like, that'll like raise I guess money for I guess the higher-ups and say the government people or whatever." (Tyler)*

Participants perceived the government to not be transparent of their spending, not disclosing how they allocate money generated from previously implemented taxes, including tobacco tax. Not knowing how the revenue from an SSB tax would be distributed was a major concern.

> *"The tax money is supposed to be used for something positive that people want, but it's not most of time. Or you just don't know where the heck it's gone. Maybe it doesn't even matter but it should be taxed to avoid people from buying it, but then again, maybe just leave it alone because I don't know where the money is going anyway." (Dakota)*

One participant viewed the proposed tax as a "financial siphon". Given government's spending patterns, participants were particularly concerned that the revenue generated will be siphoned out, stripping NE residents of money to support external priorities. This intersects with the theme of exacerbating inequities because the true benefactors of the policy were perceived as non-Indigenous people living outside of NE.

> *"Knowing government, a lot of times it's either to balance other areas of the budget, but sometimes it's a lot of bullshit and then it goes directly back to privileged communities, or it goes to things in which this community don't value as much" (Gavin)*

Previous public funds that were allocated to the community were perceived as token gestures that did not address the immediate and dire priorities of the NE residents. For instance, participants described that money tended to be invested in parks and art galleries, or general city maintenance and upkeep because *"They always have everything for hotels, or potholes, or whatever, or licenses, or some parks, or some stupid thing*." (Carolyn). This is juxtaposed against the participants' main concerns for their community, including food insecurity, addiction, poverty, and underserviced community resources, as well as where they would want the revenue to go if given the choice (educational programs, child welfare, health care etc.). As Julia expressed "I would say healthcare, I would say community programming, uh, maybe street

works, um, programming and getting maybe youth together, make it fun for them to help keep their communities clean." However, even when discussing hypothetical causes to direct tax revenue towards, some participants were apprehensive of lofty contingency promises to Indigenous communities pinned on the tax due to previous experience.

> *"My opinion would only change once it was happening, you know. I, I don't trust anything the government says... we can say whatever we want to say but until the action is put into it, it doesn't really mean anything, you know?...That's from my own life experience as an indigenous woman... Otherwise our indigenous communities would have drinking running water already, you know." (Louise)*

Participants were also not supportive of the tax because of the decision makers behind the policy, whom they perceive to push similar agendas that do not take into account Indigenous-specific determinants and needs. These "do-gooders" were perceived as lacking an understanding of the realities facing Indigenous communities, as well as how to approach health and behavioral reforms effectively and equitably. Louise referred to those reforms as "pilot projects" that have the intention to change behavior but tend to fire back because they are trial runs, not based in evidence. Participants perceived policy makers as misinformed, pushing a colonial agenda, with the same cookie cutter approach that may work better for the general population, based on western principles not Indigenous principles. Participants referred to the decision makers as the "higher ups", "privileged", "powerful", "elitist", "virtuous", "parental", and "condescending" in the context of discussing SSB tax. The decision makers, elites, and people of higher socio-economic status were considered by participants to belong to the same group of people.

> *"I think that it's kind of like elitist in a lot of times. It's always like the do-gooders within politics or within activism that say those kinds of things. Not really realizing like those folks are still going to buy it no matter what. (Gavin)*

> *We're always hear about, you know, all of this change that everybody wants to make happen. You know, everybody wants to end homelessness. Everybody wants to end poverty. Everybody wants to ... You know, everybody has these great plans*

> *to end all of this yuckiness, but in reality it's not happening. You know, that we're just making it more yucky. (Louise)*
>
> *"It makes everyone in the other areas feel like virtuous that they're trying to make a change. And then this area, it's just like we don't give a shit about you." (Gavin)*
>
> *"and then to tax that, to make that person who already is- have their own issues and their coping with it, with food and then you tax their sugary beverages then… that actually is like almost like a punishment. Its um…its uh, like condescending and authority in the sense that like- like they are trying to be parental. Right? It's gross. (Amanda)*

In conjunction with the theme of widening inequities, participants were concerned that the true benefactors of the policy would be the more privileged communities and individuals, including the decision makers. Participants indicated that the elite would benefit in financial, social, and health aspects because they already consume less SSB, more likely to comply with the policy which will keep more money in their pockets, while also benefiting from the financial siphon, as well as reinforce their self-perception of virtuousness and healthfulness. Given that privileged people were perceived to benefit more, this contributed to the second theme of SSB taxes leading to inequitable outcomes.

Theme 2: Taxes are ineffective and lead to inequitable outcomes

The second theme is characterized by concerns regarding the efficacy and equity of the tax as a behavioral intervention. This theme compounds the first given the push for a measure anticipated to benefit non-Indigenous people, privileged communities, and generate money for the government while taxing the SSB purchased in the NE.

Participants predict based on their previous experiences that an SSB tax will not be an effective instrument to change behavior because it will not address the underlying determinants of SSB consumption, including food insecurity, poverty, addiction, and social aspect of SSB consumption among Indigenous people in the inner-city context. Among several priorities,

participants called for actions that would address food insecurity first. Given the habitual and social aspect of SSB consumption, participants were simply not convinced that a tax will reduce overall consumption of SSB because "*Like if pop goes up, pop's still cheaper, pop's still more accessible. To them, it's still more norm." (Gavin)*.

> *"Um, but they're not ... I don't think like one family is gonna completely cut out a, a habit that they had for years, so it's gonna be like ... Um, they're gonna buy it, but for a cheaper price somewhere else or deal somewhere." (Diane)*

Other participants believed the tax will not be effective because of the psychological and emotional aspect of consuming SSB, providing comfort, pleasure, and a means to cope. An increase in price will not decrease consumption because SSB are not consumed simply because they might be one of the cheapest and accessible options. SSB will continue to be purchased because they are an integral part of coping among residents of a neighborhood that is often in "survival mode".

> *"You will do whatever you need to do to fix that feeling, you know. To fill that feeling up, that void, that sugar your body needs at that time. You'll do whatever you need to do, to do that. So I feel like people are still going to... They're still gonna buy pop. I don't think it's... that's gonna change at all. It's not gonna change how much pop or how much sugary drinks are being sold. That's not gonna change either." (Louise)*

Several participants often referred to tobacco tax as a means to suggest that an SSB tax would be similarly ineffective:

> *"...yeah people who smoke don't stop smoking. So people who sugary beverages aren't going to stop drinking sugary beverages, it just means its going to be harder..." (Amanda)*

Some participants raised concerns that the tax will likely lead to a negligible increase in price which will not be significant enough to reduce SSB consumption but will be taking much needed money away from residents of the NE.

> *"It's always, it's increased, and if they put a little bit more of the tax on there, on the sugar, then what's the difference of that? The only difference is somebody's making money, as in the end somewhere else down the line. That's what it is. And I mean, that's all, hey, that's what I see." Like, because most of us are low income. So like, it we- it would, um, have us spend a little bit more. But like I said, I don't think it would stop us from buying it. (Charlotte)*

The SSB tax will not reduce overall consumption of SSB because participant predict people will shop for substitutions, cheaper alternatives, or stockpile on sales or bulk options.

> *"Like say if like the government does raise the tax on sugar, it's [not] gonna stop people from buying pop, or anything. People are just gonna just whatever, go to the store, try to find the deals on it, right? That's about it." (Tyler)*

Inequitable economically

Given participants' prediction that the SSB tax will not be effective at reducing purchasing of SSB, they are not supportive of the SSB tax because they anticipate it will widen existing socio-economic inequities by exacerbating the position of Indigenous people while improving the more privileged neighborhoods and groups.

> *"it's just going to make our life more of a struggle. We're going to be living in survival mode even harder than we already are (Louise)*

Amanda compared an SSB tax to the Sheriff of Nottingham to "keep them extra poor" and suggested they needed a Robin Hood. Participants were concerned that the proposed tax will aggravate the NE's already poor financial situation because it will not deter regular consumers.

> *"I think it [SSB tax] would hurt all of our pockets, definitely.…so maybe a tax would like have to like I said, if they gonna get taxed on it, maybe they'd have to like cut something else off in their, in their monthly budget, or their weekly budget or whatever, how they're doing it. (Carolyn)*

Given residents' already tight budgets, an increase in SSB price will further increase their financial burden, leaving less for other obligations and basic necessities because SSB will continue to be a priority.

> *"More priority on pop, less priority on everything else they have to buy. Basically just that. Like if pop goes up, pop's still cheaper, pop's still more accessible. To*

> *them, it's still more norm. So if they're spending more money on pop, and that little extra money they might have been able to use on more like healthier groceries, that's just canceled." (Gavin)*

Notably, one of the obligations that is anticipated to suffer as a result of a tax on SSB would be the procurement and consumption of "healthy" food because SSB will continue to be prioritized.

> *"Now people are still gonna spend that for pop, but it's going to be five bucks less that they can spend on- on healthy food." (Janice)*

> *Um, it would probably make them a lot more, like, broker, because, like, we're already broke in the North End. And, uh, less healthy foods will get eaten because they'll be spending more money on junk food, and sweets, and pop, and alcohol beverages of course. (Evelyn)*

A couple participants anticipate that in order to continue affording SSB, people will go to greater lengths to earn more money, which will increase strain and may even lead some to risky money acquisition behaviors.

> *"People will go out of their way to find that extra money, that extra whatever-it-is, to still maintain their pop addiction, their sugar addiction. It is an addiction." (Louise)*

Amanda described how the daily hustle of living on a low income will intersect with the strain the tax will add.

> *"So people who sugary beverages aren't going to stop drinking sugary beverages, it just means its going to be harder and it just means that like instead of being able to have what you want… um, uh. The ones that end up being able to h-have what you need, you will always be chasing what you want. And so then, it makes the grind and the hustle a lot more harder and the hustle is like to having to like wake up in the morning, and like, go find a resource, and like you know, hopefully they treat you kindly, and then like maybe they have a meal" (Amanda)*

Participants anticipate the tax to benefit higher SES and non-Indigenous communities because they will be on the receiving end of the tax revenue, are expected to have an easier time reducing their already lower SSB consumption, and save money as Gavin explained:

> *"The more people that would be deterred are those that have the more healthy coping habits, or the people to have accessibility to those things. This area would be impacted more, and it doesn't address any underlying things. It's the same." (Gavin)*

This is juxtaposed against community members that will be especially affected by the tax, as Janice provides a few examples below.

> *I feel like- I would feel like- it would be so dumb. We're already being taxed on our- on our drinks, and our sugary drinks, and our sugary juices. Why add more tax? It's not gonna harm people who are or higher end of the employment spectrum. It's gonna hurt the little people. The people who- who are on EIA with children who are on EI or working poor or you know, those are people it's gonna hurt. It's gonna hurt people like myself, like other people in my complex. Um, it's gonna hurt senior citizens who like to buy pop and have it in their home for their grandchildren or when people come over, who are on pension. So, it's- it's a lose-lose situation to add another tax. (Janice)*

Social inequity

Participants anticipate that an SSB tax will negatively affect Indigenous people socially because of the public health message attached to the tax, and dampen a practice that is social, pleasurable, and sometimes a means of coping. *"I think it would affect people emotionally because they depend on sugar…like people have emotions with food, right? So same thing with pop. People want a sugar fix. And like for me, for example, I had that. I wanted my pop." (Beverly)*

Some participants viewed an SSB tax as a tool to deliver an unsolicited, paternal lesson, whereas a minority perceived it to be a positive educational tool.

> *"Is that just to get people to not buy the products? Is that just to get people not to drink these products? Is it that just to get people to think about their health before drinking those products? I don't know. You know, I just don't know. It's, like I said, it's just basically a... I would say an individual decision on one's part, so." (Gerry)*

> *I think it would like make people aware that, well, it's unhealthy and if you're gonna pay more for it, maybe it's a good idea to quit. (Beverly)*

A few participants discussed how SSB is used as a form of harm reduction, a better option or something people transition to after quitting the use of substances. However, the tax could transform the only socially acceptable vice to an unaffordable taboo, as described by Amanda:

> *"The tax in the North End, why- why you need to tax the North End? Like yur-yur-yur, these are people who already struggle because their um what is it… income status… their socio ec-economic status um… like you're going to take away the one thing that like is okay like if you can't drink, you can't do drugs and at least you can go get a slice of pizza and a drink for a dollar, you know? Sometimes we don't even have a dollar… so [laughs]" (Amanda)*

Several participants anticipated a SSB tax would also destabilize theirs or others' SSB shopping routines and budgets, something steady in the life of participants.

> *"What the hell? I do not like that. Because like, what if I don't have the exact change of what I wanted and then all of a sudden I need to have more than I don't have. And I won't be able to get it. Which would suck and I would be mad." (Shelly)*

By extension, a SSB tax will be another reminder of one's financial situation and poverty, and having less than others, as described by Louise:

> *"It makes you look at even more at the people that have what you don't have. Why do they get to live that good fucking life and I have to sit here in my front yard with a shovel to make sure that nobody's going to bust in my front door because they're living in survival mode? You know, we ... Like it's just ... It blows my mind. ....And, um, it's really hurtful as a single parent knowing that if this tax goes up, like I already struggle with feeding my kids. I already struggle with making sure that we're getting by, you know, just everyday things." (Louise)*

A few participants also commented on how a tax on SSB seemed to unfairly target Indigenous people given their perceived higher intake of SSB and the tendency of "do gooders" to employ paternalistic measures.

> *"Because as an Indigenous person, it sounds like you're trying to tax a specific group of people um- and like reprimand us for adjusting to this new world." (Amanda)*

> *"Well, the Indigenous population, uh, and there would be a lot of push back against that, especially in northern communities where sugary drinks are already very expensive, like three times the cost of what you would, uh, have in the city. And so, uh, but I think with these too, people that understand that people are addicted to these drinks, right? Whether it's a physical or mental or psychological addiction. So the push back will really be seen as something, uh, detrimental or even, um, just, uh, what would you say? Uh, oppressive." (Alan)*

Theme 3: Indigenous self-determination is critical

Given that participants described an SSB tax as unfairly targeting Indigenous people, taking away choice, and siphoning money out of the community, Indigenous input and self-determination was critical in garnering any support for an SSB in the interviews.

Many participants pointed out that the tax takes away choice by constricting an already tight budget, which was juxtaposed against the government having the power to do as they please. A couple of participants (Gerry and Louise) pointed out that the governments are the ones in the first place that introduced sugar and SSB into their diets and neighborhoods, leaving it up to individuals to make choices, but as Louise described as for Indigenous people in the NE as "two bad choices", and an extension of existing colonial policies designed to eradicate Indigenous people.

> *"Where we're pushed to make, uh, a choice from two bad choices so that we're doing it to ourselves, so that ultimately, nobody else is responsible, right? Like, the government isn't responsible for putting these taxes on things that we really need and not putting taxes on stuff we don't need. You know, it's self-elimination. It's, it's, uh... There's a certain word for it I can't think of, but, like, um. They are... We're wiping ourselves out. We're wiping ourselves out, we're wiping each other out, so that it's just less, you know, less dirt on somebody else's hands, right? Because "we did it to ourselves," quotation marks. I have big bunny ears here happening. You know, it's the same with, with addiction. You know, they... They're gonna keep putting shit out on the streets so that we're consuming it ourselves as our own choice but we're being pushed to do that, right? Like, we, like, it's, yeah... Sorry. Just, uh." (Louise)*

The exclusion of Indigenous people in policy making has had considerable health implications and is a determinant of health. Participants expressed greater support for taxation of SSB if the

generated revenue was earmarked to initiatives that were important to them. In this regard, the tone of many interviews changed during this line of questioning. Many participants who were strongly opposed to the tax, shifted their attitude when asked how they would like the revenue to be allocated in the scenario that the tax was in-fact implemented. Having input was important to participants, because they yearn for self-agency to decide how money that is taken out of their community is allocated.

Nearly all participants were opposed to directing the money to general revenue given how the government has historically distributed tax revenue. In response to the option of directing taxes to general revenue, Shelly said:

> "*Um, well, I'm thinking if it went to that, so who's gonna benefit? Really? The government will, which goes into infrastructure that doesn't have, most of the time doesn't have anything to do with majority of the citizens of the city." (Shelly)*

When discussing the option to direct revenue to causes proposed by the participant in the interview, participants were more supportive.

> *"I would understand it more and, and yeah that would be better if it went toward people who need food and not to wherever the government and why they're doing it. (Shelly)*

> *"I would, I, that would com- completely change my outlook on that." (Charlotte*)

Directing the money to an important cause is a critical aspect of acceptability of the tax among participants given existing social inequities and Canada's colonial history.

> *"it has to have a positive effect in the mind of Indigenous people, because I think people are aware of the impact of diabetes in their families. So I think if it is seen as preventing more complications due to diabetes, uh, people are more likely to support it than if it was going into something that was seen as directly beneficial to the community. (Alan)*

Participants responded positively to the prospect of earmarking the revenue to causes that promoted health, financial, and food security among Indigenous people, particularly in their

community. A common theme was to direct funds towards food programs (food banks, gardens), clean drinking water on reserves, making healthy food more accessible and affordable, housing, health promotion and education on the relationship between diet, health, and weight. However, of note is that all participants were knowledgeable of the effects of sugar and sugary beverages on health, diabetes, and dental caries.

> *"Well, I wouldn't mind spending the extra however much it would cost to purchase these items if it was going towards, like I said, healthier food options in, in low income areas. Uh, yeah. Like, I mean, most of us don't eat healthy already. And I know from my own experience, I've seen what they do have to offer. I mean, things have gotten better over time a little bit. But um, seeing what they do have in food banks isn't healthy at all, in my opinion. Most of it's processed. So I'd love for it to see that go towards healthier food options." (Charlotte)*

Although earmarking the tax to a worthy cause changed some participants' attitudes, it did not change all participants' minds. It was pointed out that hinging a benefit, especially a basic human right such as clean water or access to healthy food, on a tax that will would financially burden the targeted population, was a concern. As Louise pointed out, when a good thing is given something is taken away from the Indigenous community.

> *"I don't think i- i- it's not enough, actually. That's a pinch of it. You know, and usually when we get something good, something is taken. So, um, yeah. No, I don't think it's fair at all."*

The minority of participants were supportive of the tax irrespective of where the revenue would be allocated, or exhibited some cognitive dissonance. However, these same participants did not consume SSB themselves, believed the tax would be an effective behavior modifier, could be used as an educational tool, and that sugar is a major health concern.

> *"Well, because I don't drink sugary drinks it wouldn't really affect me directly but I think it would be good for this generation, uh, to be educated about the dangers of the sugary drinks especially in the cultural circuit where it's very prominent." (Alan)*

Discussion

Participants' overall low acceptance of the tax was defined by the inter-related dispositions that the government is not trustworthy; taxes are ineffective and lead to inequitable outcomes; and Indigenous self-determination is critical and did not appear to be considered in SSB tax proposals. Participants' attitudes toward the proposed policy to tax SSB are shaped by a broad set of considerations, including their experience with previously implemented taxes and the impact they anticipate of this newly proposed policy. This study joins a limited, yet growing number of studies that explored public acceptability of pricing policies and taxation of SSB (Somerville et al., 2015; Bombak et al., 2021; Reynolds et al., 2019). Findings strongly echo themes reported from a London, England focus group study with mid-upper class and ethnically diverse sample on attitudes toward pricing policies targeting health behavior changes (Somerville et al., 2015). Similar to the results of this study, participants' attitudes in London towards 'sin' taxes were overall negative because of beliefs that pricing policies are not effective behavior modifiers, are designed to generate incomes, and governments should not be trusted (Somerville et al., 2015).

Findings illustrated that participants do not trust the government's intentions with the proposed SSB tax and the allocation of its potential revenue. Participants' distrust of the government in the context of the proposed policy is just a tip of the iceberg, Indigenous peoples' distrust in the Canadian government is rooted in legacy of colonialism (Ryan, 1996; Morden, 2016; Groot et al., 2020). Mistrust in government and public health care systems has been heavily investigated in the wake of COVID-19 pandemic and was associated with lower compliance to COVID-19 distancing measures, vaccination, and overall higher infection and death rates (Bollyky et al., 2022). Lack of trust of the health care system has also been strongly

associated with lower self-reported health in America (Armstrong et al., 2006). Therefore, it is critical for policymakers and public health researchers to consider the indirect health impacts of government distrust with respect to SSB taxation, particularly among marginalized communities

This study draws attention to ineffective and punitive nature of SSB taxation, which increases the risk of food insecurity and other health inequalities among urban Indigenous people. As participants predict, SSB tax is regressive given that the average tax burden will increase with lower income, leaving less money for other expenses (Ross & Lozano-Rojas, 2018; Men et al., 2021). Participant's predictions of how the SSB taxation would influence future spending are similar to research in tobacco control, where lower income individuals displaced other purchases and employed conservation strategies by saving on food and delayed paying utilities (Hoek & Smith, 2016). Participants concerns may materialize to NE community members spending less on more nutritious foods in order to continue affording SSB. Evidence among urban Indigenous people in Australia suggests that when unexpected household costs are incurred, food budgets fall in priority and are often used in reconciling other financial responsibilities (Foley, 2005), and tobacco taxes in New Zealand led to increase in robberies in low-income neighborhoods (Glover et al., 2021). Evidence of SSB tax reducing SSB consumption, particularly among lower-income and Indigenous groups is inconclusive or lacking (Browne et al., 2020). Furthermore, experiential data shows that price elevation strategies will likely result in the reduction of SSB consumption among the un-intended, rather than the high frequency consumers and lower income groups due to a higher baseline consumption (Blake et al., 2018).

Concerns raised over the notion that the SSB tax is there to increase consumers' awareness of the harmful health effects of SSB is termed the signaling effect (Licari & Meier,

2000; Álvarez-Sánchez et al., 2018). Taxes have the power to assign and represent social meaning (Carruthers, 2015). Activities that are considered harmful, although not illegal, carry strong moral disapproval and stigmatization (Carruthers, 2015). As a result, this disapproval transcends public attitudes and behaviors and is expressed through public policy (Carruthers, 2015). Sin tax is a paternalistic tool, justified by the premise that it will make it harder for citizens to consume undesirable products that are "bad for them" and that they "cannot abstain from themselves" (Juul Nielsen & Jensen, 2016). Growing evidence suggests that public health promotion strategies are dominated by a strong "anti-sugar", unsubstantiated, narrative that radiates throughout social media, scientific article titles, and other publications (Hervik et al., 2021); policies inherently target high consumers, who tend to be from lower socioeconomic strata and racialized groups with the least control and choice over their food environments.

Participants' concern for the tax as a paternalistic tool underscore the importance of Indigenous self-determination in the face of new policies. Embedded within the universal right to self-determination, UNDRIP outlines the right of Indigenous people to Free, Prior, and Informed Consent (FPIC) (Food and Agriculture Organization of the United Nations [FAO], 2016). This right enables Indigenous people to give, withhold, and or withdraw consent to any measure that they are a stakeholder to (FAO, 2016). Public health priorities and policies designed to impact Indigenous communities should be defined, designed, and implemented by Indigenous people in order to ensure efficacious outcomes (FAO, 2016). The hypothecation of tax revenue should also be under the discretion of Indigenous people, particularly if provisional incentives such as a promise of drinking water are made. Given that drinkable water is a human right and been long promised to Indigenous communities, using it as an incentive for the tax should not be considered as aligning with the principles of FPIC. Governments have control over how policy

targets are identified, framed, and implemented. Policies are often poorly implemented due to the fragmented nature of the governance bodies and departments (federal, tribal, Indigenous, provincial, municipal etc.). Reflecting their power and privilege, policy makers tend to frame Indigenous people as the problem, as "other", which historically and presently lead to assimilatory measures. These measures continue to undermine Indigenous self-determination and incorporation of Indigenous knowledge and perspectives in policy making.

To our knowledge this is the first study to explore attitudes towards a proposed SSB tax among Indigenous people in Canada. The diverse sample in age and gender provides a comprehensive indication of the perspectives of Indigenous residents of the NE. While our sample is relatively overrepresented by those who were not employed at the time of the interview, it is also a strength because it allows for the incorporation of perspectives that are excluded from research due to socio-economic barriers to participation. Continuous collaboration and conversation with research partners, research assistant, and broader community for member checking enhanced the rigor of the study. Further research is required to explore the acceptability of the SSB tax among other Indigenous communities, both on- and off-reserve. As called by the TRC (2015), Indigenous people should have the space and power to be involved in the design and implementation of health policies (Call to action #19).

In conclusion, participants were generally opposed to SSB taxation. Combined with the evidence that sugary beverages are consumed at a greater frequency, volume, and energy among Indigenous and lower-socioeconomic groups in Canada, these populations will disproportionately incur the greatest economic cost, which must be considered as an additional pathway with which a SSB tax may further negatively influence health. Future research should

explore how FPIC consent for policies is conceptualized, as outlined in the United Declaration of the Right of Indigenous Peoples.

Chapter 5: Overall Discussion

Findings illustrate the ways in which Indigenous people procure SSB in the context of an urban neighborhood situated in a food desert with high prevalence of food insecurity. Results further expand on how procurement of SSB influence the perceived socio-economic implications of a SSB tax for urban Indigenous people. Exploring in-store shopping experiences provided insight into the social narratives or discourses of SSB, which were found to be influenced by race, class, and weight. Our results indicate that urban Indigenous people already experience judgment, stigma, and shame associated with SSB and its taxation may worsen social implications, particularly among Indigenous and low-income groups.

This study can inform policy makers of the acceptability of a SSB tax through the perspective of urban Indigenous people. This research captures how Indigenous people anticipate the tax to impact their personal and community's bottom line. Through the decolonizing lens this study also explored Indigenous people's trust in governance, the intentions of the proposed policy, and use of revenue by the government. The findings of this study also provide the community partners with the necessary evidence to inform their own position on this controversial policy and in their ongoing advocacy efforts to address food insecurity facing Indigenous communities.

Finally, the study's findings triangulate with other parts of the larger study, including the SSB price data, where prices of SSB have been compared between other parts of the city (in preparation), as well as according to which beverages are typically taxed in other jurisdictions (in preparation). We will also contrast the data in the NE to similar interviews with white participants from the River Heights neighborhood, a mid- to higher income neighborhood of Winnipeg, and Indigenous participants living in Flin Flon, Manitoba. We will also utilize

repeated cross-sectional data from the Canadian Community Health Surveys in 2004 and 2015 to examine changes in SSB intake over time according to Indigenous identity.

Future research could explore impact and attitudes toward the SSB tax scheduled to be implemented in Newfoundland and Labrador (NL) in the Fall of 2022 among Indigenous and non-Indigenous residents, as well as compare how procurement of SSB before and after the implementation of the SSB in tax in NL may have changed. Importantly, future research should focus on documenting quantitatively and qualitatively the impact of SSB taxes on communities with food insecurity and impact of SSB tax revenue use for marginalized communities.

Knowledge translation

Translating the study's findings into accessible and useful information to our community partners and research participants is an important outcome of this study. Knowledge translation has many definitions. The Canadian Institute of Health Research (2016) defines knowledge translation as a "dynamic and iterative process that includes synthesis, dissemination, exchange and ethically-sound application of knowledge". Kaplan-Myrth and Smylie (2006) provide a definition more appropriate in an Indigenous context – "sharing what we know about living a good life" (p.). The latter definition recognizes that knowledge is held by both Indigenous and non-Indigenous people; that Indigenous people have been conducting and applying their own research all along; that knowledge is shared through a continuous dialog, translated back and forth; and that knowledge should be used to enact positive change (Kaplan-Myrth & Smylie, 2006).

In alignment with these principles, we incorporated knowledge translation throughout the course of the study, also known as integrated knowledge translation (Kothari, McCutcheon & Graham, 2017). Together with the community research assistant, knowledge exchange took place

in the debriefing, member-checking, and data analysis phases. Once findings were ready to be presented to the broader community, we discussed together with Fearless R2W and NIDA regarding the best course of action and mode of distribution (e.g., presentation, poster, infographic, community gathering etc.). Detailed infographics were distributed to participants who indicated interest in receiving study results.

Together with our community partner, research assistant, and supervisor, I presented ongoing findings to the broader community through community-run events and newsletters. Findings from the first objective were presented at a virtual "Food as Medicine" community event held by Fearless R2W on March 24, 2021. Findings from the second objective were presented at a hybrid in-person/virtual event on November 17, 2021. Results from both objectives were also published in National Indigenous Diabetes Association newsletters in Summer 2021 (Appendix E) and Winter 2022 (Appendix F). Results were also presented to the nutrition scientific community at the Critical Dietetics Conferences in November, 2020 and at Canadian Nutrition Society in May, 2022. Results were presented in the context of the broader study team at a research team gathering in Winnipeg on August 18, 2022.

Conclusions

Overall, this research provides initial exploration and underscores concerns around the efficacy of SSB taxation, and the inequitable outcomes it is likely to impose on Indigenous, low-income, and food insecure groups. In the urban, inner-city context, findings reveal the substantial measures Indigenous people already employ to afford SSB on a regular basis. Given the regressive nature of the SSB tax and growing public stigmatization of SSB, these results underscore the economic, social, and broader health risks posed by the tax to populations marginalized by colonialism, class, race, and body size. On the basis of our findings and calls of

the TRC and UNDRIP, Indigenous self-determination in policy making is vital for the protection and advancement of Indigenous health in Canada.

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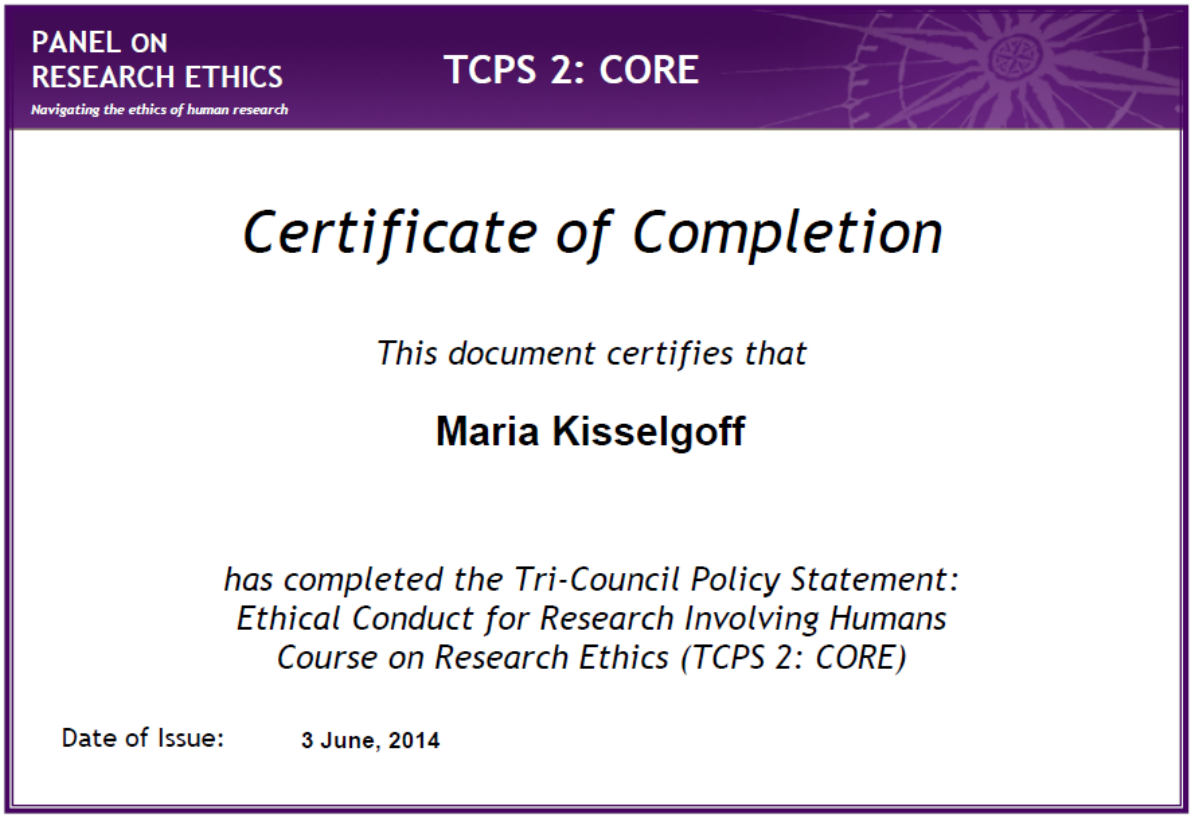
Appendices

Appendix A: Ethics training

TCPS 2


PANEL ON RESEARCH ETHICS
Navigating the ethics of human research

TCPS 2: CORE

Certificate of Completion

This document certifies that

Maria Kisselgoff

has completed the Tri-Council Policy Statement:
Ethical Conduct for Research Involving Humans
Course on Research Ethics (TCPS 2: CORE)

Date of Issue: 3 June, 2014

PHIA

UNIVERSITY OF MANITOBA

Administrative Use Only
Pledge #: 102-24680

PERSONAL HEALTH INFORMATION

PLEDGE OF CONFIDENTIALITY

Please read the statements below and indicate if you acknowledge/understand your responsibility under PHIA and University of Manitoba policies and procedures.

	DECLARATION
☑	I ACKNOWLEDGE that I have completed ***The Personal Health Information Act*** (PHIA) training offered by The University of Manitoba ("the University") and I am aware of my obligations under PHIA.
☑	I ACKNOWLEDGE that I am aware of the University's policy on confidentiality and security of personal health information as described in the Access and Privacy Policy, which is in accordance with ***The Personal Health Information Act***.
☑	I ACKNOWLEDGE that I am aware of the University's procedures on confidentiality and security of personal health information as described in the Access and Privacy Procedures, including procedures relating to collection, access, use, disclosure, retention and storage, and destruction of personal health information.
☑	I UNDERSTAND that in consideration of my association (including as a student, if applicable), appointment, employment, or contract with the University ("my relationship"), and as an integral part of the terms and conditions of my relationship, I hereby agree, pledge and undertake that: • I will not at any time, during my relationship with the University, access or use personal health information; • I will not reveal or disclose to any persons within or outside the University, any personal health information; EXCEPT as may be required in the course of my duties and responsibilities, in accordance with applicable laws, and pursuant to University and departmental policies governing proper release of the information.
☑	I UNDERSTAND that my obligations concerning the protection of confidentiality relate to all personal health information in the custody or under the control of the University that I may gain access to, directly or indirectly, as a result of my relationship.
☑	I UNDERSTAND that the obligations outlined above will continue after my relationship with the University ends.
☑	I UNDERSTAND that unauthorized use or disclosure of personal health information may result in disciplinary action being taken, and/or legal action at the discretion of the University.

Full Name: Maria Kisselgoff **Position:** Student Research Assistant

Date: May 1, 2019 **UM Unit/Organization:** Human nutritional sciences

Access and Privacy Office Authorization: Karen Meelker

Digitally signed by Karen Meelker
Date: 2019.05.02 14:20:10 -05'00'

(Administrative Use Only)

Appendix B: Consent form

Sticky Money: Exploring the acceptability of a sugar-sweetened beverage tax among Canadian Indigenous populations

Principal Investigator: Dr. Natalie Riediger

UNIVERSITY OF MANITOBA

RESEARCH PARTICIPANT INFORMATION AND CONSENT FORM

Individual Interview

Title of Study: "Sticky Money: Exploring the acceptability of a sugar-sweetened beverage tax among Canadian Indigenous populations"

Principal Investigator:
Natalie Riediger
Assistant Professor
University of Manitoba
407 Human Ecology Building
Winnipeg, Manitoba, Canada
R3T 2N2
Email: Natalie.riediger@umanitoba.ca

Sponsor: n/a
Funder: Canadian Institutes of Health Research

You are being asked to participate in a research study involving an individual interview. Please take your time to review this consent form and discuss any questions you may have with the study staff, your friends, or family before you make your decision. This consent form may contain words that you do not understand. Please ask the study staff to explain any words or information that you do not clearly understand.

Purpose of this Study
This research study is being conducted to study the acceptability of a proposed tax on sugary drinks in Canada.

Participants Selection
You are being asked to participate in this study because you identify as Indigenous and are an English-speaking adult residing in, or near, North End, Winnipeg OR are employed at a small business in the North End or Point Douglas, that sells sugary drinks.

A total of 20-25 participants will be asked to participate.

Sticky Money: Exploring the acceptability of a sugar-sweetened beverage tax among Canadian Indigenous populations

Principal Investigator: Dr. Natalie Riediger

Study procedures
The method of data collection for this study will be an individual interview with a Research Assistant or Researcher as well as a short Demographic Questionnaire. Interviews are a way of finding out people's thoughts and ideas about a specific topic. Participation in the study will be for approximately 1 hour. You will be asked some questions relating to your experience with food, specifically sugary drinks, and your perceptions and acceptability of a proposed tax on sugary drinks. These questions will help us to better understand what the implications are if a sugary drink tax is implemented in Canada and what the considerations may be if such a tax is implemented.
The sessions will be audio-taped and the audio-tapes will be transcribed by an anonymous transcription services in Canada to ensure accurate reporting of the information that you provide. Transcribers will sign a form stating that they will not discuss any item on the tape with anyone other than the researchers.
No one's name will be asked or revealed during the individual interview.
The audio-tapes will be stored in locked filing cabinets before and after being transcribed. Audio files and the transcriptions will be destroyed *7* years after the completion of this research.

Risks and Discomforts
There are no anticipated physical risks to participants. However, you may find talking about your food environment and its relationship to health to be upsetting or emotional. You do not have to answer any question that makes you feel uncomfortable or that you find too upsetting.

Benefits
Being a study participant may not help you directly, but information gained may provide information regarding the merits or limitations in implementing a tax on sugary drinks.

Costs
There is no cost to you to attend the individual interview.

Payment for participation
You will be given $50 for your participation in this research study.

Confidentiality
We will do everything possible to keep your personal information confidential. Your name will not be used at all in the study records. Your business or place of employment will also not be used in any of the study records. A list of names and email addresses of participants will be kept in a secure file so we can send you a summary of the results of the study, if you want. If the results of this study are presented in a meeting, or published, nobody will be able to tell that you were in the study. Please note that although you will not be identified as the speaker, your words may be used to highlight a specific point. The collection and access to personal information will be in compliance with the Canadian provincial and federal privacy legislations.

Audiotapes of the interview will be typed (transcribed) and used to prepare reports, presentations, and peer-reviewed publications. The audio files, transcripts, questionnaire, consent forms, and typed notes will be kept for 7 years in a secure locked file cabinet and office. Only the research staff and Principal Investigator, Dr. Natalie Riediger, will have access to them and know your name. De-identified transcripts will be securely shared with researchers on the study team at other Canadian post-secondary institutions for data analysis.

Sticky Money: Exploring the acceptability of a sugar-sweetened beverage tax among Canadian Indigenous populations

Principal Investigator: Dr. Natalie Riediger

Some people or groups may need to check the study records to make sure all the information is correct. All of these people have a professional responsibility to protect your privacy.

These people or groups are:

- The Health Research Ethics Board of the University of Manitoba which is responsible for the protection of people in research and has reviewed this study for ethical acceptability
- Quality assurance staff of the University of Manitoba who ensure the study is being conducted properly

Interview data will be transcribed, with transcriptionist agreeing to maintain full confidentiality in regards to all content of each interview. All records will be kept in a secure area and only those persons identified will have access to these records by a password protected computer. If any of your research records need to be copied to any of the above, your name and all identifying information will be removed. No information revealing any personal information such as your name, address or telephone number will leave the University of Manitoba.

Permission to Quote:
We may wish to quote your words directly in reports and publications resulting from this. With regards to being quoted, please check yes or no for each of the following statements:

Researchers may publish documents that contain quotations by me under the following conditions:	
☐ Yes ☐ No	I agree to be quoted directly if my name is not published (I remain anonymous).
☐ Yes ☐ No	I agree to be quoted directly if a made-up name (pseudonym) is used.

Voluntary Participation/Withdrawal from the Study
Your decision to take part in this study is voluntary. You may refuse to participate or you may withdraw from the study at any time.

Questions
If any questions come up during or after the study, contact the principal investigator: Dr. Natalie Riediger at 1-(204)-480-1323 or Natalie.riediger@umanitoba.ca

For questions about your rights as a research participant, you may contact The University of Manitoba, Bannatyne Campus Research Ethics Board Office at 1-(204)-789-3389.

Sticky Money: Exploring the acceptability of a sugar-sweetened beverage tax among Canadian Indigenous populations

Principal Investigator: Dr. Natalie Riediger

Consent Signatures:

1. I have read all 4 pages of the consent form.
2. I have had a chance to ask questions and have received satisfactory answers to all of my questions.
3. I understand that by signing this consent form I have not waived any of my legal rights as a participant in this study.
4. I understand that my records, which may include identifying information, may be reviewed by the research staff working with the Principal Investigator and the agencies and organizations listed in the Confidentiality section of this document.
5. I understand that I may withdraw from the study at any time and my data may be withdrawn prior to publication.
6. I understand I will be provided with a copy of the consent form for my records.
7. I agree to participate in the study.

Participant signature_____ **Date** _____
(day/month/year)

Participant printed name: _____

I, the undersigned, have fully explained the relevant details of this research study to the participant named above and believe that the participant has understood and has knowingly given their consent

Printed Name: _____**Date** _____
(day/month/year)

Signature: _____

Role in the study: _____*[*

Appendix C: Demographic Questionnaire

(Version May 3, 2018)

Please take a moment to complete this short questionnaire. Your answers will remain confidential.

Participant ID#:_____

Date:_____

1. With which gender do you identify?
   ❑$_1$ Male ❑$_2$ Female ❑$_3$ Other

2. In what year were you born? _____[YYYY]

3. What is the highest level of education you have completed?

   ❑$_1$ Primary school

   ❑$_2$ Some secondary school

   ❑$_3$ Completed secondary school

   ❑$_4$ Completed trade/technical school or college diploma

   ❑$_5$ Completed university degree

4. What is your current employment status?
   ❑$_1$ Retired

   ❑$_2$ Semi-retired or working part-time in the labour force

   ❑$_3$ Working full-time in the labour force

   ❑$_4$ Not working in the labour force (a caregiver who doesn't work by preference/on leave/ unemployed)

5. With what race/ethnicity do you identify?
   ❑$_0$ White

   ❑$_1$ First Nations

   ❑$_2$ Metis

❑$_3$ Inuk (Inuit)

❑$_4$ Black

❑$_5$ South Asian

❑$_6$ Southeast Asian

❑$_7$ Arab

❑$_8$ Chinese

❑$_9$ Multiple ethnicities/races

❑$_{10}$ Other: _____

6. In general, how would you rate your health?

❑$_5$ Excellent

❑$_4$ Very Good

❑$_3$ Good

❑$_2$ Fair

❑$_1$ Poor

7. Do you and other household members always have enough of the kinds of foods you want to eat?

❑$_2$ No

❑$_1$ Yes

8. How often do you consume sugar-sweetened beverages (such as soda/pop (regular or diet), sports drinks, sweetened tea, sweetened coffee)?

❑$_5$ Never

❑$_4$ Less than once per week

❑$_3$ 1-3 times per week

❑$_2$ 4-6 times per week

❑$_1$ At least once per day

Thank you for your participation!

Appendix D: Interview guide

Phone interview addition:

I like to mention a few things before we start

1. Of course, talking on the phone, we can't see each other. After I ask a question and you answer, there might be some awkward silence or we might talk over each other, so I apologize in advance.
2. We are very interested in stories and experiences, so please feel free to share as much as you would like. We are very interested in hearing your opinions and thoughts.
3. Speaking of opinions, I want to make sure that you know that we are not the health police, we are not associated with the organizations that proposed the SSB tax. We are researchers who are here to hear what you personally think.

Any questions?

Now we can get started

1. Can you tell me a bit about your community – what or who do you consider to be part of your community
    a. What are some strengths, weaknesses, or concerns in your community?
    b. What do you think is the most urgent concern in your community?
    c. What general health concerns, if any, do you have for your community, yourself, your family?

2. What beverages do you drink most frequently?
    a. How often do you have drinks with sugar?
        i. Pop
        ii. Diet drinks
        iii. Sport drinks
        iv. Coffee or tea
        v. Juice
        vi. Alcohol + pop
        vii. Has this changed over time?

    b. How often do people in your family have drinks with sugar?
        i. What types of drinks?
        ii. Has this changed over time?
    c. How often do your friends have drinks with sugar?
        i. What types of drinks?

        ii. Has this changed over time?
3. When you drink sugary beverages in front of your family, do they react to you in any way?
    a. Do they say anything, look, or comment? Can you tell me (a story) more about a particular time that it happened?
    b. How do they react to you drinking _____ vs _____
    c. How does that make you feel?
    d. How do you deal/cope with these experiences?
    e. Why do you think they react this way?
    f. What do you think are the causes of these experiences?

4. Where do you drink beverages with sugar? Where do you feel most and least comfortable drinking sugary drinks?
    a. How is the experience of drinking sugary drinks different or the same in public or private?
    b. If someone reacts to you drinking sugary drinks, who is reacting to you?
    c. How are these reactions the same or different compared to when you drink other types of drinks? Certain types of sugary drinks?
    d. How has this changed (or not changed) over time?
        i. Compared to when you were a child?
    e. Why do you think there are (or are not) differences?

5. Where do you usually buy the beverages?
    a. Can you describe to me what usually happens when you purchase a drink?
    b. If you had to walk me through what usually happens – where do you buy, when, in what form – single cans, bottles, bulk?
    c. How often do you buy beverages with sugar at the ____ store?
    d. Where do you prefer to shop?
    e. How far away are you from a “big” store?

6. When you are in the store, buying drinks with sugar, how, if at all, do people react to you?
    a. Who is reacting?
    b. How does that make you feel?
    c. How do you deal or cope with these experiences?
    d. What do you think are the causes of these experiences?
    e. How are these reactions the same or different than they were in the past?

f. How these reactions are the same or different compared to when you buy other types of drinks? Certain types of sugary drinks?

7. How do you react to others drinking or buying sugary drinks?
    a. Your family?
    b. Friends? Strangers?
    c. Children?
    d. Overweight people?
    e. Why do you react (or not react) that way?

8. Have you heard about the sugar-sweetened beverage tax?
    a. What sources did you hear that from?

9. If a tax was introduced, what drinks do you think will be taxed? Taxed first?
    a. Why?
    b. What about diet drinks?

10. If the tax was introduced and sugary drinks become more expensive, who do you think would be most affected?
    a. How do you think that the tax would affect your purchasing habits, if at all?
    b. How do you think the tax will affect Indigenous/other people living in the North End?
        i. How would it affect people who cannot afford food?

11. How would you feel about the tax being introduced in Manitoba or Canada?
    a. What about in northern, remote communities?
    b. In communities where the cost of food is much greater than Winnipeg?
    c. In communities without drinking water?

    d. How do you think a tax on tobacco/cigarettes affected Indigenous people?
        i. In what way? Positively or negatively?
        ii. Do you think fewer Indigenous people smoke because of the tax?
        iii. How do you think the sugar tax compares to the tobacco tax?

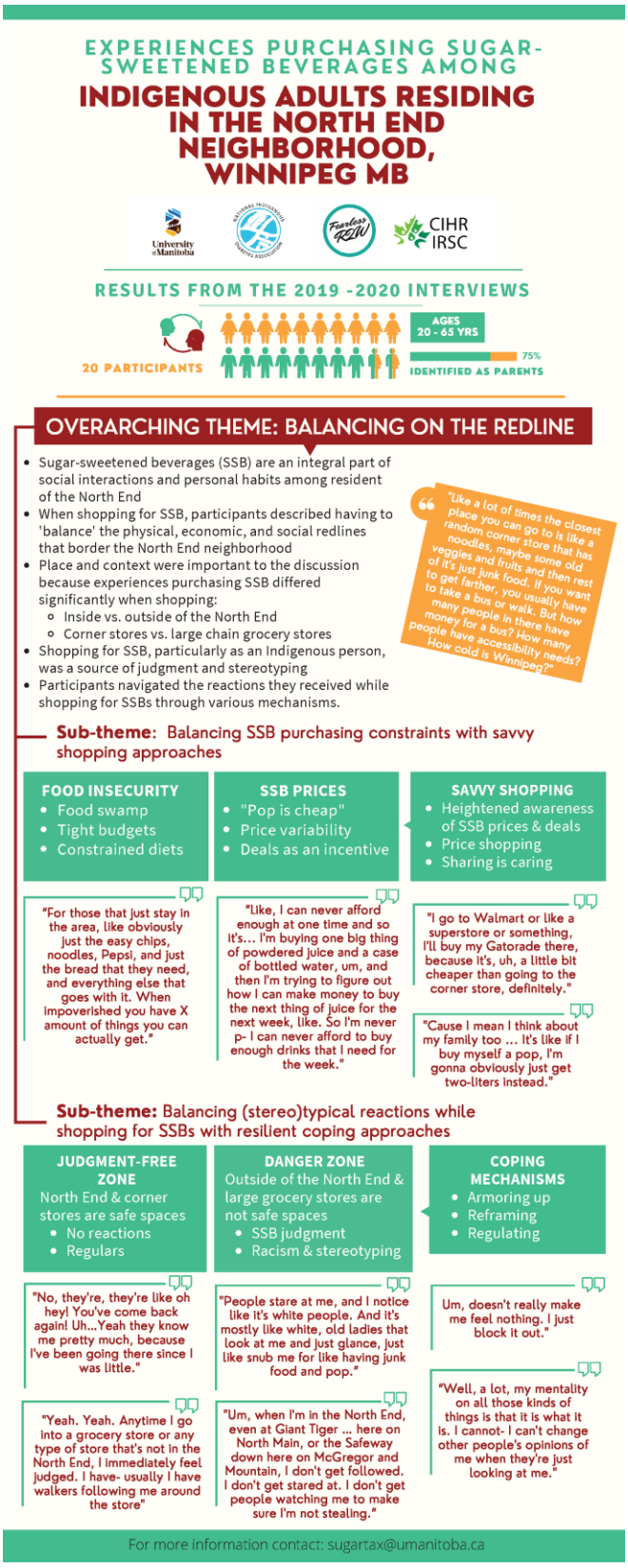
12. Where do you think the money generated from the tax would go?
    a. Where would you want it to go?

b. If it did not go towards what you want, or went towards general revenue – would you still support?

13. How do you think drinks with sugar affect (or do not affect) individuals' health?
    a. Where have you heard about drinks with sugar and health?
    b. What about diet vs regular health?

Thank you for your time and participation. Is there anything you want like to add or ask me?

Appendix E: Objective 1 infographic



Appendix F: Objective 2 infographic