The Significance of a Relations-based Approach to Indigenous Research Ethics and Indigenous Data Sovereignty

By

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ABSTRACT

Background: Indigenous people have been increasingly asserting self-determination in research to "research ourselves back to life". There is a current knowledge gap regarding how gender is considered in Indigenous research ethics and its implications for Indigenous self-determination in research.

Methods: Utilizing critical discourse analysis and a decolonizing theoretical framework a systematic review was conducted to contribute to filling this knowledge gap.

Results: The dominant concept and language of gender as binary are being used in Indigenous research conducted in observance of Indigenous research and it is given significance through its continued use, particularly in relation to participant sampling and bias. The mainstream concept is also given significance because research involving Indigenous people is in response to inequities resulting from colonization. However, there is resistance to this concept and its significance by revitalizing and renewing Indigenous Ways of Knowing (research paradigms including epistemology, methodology, methods, and theories) such as language and most significantly, elevating relations (human-to-human and human-to-nature) as part of Indigenous Ways of Being (ontology). The implications of this recovery and renewal is alignment and strengthening of Indigenous Data Sovereignty. This is ethical Indigenous research.

Conclusion: "Researching ourselves back to life" involves going back to the very beginning, to our very being as Indigenous peoples and relating this to how we understand, conduct, and utilize ethical research to express and reflect our reality for wellness, governance, and nation-(re)building.

Keywords: Indigenous Ways of Being; Indigenous Ways of Knowing; Indigenous research ethics; Indigenous self-determination in research; Indigenous Data Sovereignty; Indigenous Data Governance; decolonizing data.

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CHAPTER I: INTRODUCTION

1.1 Background of the Problem

> If we have been researched to death, maybe it's time we started researching ourselves back to life.

This statement was made by an Elder at a 1992 workshop to shape the emerging research agenda of the Royal Commission on Aboriginal Peoples (RCAP). Up to that point, many workshop participants expressed numerous criticisms of past research and skepticism about RCAP research (Brant Castellano, 2004: 98). Research has acquired a bad name amongst First Nations Peoples "because the purposes and meanings associated with its practice by academics and government agents were usually alien to the people themselves and the outcomes were, as often as not, misguided and harmful." (Ibid.) First Nations Elders in Manitoba recount the

> …long history of governments attempting to sever the most sacred of our relationships and undermine or displace our Creator-given responsibilities…through exclusive control over the collection, interpretation, and use of data and information regarding our people, lands and resources (Assembly of Manitoba Chiefs, 2017, p. 9).

First Nations in Canada and other Indigenous peoples all over the world are increasingly asserting self-determination in research including developing their own research ethics. An example of is the First Nations-developed research principle of Ownership, Control, Access, and Possession (OCAP®). OCAP® is one tool that is applied by First Nations communities across Canada in their exercise of jurisdiction over their own data (Assembly of Manitoba Chiefs, 2017, p. 9). These principles serve to guide the re-appropriation of the research activities and outcomes in research pertaining to Indigenous peoples and provide the context within which the development of culturally relevant, Indigenous worldview research paradigms is developing. In effect, OCAP® is provides the jurisdictional framework for the Indigenous research agenda (Indigenous Peoples' Health Centre Research, 2004, pp. 34-35, citing Brant Castellano, 2004).

Information is a resource, and it has value, to both First Nations and non-First Nations. It is valuable to First Nations because it can be used to advise policy and decision-making, enhance understanding of a particular area of study, and can be used to secure funding to meet an unmet need (The First Nations Information Governance Centre, 2014, p. 12). It "also has value to the extent that it is a representation of the knowledge, status and conditions of a community" (Ibid). However, that same information can be used to harm a community, leading to discrimination and stigmatization, which has led to many complaints and about research by Indigenous peoples (p. 12). The FNIGC states that, “First Nations themselves are the only ones that have the knowledge and authority to balance the potential benefits and harms associated with the collection and use of their information” (p. 12).

1.2 Statement of the Problem

There is a current knowledge gap regarding how gender is considered in Indigenous research ethics and what are its implications for First Nations self-determination in research. This finding resulted from a literature review conducted in the development of the proposal for this thesis. Key contributing factors to this overall finding are:

(1) Understanding Indigenous Ways of Being is foundational to understanding gender from the Indigenous perspective.
(2) These understandings have been impacted by colonization.
(3) Indigenous Ways of Being (including gender) and Indigenous Ways of Knowing (i.e. Indigenous research paradigms) are both part of Indigenous worldview and hence work in tandem.
(4) There is an opportunity to learn from current gender-based policy analysis approaches.
(5) Further exploration of this topic can be done in the areas of qualitative, health and cross-cultural research.

The following sections provide more context and details of the current problem.

1.2.1 Current Gap

Gender is not addressed within current research ethics related to Indigenous peoples. This is demonstrated by two ethical guidelines are presented here – one Indigenous and the other non-Indigenous but related to Indigenous people. The *Kwayask Itotamowin: Indigenous Research Ethics* were developed by the Indigenous Peoples’ Health Research Centre (IPHRC) (Ermine et al, 2005, p. 6). This was in response to a 2004 Institute of Aboriginal Peoples’ Health’s call for input from Aboriginal Capacity and Development Research Environment (ACADRE) centres. The IPHRC is one such centre. The IPHRC clarifies that the project undertaken in this development focuses on the issue of Aboriginal health research ethics, and its intent was to “seek to support the development of paradigms that intrinsically protects the Indigenous knowledge and the aspirations of our communities” (Ermine et al, 2005, p. 6). The following highlights two relevant sections that are missed opportunities to address gender:

Section	**Observation**
Section 8.5 “Diversity between First Nations and Aboriginal communities”: *In the discussions in the research community with respect to this new policy, one must not presume that First Nations or Aboriginal communities are homogenous and that all would accept a generalized policy statement as adequately protecting every community’s interests.* (Ermine et al, 2005, p. 35)	“Homogeneity” appears to refer to communities and not gender.
Section 5.2 identifies and speaks to the “deep concern” for community youth, where it is stated (Ermine et al, 2005, p. 15). Furthermore, *The Elders have a perception that mainstream influences are taking over the minds of the children from the communities to the degree that the youth now have a different attitude towards cultures and knowledge. One of the effects of the system of education is that it has created disconnection between the youth and the Elders of the community.* (Ermine et al, 2005, p. 15)	It can be argued that there should be an equally “deep concern” for the disempowerment of other segments of the population, including based on gender, as a result of mainstream influence.

Like the *Kwayask Itotamowin Research Ethics*, the *Tri-Council Ethics Guidelines for Research Involving First Nations, Metis and Inuit Peoples* were all developed as a result of many issues with cross-cultural research, primarily those involving Western-based researchers with Indigenous peoples, culture and lands as the research subjects. Article 9.6 “Recognizing Diverse Interests within Communities” provides,

> In engaging territorial or organizational communities, researchers should ensure, to the extent possible, that they take into consideration the views of all relevant sectors – including individuals and subgroups who may not have a voice in the formal leadership. Groups or individuals whose circumstances make them vulnerable may need or desire special measures to ensure their safety in the context of a specific research project. Those who have been excluded from participation in the past may need special measures to ensure their inclusion in research (2010).

Furthermore, in the application section following this article, it is written that

> Gender-based analysis is being applied in First Nations, Inuit and Metis organizations and communities to promote or restore recognition of women’s responsibilities in the conduct of community life – including decision-making that directly affects their welfare. The legacy of patriarchal governance structures continues to pose challenges to women’s full participation. Approaches that are attentive to cultural considerations help to ensure the equitable participation and benefit of women throughout the life cycle of a research project. (Tri-Council, 2010)

The following are my key observations of the insufficiency of this article and comments on its application:

- Indigenous organizations have expressed concern with gender-based analysis, which will be discussed in more detail later in this section.
- Concern that researchers should "to the extent possible" take into consideration the views of all segments of the population. This weakens the article and may provide disingenuous or otherwise less diligent researchers with a means to rationalize implementing this article within their research.

Getty provides additional concerns with Tri-Council developments, specifically the TCPS2, including: the researcher risks losing project funding if it applies ethical guidance offered by Indigenous research partners that contravenes their university-based REB; falls outside of established funding structures, impacting the trust building that takes time; and can undermine the larger political goals of decolonization and Indigenous resurgence (Getty, 2010, pp. 2-3). In his view, Indigenous peoples are best positioned to determine the ethical practice of academic research involving Indigenous peoples in Canada (p. 7). This highlights the need for Indigenous peoples to clearly and comprehensively to develop our own Indigenous research ethics and in doing so, assert our self-determination and jurisdiction over research.

Because much of the research involving Indigenous people in Canada and the United States has been qualitative research, health research, and cross-cultural research, these three types are of focus for this present study. Coupled with the gaps in Indigenous research ethics regarding consideration of gender or gender balance, these are key areas of to examine and identify critical opportunities to make space for Indigenous Ways of Knowing in every-growing Indigenous research ethics.

Qualitative research allows researchers to include Aboriginal perspectives into, for example, the underlying factors that affect their own health (Meadows, 2009, p. 2). Ethical issues emerge when the values of research in the academic setting seemed at odds with those of the individual participant and their communities (6). Ball et al write that ethical research practice with Indigenous populations relies on understanding historical trauma and being careful not to trigger traumatic memories and fear by what participants are asked to do in the research project (Ball & Janyst, 2008, p. 43). As an example, this includes appropriate ways to interview Indigenous fathers considering the impacts of the Indian residential era and the negative impacts on being fathered and becoming a father (p. 44). Meadows states that “challenges in doing qualitative health research with marginalized groups can be met through continuing to find and share successful ways of practice, which is essential if we are to effectively change health outcomes” (Meadows, 2009, p. 23).

MacKinnon writes that, in working together on First Nations health, all levels of government must consider First Nations values, priorities, government system, in the present and evolving health systems, including developing new research and health models (MacKinnon, 2005, p. 16). Hackett writes that history offers much needed perspective to understanding the origins of present health concerns (Hackett, 2005: 18). Revitalizing Indigenous ways of knowing and being is viewed as a critical step in confronting colonialism and the enduring legacy of poor health outcomes of First Nations peoples.

For purpose of this thesis, “cross-cultural” is understood within two contexts: (1) to refer to research conducted across different First Nations cultural groups, for example, the Dakota, Dene, Anishinabe, and Cree; and (2) to refer to Western-based researchers with Indigenous peoples, culture and lands as the research subjects. This description is not intended to necessarily equate the two approaches, but rather to capture involvement of different First Nations cultural groups in the same research initiative or project, which is more commonly practiced, including by First Nations through research partnerships and by First Nations organizations. This happens for many reasons, such as limited research funding opportunities and limited capacity. Kovach writes about “the ethical anguish of bringing cultural knowledges into our research given they will inevitably be judged by those unfamiliar with them. At the same time...acknowledge[ing] that it is tribal epistemologies that make Indigenous research distinctive” (Kovach, 2010, p. 155). There is a “complexity of bringing cultural epistemologies into spaces not fully decolonized” (Ibid).

1.2.2 Addressing the Gap

a. Identify Indigenous understandings and concepts of gender – Indigenous Ways of Being

Understanding “gender” in the Indigenous context is as a way of “being” (McKegney, 2014, p. 5; Anderson, 2016: xxv; Brooks, p. 6). It is best thought of as a verb rather than a noun (McKegney, p. 5). Citing Justice, McKegney states that Indigenous masculinity “isn’t a static thing; it’s dynamic, ever in motion…[it] is something that’s *done* more than something that *is*” (Ibid). Anderson writes that Native womanhood “is an ongoing exercise that involves mental, physical, spiritual and emotional elements of our being...” (2016, p. xxv).

Understanding of Indigenous Ways of Being is found not only at the individual level but at the interpersonal level as well. “Gender balance” is the term and concept most prevalent within this context. Valaskakis (2013) provides the following description:

> First Nations believe the eagle flies with a female wing and a male wing, showing the importance of balance between the feminine and masculine in the human condition. Consideration of the feminine and masculine contributes to a more complete understanding of gender relations and reinforces relationships (p. 9).

Settler assumptions and imposition of heteronormative patriarchy disrupted and displaced Indigenous ways of being and concepts of gender balance. In effort to revitalize these understandings and concepts, how they have been impacted by colonization must be examined. Lawrence writes that the *Indian Act* and Canadian regulation of Native identity created gendered notions of “Indianness”, and colonization has always been a gendered process (Lawrence, 2003, p. 5). Alfred suggests two reasons as to why colonization sought to remove gender balance from Indigenous communities –to impose European cultural practices and worldviews, with patriarchy and the subjugation of women were at the forefront; and to attack Haudenosaunee women as decision-makers and title holders of land (McKegney, 2014, p. 77). When Indigenous peoples rejected their traditional worldviews and took on a Christian perspective of relationships of humans to the universe, the ground is laid for the destruction of Indigenous societies because “it’s [traditional Indigenous worldview] based on balance, and it is necessary to understand that balance from our teachings, and from the ceremonies and songs and so forth…” (McKegney, 2014, p. 78). Anderson also calls for Indigenous communities to undertake discussions on how to bring back and reinstate “systems of gender balance” (Anderson, 2016, p. 94). This demonstrates that “gender balanced” relationships are contained within Indigenous cultural ways, languages, ceremonies, and protocols.

b. Critically examine the impacts of colonization on Indigenous understandings and concepts of gender

Examining the impact of colonization as a defining characteristic of heteronormative patriarchy is a critical step in looking at Indigenous understandings and concepts of gender. In “Decolonizing Sexual Violence: Professional Indigenous Women Shape the Research”, Bubar writes that “it is critical to explore the issue of sexual assault within a history of colonization…[because] sexual violence is an instrument of empire and colonization, not merely a symptom of dysfunctional community” (2013 p.

527). She adds that “framing sexual assault as a key component of ongoing colonization…[provides] a renewed understanding of how to make sense of women’s experiences” (p. 535).

This also raises the issue of how gender relationships change over time, due to colonization and/or societal factors, contributing to an imbalance or a new balance. Ball’s qualitative research involving First Nations and Metis fathers’ involvement in reconstituting Circles of Care, as part of a Canadian Nation study, reported a “broad shift in gender roles in their partnership relationships, families and Indigenous communities” (p. 130). This was as a result of increased participation of First Nations women in education and the labor force and the accompanying pressure on fathers to become more involved in caring for children. One male participant in this project stated,

> Now, we have moved to such a society that women are more in the limelight for career opportunities. That’s a great thing. Now there’s a shift going on, where there has to be a balance where both parents have equal involvement in their kids’ lives. I think it’s the economy that dictates how it’s being done (Ibid).

This suggests a critical examination of Indigenous research ethics should involve the impacts of colonization on gender, and whether certain groups are further marginalized and the implications of this on the whole (i.e., family, community, nation).

c. Determine relation of Indigenous understandings and concepts of gender to Indigenous research paradigms – Indigenous Ways of Knowing

Kovach writes, “…nested within any methodology is both a knowledge belief system (encompassing ontology and epistemology) and the actual methods. The two work in tandem.” (2009, p. 25) There is a critical need to utilize Indigenous ways of knowing to uncover Indigenous understanding of gender, and in turn, use Indigenous understandings of gender to develop the type of ethical research systems and practices that Kovach speaks of. While the latter is the focus of this thesis, and hence relates to the significance of this review, the former is discussed in this section utilizing Battiste and Youngblood Henderson’s discussion on the structural tenants of Indigenous ways of knowing (2000, p. 42):

1) Knowledge of and belief in unseen powers in the ecosystem.
2) Knowledge that all things in the ecosystem are dependent on each other.
3) Knowledge that reality is structured according to most of the linguistic concepts by which Indigenous peoples describe it.
4) Knowledge that personal relationships reinforce the bond between persons, communities, and ecosystems.

5) Knowledge that sacred traditions and persons who know these traditions are responsible for teaching “morals” and “ethics” to practitioners who are the given the responsibility for this specialized knowledge and its dissemination.
6) Knowledge that an extended kinship passes on teachings and social practices from generation to generation.

They go on to state that Indigenous languages “provide direct and powerful ways of understanding Indigenous knowledge. They are the critical links between sacred knowledge and the skills required for survival” (Battiste & Youngblood Henderson, 2000, p. 48). In considering the third tenet regarding language as a way of knowing identified by Battiste and Youngblood Henderson, Norris writes about Indigenous women’s role in language maintenance and revitalization, which can be viewed from two different perspectives (Norris, 2009, pp. 313-353). One view is that women hold a “traditional” role as the “keepers” or transmitters of their cultures and languages, and the other is that women are “at the forefront of linguistic change” (p. 319). Anderson notes that Indigenous languages have women’s and men’s ways of speaking, and that certain activities, spaces or ways were “gendered”, but that “it was all about balance – maintaining harmony and balance and strengthening those two halves of the medicine wheel…[and] we have to create those spaces that can work in a healthy way...[because the health of the individual is the health of the collective” (Anderson, 2016, p. 97).

Bauer writes that Two-Spirit is an umbrella term adopted in 1990 at an intertribal conference in Winnipeg, Manitoba, as “a way of communicating a broad range of traditional Indigenous gender-diverse identities and social roles” (Bauer, 2017, p. 18). This Indigenous term and concept take many forms outside any identities, including lesbian, gay, bisexual, and transgender, that have been developed within primarily white settler communities (Ibid). They are more “gender fluid” than “trans”, more complicated than “gender fluid”, and are described as representing an entirely “different paradigm” (Ibid.). Bauer writes, “the distinctions made between two-spirit and other newer gender-diverse identities in North America colonial contexts reflects considerations internationally with regard to the many traditionally held genders” (p. 19). The term “gender diversity” is more evident in queer studies literature (Driskell et al, 2011; Rifkin, 2011) which suggests it refers to gay, lesbian, bisexual, transgender, queer, and Two-Spirit people (Driskell et al, 2011, p. 1).

Language as a way of knowing also highlights another way of knowing identified by Battiste and Henderson - sacred traditions and persons who know these traditions are responsible for teaching “morals” and “ethics” to practitioners who are the given the responsibility for this specialized knowledge and its dissemination. This also demonstrates that by revitalizing our ways of knowing, First Nations worldview on gender can be restored. As Ball writes, “research into Indigenous fathering has the potential to reveal new conceptions of men’s roles in the lives of children and to highlight sources of resilience that have not yet been glimpsed in theories or in community program models” (Ball, 2010, p. 134).

Deloria (1988) writes:

> By kinship all Dakota people were held together in a great relationship that was theoretically all-inclusive and co-extensive with the Dakota domain…Before going further, I can safely say that the ultimate aim of Dakota life, stripped of accessories, was quite simple: One must obey kinship rules; one must be a good relative (pp. 24-25).

This statement on kinship highlights two ways of knowing identified by Battiste and Youngblood Henderson which can be used to restore our worldview on gender: the fourth tenet of knowledge that personal relationships reinforce the bond between persons, communities and ecosystem; and the sixth tenet that knowledge that an extended kinship passes on teachings and social practices from generation to generation. Alfred identifies the need to challenge stereotypes of Indigenous masculinity as the “bloodthirsty warrior” or the “noble savage” are “instrumental to someone else’s agency” (McKegney, 2014, p. 80). He suggests “the way to confront that and to defeat it and to recover something meaningful for Natives is to put the image of the Native male back into its proper context of a family with responsibilities to the family…” (p. 79). Rebuilding the foundations of Indigenous communities is looking at responsibility to the community (Ibid). Anderson also recognizes the importance of reconstructing Indigenous kinship systems that “had to be dismantled in order to make colonial inroads”, including the way “kinship is connected to the land” (p. 91). In *When did Indians Become Straight*, Rifkin (2011) raises the stakes of the importance of kinship by highlighting its connection with Indigenous sovereignty, which

> Offers a means of disjointing the political imaginary of the settler state by refusing distinction between governance and “sexuality”, understand the facets of social life fused to each other within the latter as actively taking part in political processes...[it] provides a way of redefining what constitutes governance by seeing dynamics of family formation and household construction, for example, as central aspects of the kinds of collective identification, spatiality, decision-making, and resource distribution that conventionally are understood as outlining the contours of a polity (p. 10).

Battiste states, “Ethical research systems and practices should enable Indigenous nations, peoples and communities to exercise control over information relating to their knowledge and heritage and to themselves” (Battiste & Youngblood Henderson, 2000, p. 132). This literature review demonstrated the interdependent relationship of Indigenous ways of being and ways of knowing and identified a critical pathway to a more ethical Indigenous research paradigm.

d. Learn from various approaches to gender-based policy analysis to avoid or mitigate similar approach in research

The Government of Canada committed to using the gender-based analysis (GBA) tool in 1995 as part of the ratification of the United Nations’ *Beijing Platform for Action*, and that gender equality is enshrined in the *Charter of Rights and Freedoms*, which are part of the Constitution of Canada. (Status of Women Canada. Retrieved from: http://www.swc-cfc.gc.ca/gba-acs/index-en.html) The Canadian Women’s Health Network identify a move away from health research and practice that traditionally assumed a gender-neutral or gender–blind stance “by using men as the standard for medical practice while excluding women from clinical trials and other research.” (Canadian Women’s Health Network). More recently, and largely in women’s health, sex, and gender-based analysis (SGBA) tools have been developed to understand and improve women’s health (Canadian Women’s Health Network).

Paterson is critical of the way gender mainstreaming is currently practiced in Canada because it cannot provide insight about the ways in which “difference” comes to be and how or why this is politically important (Paterson, 2010, p. 411). Hankivsky and Christofferson are critical of GBA maintaining the primacy of gender on a consistent basis (2008, p. 273). An additional concern is the danger that inequalities will be reproduced rather than challenged. As Paterson indicates, common amongst mainstream GBA tools in Canada is the underlying goal of achieving gender equality between men and women, including individuals that identify with a “binary concept of sex or gender categories of male and female, masculine and feminine” (Status of Women Canada).

Stirbys states that mainstream GBA is “not necessarily an approach that takes other worldviews into consideration, and for that reason, a GBA lens applied to First Nations communities can do more harm than good when policies are not relevant to their life experience and circumstances” (2008, p. 138). The Native Women’s Association of Canada (NWAC) writes that “mainstream GBA frameworks are not adequately equipped to account for the cultural identity of Aboriginal women" (Native Women's Association of Canada [no date], p. 1). NWAC adds,

> In order to adequately and respectfully address the needs and circumstances of the Aboriginal female population, GBA requires a cultural framing that reflects Aboriginal ways of knowing, Aboriginal histories (both pre- and post-contact), and contemporary realities in Canada (p. 2).

The Status of Women Canada (SWC), now Women and Gender Equality (WAGE), in recent years launched its Gender-Based Analysis Plus (GBA+), which is a method for "examining the intersection of sex and gender with other identity factors" (WAGE website). GBA+ is also focused on gender equality, which the WAGE describes as "diverse groups of women, men, and gender-diverse people are able to participate fully in all spheres of Canadian life, contributing to inclusive and democratic society" (Ibid). These other identifiers include geography, culture, income, sexual orientation, education, ethnicity, ability, age, religion, and language (Ibid.) It does not include colonization, a factor that many Indigenous scholars and other scholars have identified as impacting Indigenous identity (Valaskakis et al, 2009; Rifkin, 2011; McKengey, 2014; Kovach, 2009; Morgenson, 2011; Driskill et al, 2011).

The emergence of this new kind of GBA – GBA+ - warrants an exploration into the implications of intersectionality for Indigenous research ethics and Indigenous worldview on gender as well. GBA+ draws on the research and policy model of "intersectionality", which is a type of analysis that attempts to "examine the consequences of interacting inequalities on people occupying different social locations as well as address the specific acts and policies address the inequalities experienced by various groups" (Ibid, citing Bishwarma, Hunt and Zajicek, 2007, p. 9). Cole states that intersectionality examines: (1) the impact of race, class, gender (and other intersections) on women's lives; and (2) it offers support for the deconstruction of binaries, normalization theories and homogenizing categories while simultaneously offering a platform that can address all the concerns of all women (2009, p. 566). Olsen describes intersectionality as allowing for acceptance of differences between women and between men, not only between women and men; thereby, "open[ing] up the differences between Indigenous people, not only between Indigenous people and non-Indigenous people" (Olsen, 2016, p. 517, citing Berg et al., 2010, pp. 14-15). Baines suggests that race, gender, heterosexism, and colonialism work as a "seamless whole, making it difficult, in particular, to un-do heterosexist oppression"; however, she encourages "further studies on the performance of oppressions…to deepen our understanding of the continuities and discontinuities of doing, re-doing and un-doing gender" (Baines, 2010, p. 144).

Both the Assembly of First Nations (AFN) and NWAC have developed and promote culturally rooted GBA tools (Assembly of First Nations, 2009; Native Women's Association of Canada). The goal of the AFN's Gender-Balanced Analysis Framework is "to restore and strengthen the sacred circle of our Nations through creating, supporting, maintaining, and protecting balanced relationships amongst First Nations people" (AFN, 2009). Wolski states, "The need to restore the value of Aboriginal gendered roles has motivated the development of the…CRGBA [Culturally Rooted Gender Based Analysis]" (p. 248).

Like the Status of Women Canada's GBA, the AFN's tool also relates to equality, but it is about so much more than that. The AFN's GBA is also about: "our unique and distinct cultures and histories, social, political and economic situation"; providing a social determinants of health approach; to address substantive and procedural challenges of federal and mainstream GBA frameworks; and as a tool to fulfill international human rights obligations and commitments for equality rights and empowering women (Assembly of First Nations, 2007, pp. 25-30). This is further illustrated by the key values of the AFN GBA framework, which include: culture and cultural identity that directly impact well-being, including teachings, language, ceremonies and land; holistic and balanced understanding; self-determination – Creator-given laws, ceremonies, language and values to organize our societies and conduct ourselves in a balanced, respectful, honourable way; consultation – all are within the sacred circle and should participate in decision-making; equity – historical and social justice, aligned with Aboriginal and treaty rights, and equity in outcomes; diversity – at the individual and nation levels; sustainability – our ways are sustaining, which is the basis of our sustainability, and recognition of new requirements for sustainability (AFN, pp. 33-35). The AFN's gender balanced analysis framework highlights the continued limited view of mainstream GBA.

While WAGE (formerly Status of Women Canada) moves more towards intersectionality with its revamped GBA tool, according to Olsen, "intersectionality is seen by some as being just another term for an indigenous practice and holistic line of thinking" (Olsen, 2016: 519, citing Hunt, 2012, pp. 2-4). This was how Indigenous peoples have thought all along. Holistic thinking is a way of knowing that has been disrupted by colonization and has potential for improving GBA tools moving forward. Hankivsky and Christofferson view the intersectional paradigm as key to understanding health inequities and the social determinants of health (2008, p. 272). However, they admit that the "transformative potential" of this approach in the context of health determinants are "largely unexamined" (p271). Similarly, Bauer admits the implementation of intersectionality has been primarily within qualitative health research. Limited implementation poses several challenges which can be addressed through “greater and more thoughtful incorporation” to “promote useful evidence for population-level interventions” (Bauer, 2014, p. 10).

1.3 Study Purpose

The purpose of this systematic review is to explore how Indigenous understandings and concepts of gender support Indigenous self-determination in research. It arises from issues outlined in the previous section (1.2). This knowledge gap can be addressed by:

a. Beginning with Indigenous understanding of Ways of Being which are foundational to all aspects of the person including gender.
b. Critically examine the impacts of colonization on this understanding and more specifically, on gender.
c. Determine how Indigenous understandings and concepts of gender relate to Indigenous research paradigms (Indigenous Ways of Knowing).
d. Learn from various approaches to gender-based policy analysis.
e. Undertake this inquiry in the areas of qualitative, health, and cross-cultural research.

The objectives of this study are to:

- **Objective 1:** Identify Indigenous ways of being and knowing as they relate to Indigenous understandings and concepts of gender to determine what these understandings and concepts may mean in the context of Indigenous research ethics.

  It is recognized that Indigenous understandings of “gender and sexualities are multidimensional and vary within and among cultures, sometimes over time and space and sometimes over the life course” (Jacobs, 1997). The intent of this objective is not to be prescriptive, but rather, to generate discussion and provide possible ways forward that can be taken up or adapted by any Indigenous group for their own use and situation.

- **Objective 2:** Review existing research ethics of relevant individual First Nations or Tribes, regional and national First Nations and Native American/American Indian organizations, academic institutions, federal and provincial/state governments, related to Indigenous peoples and to: (a) identify how gender is understood in these contexts; and (b) to analyze how they impact Indigenous self-determination in research (e.g. gaps of any kind, potential harms, and how they are supportive), both in light of Objective 1 above.

- **Objective 3:** Review existing and available gender –based and –balanced analysis frameworks, tools, and reports, to identify any potential harms or strengths in how they consider gender in Objectives 1 and 2 above.
- **Objective 4:** Suggest next steps based on findings of Objectives 1, 2, and 3.

1.4 Study Significance

This systematic review will fill an existing gap in knowledge and propose next steps in developing gender-balanced Indigenous research ethics that can strengthen Indigenous research on multiple levels. Gender-balanced Indigenous research ethics can contribute to facilitating and promoting personal and interpersonal empowerment and healing at the individual, family, and community levels. They will help to revitalize First Nations cultural values, traditions, languages, and ceremonies. They will serve as another means of confronting and challenging colonialism and heteropatriarchal normative. Gender-balanced Indigenous research ethics will help to strengthen Indigenous self-determination in research.

Indigenous research ethics and other ethical guidelines in this initial review suggest that much needs to be done to ensure gender considerations are incorporated into such ethics and guidelines. In this thesis, I will suggest critical steps in the process to undertake this endeavor, which may include:

1) Recognition that the exclusion of gender in Indigenous research ethics perpetuates colonialism.
2) Creating an ethical space within Indigenous communities to facilitate open, honest and meaningful dialogue on gender implications for research (i.e. roles and responsibilities of women and others along the gender continuum in research as understood by First Nations Peoples) and research ethics (i.e. gender-balanced ethical principles, articles, etc.). This dialogue should also examine such implications on key objectives and aspirations of First Nations research and research ethics, such as: self-determination; First Nations governance; cultural and community contexts; benefits; justice; and healing as examples.
3) The resulting research ethical principles or guidelines should be explicitly stated for clarity and certainty, and to underscore the essential nature of gender. As well, Indigenous gender-balanced frameworks and methodological tools should be recognized and promoted.

In this way, I seek to demonstrate that gender-balanced Indigenous research ethics will help to strengthen indigenous self-determination in research in addition to filling an existing void and avoiding potential harms with mainstream approaches to gender-based research ethics.

1.5 My Positionality

I am a citizen of the Oglala Lakota Nation and identify as a *winyan* whose Lakota worldview continues to develop through a personal process of decolonization and indigenization. My educational experiences have been at highly regarded institutions yet my most important, significant, and meaningful learning has come through life experience including observation of and support from relatives and close friends, sitting with elders and knowledge keepers, listening to the perspectives and wisdom of Indigenous community members, being a helper to Indigenous communities, nations and organizations, mentorship from those who hold and promote Indigenous worldview, and embracing Creator's many ways of creating opportunities for spiritual, mental, emotional, and intellectual development.

The present research was the result of a directed readings course coupled with my more recent life experiences regarding gender issues relating to Indigenous people. Upon greater reflection, this research comes from a deeper place. It comes from a place of love, caring, and want of everyone in our families, communities and nations to be free to be who they are as Lakota people, as Indigenous people, and to recognize their sacred gifts, purpose and their roles and responsibilities to each other and all of creation. This is how we tell our own stories, how we exercise our self-determination, and this is how we mend the sacred hoop.

CHAPTER II: THEORETICAL AND METHODOLOGICAL FRAMEWORK

2.1 Overview of Rationale

The decolonization theoretical perspective and critical discourse analysis (CDA) methodology with application of CDA and systematic review methods provide the theoretical and methodological framework for this study because:

(1) **The object of study is gender**, which is understood as a social construct and is performative – social actors are "doing" gender everyday (Coates, p. 7).

(2) **The purpose of this study** is to explore how gender is understood and practiced by the research community utilizing Indigenous research methods and Indigenous research ethics to determine whether this supports Indigenous self-determination in research. Critical discourse analysis is a normative and explanatory critique that does not simply describe existing realities of language and its relation to power but seeks to explain how and why such social realities came into existence to identify possibilities to transform them for social justice (Fairclough, 10). Consequently, three concepts figure indispensable to CDA – power, history, and ideology. Therefore, CDA will not merely reflect how gender is understood within discourse and practice but it seeks to build understanding as to how and why this particular understanding came into reality to identify possibilities of gender within Indigenous research ethics to support Indigenous self-determination in this area.

(3) **The impact of colonization and desire for self-determination** regarding research on, for, with and by Indigenous peoples is well-documented and -known and it is a critical reason for Indigenous self-determination in research. The decolonization perspective is about centering Indigenous concerns and worldviews and then coming to know and understand theory and research from the Indigenous perspective and for Indigenous purposes (Battiste and Youngblood Henderson, citing Smith, pp. 12-13). Additionally, reclaiming our history is critical and essential aspect of decolonization (Smith, 2012, p. 31).

(4) **The need for this exploratory study** is based on indications that little or no research on this specific subject has been conducted and that a fuller understanding of the situation requires

> a series of questions be put forth. A systematic literature review can provide comprehensive identification, appraisal and synthesis of all relevant studies on such a topic where new studies are needed and where a series of related questions can be posed (Pettigrew et al, 2006, pp. 2 and 19). This aligns it with CDA methodology.

The following sections provide detailed background of critical discourse analysis, the decolonization theoretical perspective, and systematic review, and the rationale for their use in this study.

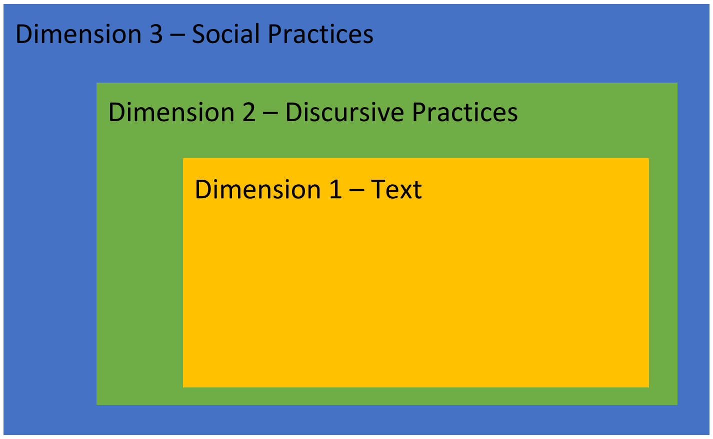
2.1.1 Critical Discourse Analysis

Discourse analysis explains how we know the social world and provides methods for studying it (Phillips & Hardy, 2002, p. 3). Important to understanding discourse analysis are two key terms, as described by Phillips and Hardy:

- **Discourse**: an interrelated set of texts and the practices of their production, dissemination, and reception that brings an object into being (p. 3).
- **Text**: a discursive unit and material manifestation of discourse, which come in many forms, such as written texts, symbols, etc. (p. 4, citing Grant, Keenoy & Orwick)

Texts are not meaningful on their own. Their meaning comes from their interconnection with other texts, the different discourse on which they draw, and how they are produced, disseminated, and consumed (Ibid). This process is what gives texts their meaning and is how they contribute to what makes up social reality by giving it meaning (Ibid). Discourse analysis is about ascertaining how discourse constructs social reality through studying texts in a structured and systematic way (Ibid). Like texts, discourses do not possess meaning on their own and discursive activities do not occur in a vacuum. They emanate out of interactions between social groups and the complex social structures in which the discourse is embedded (Ibid). Therefore, to understand discourse and its effects, we must also understand the context within which they arise (Ibid., citing Sherzer, 1987; van Dijk, 1997a).

Discourse analysis is often referred to as “three dimensional” in the sense that it connects **texts** to discourse in their historical and social context (i.e., **discursive practices**), and in turn, discursive practices to how we refer to particular actors, relationships and practices that characterize what is being studied (i.e., **social practices**) (p. 4). A visual representation of this often associated with Fairclough (1992) is as follows:


Dimension 3 – Social Practices
Dimension 2 – Discursive Practices
Dimension 1 – Text

Phillips and Hardy write,

> …social reality is produced and made through real discourses, and social interactions cannot be fully understood without reference to the discourses that give them meaning. As discourse analysts, then, our task is to explore the relationship between discourse and reality (p. 3).

In other words, discourse analysis is a methodology that helps uncover an epistemology that explains how we know the world and how language helps to construct the set of assumptions we hold about this world (p. 5).

Phillips and Hardy (2002) distinguish discourse analysis from other qualitative approaches and sets out five reasons for using this approach, generally (pp. 6-16). The following outlines the rationale for selecting discourse analysis in the present study based on that discussion:

Other Qualitative Approaches	Discourse Analysis	Allows for Areas Inquiry in the Present Study
1) Traditional approaches to qualitative research assume a social world and then seek to understand the meaning of this world for participants.	Enables this study to explore how socially produced ideas were created in the first place and how they are maintained and held in place over time.	How gender (socially constructed idea) is created within research involving Indigenous peoples in Canada and the US using Indigenous research ethics and methods and is maintained and held in place over time (i.e. 1999-2019).

Other Qualitative Approaches	Discourse Analysis	Allows for Areas Inquiry in the Present Study
2) Other qualitative methodologies work to understand or interpret social reality as it exists – how language reflects and reveals it.	Seeks to uncover the way in which it was produced – how language constructs social phenomena.	How language constructs gender within research involving Indigenous peoples in Canada and the US using Indigenous research methods and ethics.

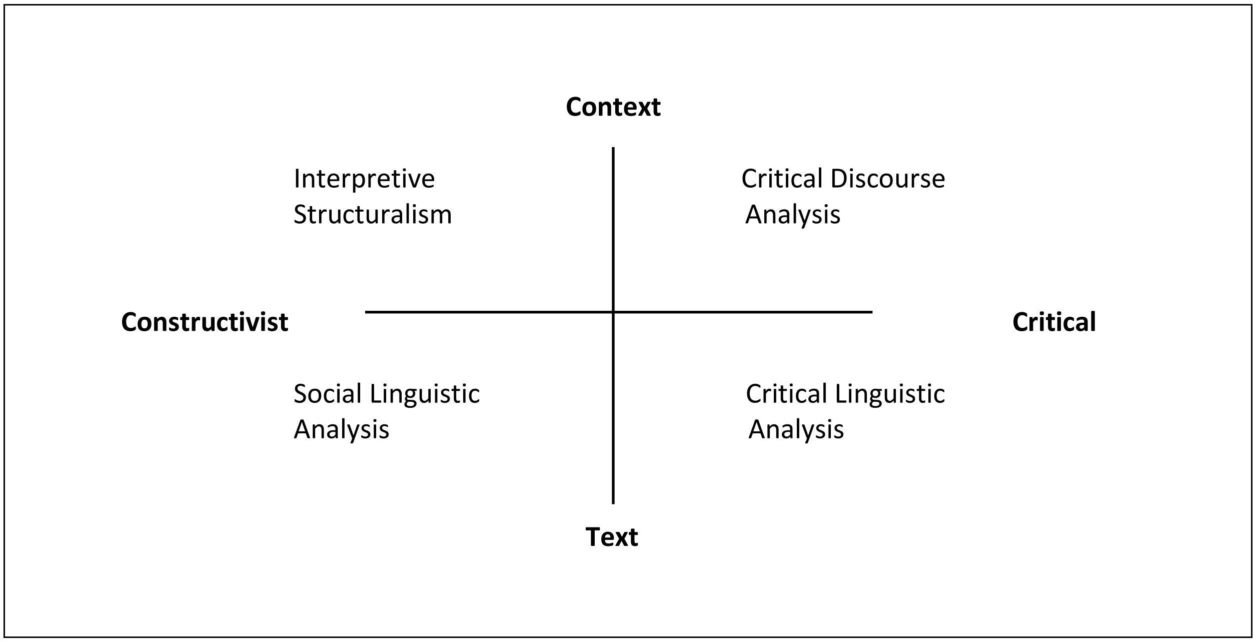
It must be noted that the period for the present study is 1999-2019 because many Indigenous authors who published during this time commented about how little was written on gender from the Indigenous perspective previously.

Phillips and Hardy provide further rationale for the use of discourse analysis (pp. 12-16):

Phillips and Hardy-Identified Rationale for use of Discourse Analysis	Allows for Areas of Inquiry in the Present Study
1) Common acceptance in humanities and social sciences in the past few decades that language is more than reflective of society, it is constitutive of social reality – how and why the social world comes to have the meanings it does. (A more reflexive process.)	*How and why gender has come to have the meaning it does within the context of current Indigenous research ethics and methods? How does this impact Indigenous self-determination?*
2) Emergence of new topics for study which has raised new challenges for researchers and creating new categories and drawing to attention to how boundaries are constructed and held in place. Traditional methodologies can "reify categories, making them seem natural and enduring" (p. 13).	*What are Indigenous understandings and concepts of gender? What are their implications for Indigenous research ethics and methods? How are dominant concepts constructed and held in place in this location?*
3) Renewed interest in critical management studies, which has highlighted the intersection between critical and postmodern theory, specifically on the connection between meaning and power. This has also created the need for new methods to "expose the dynamics on which power distributions in organizations – and in research – depend" (p. 15).	*How does the socially constructed meaning of gender used in research that utilizes Indigenous research ethics and methods reify power relations in the community of researchers involved?*

Phillips and Hardy-Identified Rationale for use of Discourse Analysis	Allows for Areas of Inquiry in the Present Study
4) Changing nature of organizational and management practice due to new technologies and other developments that have impacted the landscape.	The technological aspects of research are considered, particularly in data governance.
5) Traditional methods and approaches are limiting and there is no “one best method”. “Non-traditional” methods can bring to light traditional methods may have obscured or those things not seen.	The methodology allows for a more reflexive rather than reflective approach to gender as it is focused on *why* and *how* and not solely on *what*.

There are distinct forms of discourse analysis that vary in underlying theoretical assumptions and the empirical focus of research to which they are applied (p. 18). Phillips and Hardy provide a framework as a tool to understand the diversity of approaches. This is to allow researchers to consider the importance of epistemological and methodological characteristics of each type (Ibid). The following is that framework according to two key dimensions: (1) the degree to which the emphasis is on individual texts or on the surrounding contexts; and (2) the degree to which the research focuses on power and ideology as opposed to processes of social construction (p. 20):


Context
Interpretive Structuralism
Critical Discourse Analysis
Constructivist
Critical
Social Linguistic Analysis
Critical Linguistic Analysis
Text

The vertical axis relates to the relative importance of text versus context in the research. The horizontal axis relates to the degree to which the research concerns more critical studies (power, knowledge and ideology surrounding discursive practices) versus that focused more closely on constructionist studies (close analysis of the way in which a particular social reality has been constructed) (p. 20). By combining these two axes, Phillips and Hardy (pp. 22-29) identify four major perspectives in empirical studies which are briefly summarized in the following:

Perspective	Brief Summary
1) Social Linguist Analysis	Constructivist and text-based with a research focus on individual texts, broadly defined, and relating them only marginally to the distal context they occur in or exploring the power dynamics in which they are implicated. The goal is to undertake a close reading of the text to provide insight into its organization and construction, and to understand how texts work to organize and construct other phenomena. Examples of data collection methods – interviews, focus groups, stories, etc.
2) Interpretive Structuralism	Constructivist with a focus on analysis of the social context and the discourse that supports it. Texts may provide some data, but the description of the context often relies on interviews or archival materials to provide context. The goal is to understand context and studying data that provide insight into “the bigger picture” rather than a microanalysis of individual texts.
3) Critical Linguistic Analysis	Like social linguistic analysis, focuses on individual texts but with a strong interest in the dynamics of power that surround the texts at the micro-dynamic levels (i.e. at the local or proximate level). Examples of data collection methods are storytelling from a narrative perspective, literary analysis, and the study of rhetoric, narrative and metaphor, etc.

Perspective	Brief Summary
4) Critical Discourse Analysis	Focus on the discursive activity in constituting and sustaining unequal power relations (Phillips and Hardy citing Fairclough & Wodak, 1997). It “should describe and explain how power abuse is enacted, reproduced or legitimated by the talk and text of dominant groups or institutions” (Ibid citing van Dijk, 1996, p. 84) Furthermore: • Researchers attempt to analyze the discursive struggle(s) reflected in the privileging of a particular discourse and marginalization of others. (Phillips citing Keenoy et al., 1997, p. 150; Mumby & Stohl, 1991). • Focuses on how discursive activity structures the social space within which the actors act through the constitution of concepts, objects, and subject positions (drawing on Fairclough). • Focus on the distal context – how some actors privileged at the expense of others and how broad changes in the discursive activity results in different arrangements of advantage and disadvantage in terms of power dynamics. A range of data collection methods are associated with this approach.

The primary reason for not selecting social linguist and interpretive analysis as the approach in this study was because they only marginally deal with dynamics of power, knowledge and ideology surrounding discursive processes. As the context of this study is Indigenous self-determination in research which involves Indigenous peoples asserting sovereignty and governance over research involving their people, culture and lands, such approaches would not fully enable such an examination.

Critical linguistic analysis was not selected in this study for a couple of reasons. First, this would involve research at the proximate or local level by interviewing those involved within the community of researchers conducting research as an example. The present study utilizes a different method – systematic review. Additionally, in the case of Indigenous peoples, the more appropriate and effective implementation of critical linguistic analysis would involve study of the respective languages – Lakota/Dakota/Nakota and Anishinabemowin, as examples.

All of these approaches to critical discourse analysis can contribute to the overall object of study – concepts of gender in Indigenous research ethics – each in their own way; however, at this time, given the focus and methods of this research, critical discourse analysis is most appropriate.

Even within critical discourse analysis, there is a range of different approaches; however, at their most fundamental level they must satisfy several requirements to effectively realize their aims (p. 14, citing Van Dijik, 2003). These requirements are summarized here (pp. 12-13):

- Problem- or issue-oriented – any theoretical or methodological approach is relevant so long as it successfully studies relevant social problems.
- In order to effectively study social problems, CDA is typically inter- or multi-disciplinary, and focuses on relations between discourse and society.
- CDA focuses on (group) relations of power, dominance, and inequality and the ways these are reproduced by social group members by text and discourse.
- Much of the work of CDA is about underlying ideologies that play a role of or resistance against dominance or inequality.
- CDA is geared toward uncovering, revealing, or disclosing what is not immediately obvious in relations of discursively enacted dominance or their underlying ideologies.
- It attempts to uncover the discursive means of mental control and social influence implies a critical and oppositional stance against the powerful and especially those who abuse their power.
- Studies in CDA attempt to formulate or sustain an overall perspective of solidarity with dominated groups by, for example, proposals to develop or enact counter-power and counter-ideologies as practices of challenge and resistance.

Another element identified is that CDA is an explicitly critical approach to studying text and discourse and not as a subfield of discourse analysis. While the previous section discussed discourse analysis generally, this was not to situate CDA as a subfield of discourse analysis but to distinguish discourse analysis from other forms of social inquiry by highlighting common ground across different forms of discourse analysis.

Fairclough states CDA is geared to "better understandings of the nature and sources of social wrongs, the obstacles to addressing them, and possible ways of overcoming these obstacles" (p. 13).

While discourse involves (a) meaning-making as an element of the social process; (b) the language associated with a particular social field or practice; (c) a way of construing aspects of the world associated with a particular social perspective; Fairclough prefers to use the term "semiosis" to the first component, and in the most abstract and general way, which has the advantage of considering semiotic modalities beyond language such as visual images and body language (p. 11).

Fairclough identifies four different stages (and respective steps within those stages) to conduct CDA (pp. 13-15):

Stage	Steps
1. Focus upon a social wrong in its semiotic aspects.	a. **Step 1:** Select a research topic that relates to, or points to, a social wrong and that can be productively approached in a trans-disciplinary way, with particular focus on dialectical relations between semiotic and other "moments". b. **Step 2:** Construct objects of research for initially identified research topics by theorizing them in a trans-disciplinary way.
2. Identify obstacles to addressing the social wrong.	a. **Step 1:** Analyse dialectical relations between semiosis and other social elements: between orders of discourse and other elements of social practices, between texts and other elements of events. b. **Step 2:** Select texts, and points of focus and categories for their analysis, in light of, and appropriate to the constitution of the object of research. c. **Step 3:** Carry out analysis of texts – both interdiscursive and linguistic/semiotic analysis.
3. Consider whether the social order "needs" the social wrong.	Question whether the social order needs this. This leads to consideration of "whether the social wrong in focus is inherent to the social order, whether it can be addressed within it, or only by changing it" (p. 15). This is to demonstrate if this issue gives rise to major social wrongs, and therefore, thinking if it should be changed. This also connects with the question of ideology as discourse is ideological in so far as it contributes to sustaining relations of power and domination.
4. Identify possible ways past the obstacles.	Moves the analysis from a negative to a positive critique by identifying possibilities within the existing social process for overcoming the obstacles to the social wrong, focusing on dialectical relations between semiosis and other elements. This can include developing a semiotic "point of entry" into research on ways in which these obstacles are actually tested, challenged and resisted, within organized social groups/movements or more informally by individual people on a daily basis.

The constructivist approach outlined in the general discussion on discourse analysis earlier in this section is particularly salient in Fairclough's approach because of the ideological effects on discursive practices. According to Fairclough there are some underlying assumptions behind certain selections of discourse, and these are never value-free or unintentional (Moussou, p. 14). Moussou highlights Fairclough's use of the discourse-power-ideology relationship in introducing the concept of hegemony which is described as "a way of theorizing change in relation to the evolution of power relations which allows a particular focus upon discursive change, but at the same time a way of seeing it as contributing to wider process of change" (citing Fairclough, 1993, p. 92 as cited in Jahedi et al, 2014, p. 30). Furthermore, "the political concept of 'hegemony' can be useful in analyzing orders of discourse" which is a "network of social practices in its language aspect with the elements of such as discourses, genres and styles" (Moussou citing Fairclough, 2003, p. 14). Fairclough describes these terms in the following ways (p. 11):

- **Discourses:** semiotic ways of construing aspects of the world (physical, social or mental) that can generally be identified with different positions or perspectives of different groups of social actors.
- **Genres**: semiotic ways of acting and interacting.
- **Styles**: identities or "ways of being" in their semiotic aspect.

2.1.2 Decolonization

Smith describes the decolonization critique as involving two strands, with the first drawing upon the "notion of authenticity" in the pre-colonial time when Indigenous peoples were born into and lived in a world of our own making and had absolute authority of our lives (Smith, 2012, p. 25). The second strand of decolonization demands critical analysis of how Indigenous people were colonized, its impacts for Indigenous peoples' immediate past, and what it means for Indigenous peoples' present and future (Ibid). A significant aspect of this critique is that solutions are posed from a combination of pre-colonial time and the time of colonization (Ibid). Decolonization enables a constant reworking of our understandings of the impact of colonization (Ibid). In the present research, it will enable:

- Deconstructing and reshaping whatever gender identity means to Indigenous peoples and how and why it holds this meaning and how this is represented in discursive and social practices.
- Assessing the impact of colonization on the regulation of our identities and the implications of this process.
- Remembering who we are through our own ways of knowing, through language and our own histories, and interconnection and interrelation to ecologies which bring balance.

Though gender is socially constructed and there is no such word for gender in Indigenous languages, colonization has meant gender has come to be one component of Indigenous identity. The regulation of Indigenous identity has been central to the colonization process in both Canada and the United States through imposition of systems of classification and settler governments defining who is "Indian" and controlling access to our lands (Lawrence, 2003, p. 1). Gender and sex continue to be a part of this classification system. Traditional Indigenous ways of identifying the self in relation to the land and community were forcibly displaced by these regulatory regimes, functioning to "naturalize colonial worldviews" (Ibid). The destructive process of Eurocentric system of classification and definitions used within them serve the purpose of those who created them, with their validity resting solely with those who created them, and are forced upon others based upon assumptions of superiority (Battiste and Youngblood Henderson, pp. 36-37). This is what Battiste refers to as "cognitive imperialism" (Ibid).

Deconstructing and reshaping how we understand Indigenous identity is critical to decolonization (Lawrence, 2003, p. 1). Decolonizing how these identities are represented is critical. The way in which Indigenous peoples are represented matters because "it gives the impression of truth" to those who may not know anything about Indigenous people (Smith, p. 37). Writing or analyzing writings from a decolonized perspective can also be about how not to do it as it is how to do it. The following are some examples of problems and dangers of reading and interpretation, particularly within academia (pp. 37-38):

- When we [Indigenous people] do not see ourselves in the text.
- When we see ourselves but can barely recognize ourselves through the representation.
- We can adopt uncritically similar patterns of writing having been trained or having learned this through academic study.
- We begin to write about ourselves as if we really were the "Other" and all that this entails.
- When undertaking academic writing, we do not critically engage in the process of selecting, arranging and presenting knowledge, privileging certain texts, viewpoints or issues, which can render invisible or unimportant Indigenous writers and reinforcing the validity of other writers.

Smith states,

> Every aspect of the act of producing knowledge has influenced the ways in which Indigenous ways of knowing have been represented. Reading, writing, talking, these are fundamental to academic discourse as sciences, theories, methods and paradigms (p. 36).

There are many sites where decolonization is taking place and where Indigenous people deconstructing and reshaping their identity. Decolonization projects in the United States and Canada involve remembrance and reformation in mind and bodies of our relations and responsibilities to the lands and the ecosystem in which we live and to other beings to whom we are related (Barker, 2017, p. 26). These projects involve remembrance of original teachings, personal accounts of historical experience, and cultural values through multi-media cultural productions including songs, dance, and artistry (Lawrence, p. 27). They provide an array of analysis in addressing histories of sexual violence against Indigenous people, internalized violence within Indigenous families and sexed practices, and eroticism, with the aim of contributing to decolonized practices (Barker, p. 17). The latter relates to the agency of sexual exploration and fun, "emphasizing the multiple gendered-sexualized identities within Indigenous ways of knowing and being in the world grounded in Indigenous epistemologies" (Barker, p. 27). In Barker (pp. 27-28), reproductive health rights activist Jessica Yee Danforth (Mohawk and Chinese), founder and executive director of the Native Youth Sexual Health Network, is quoted as stating:

> Sexuality is not just having sex. It's people's identities. It's their bodies. It's so many things. A lot of elders that I work with say that you can actually tell how colonized we are as a people by the knowledge about our bodies that we've lost. The fact that we need systems and institutions and books to tell us things about our own bodies is a real problem. If we don't have control over our own bodies, then what do we have? If something like body knowledge no longer belongs to community and is institutionalized, then what does that really mean?...to place sexual health over here and land rights over there is a very colonial, imperial way of thinking. Environmental justice is over here, reproductive justice is over there…What better way to colonize a people than to make them ashamed of their bodies.

Nelson writes that an essential part of the decolonization process is decolonizing the "self" which is our whole being – body, mind, heart, spirit and more (Nelson in Barker 2012, p. 235). Decolonizing requires "a fierce re-examination of our colonial, and often sexist and homophobic, conditioning and an honest inventory of our pansexual natures and visceral connections to the more-than-human world" (Ibid). She is interested in the interrelationships and theoretical synergy among ecology, sex, and Native cultures through the academic fields of ecology, sexuality studies, and Indigenous studies. In exploring expressions of Native sexualities, we will need to create new theoretical frameworks and decolonize "nature" itself (Ibid). Citing T.J. Demos, to "decolonize nature" would suggest "cancellation of this subject-object relation between humans and the environment, the removal of the conditions of mastery and appropriation that determine the connection between the two, and the absolution of the multiple ways of violence that mediate the relation of human power over the world" (Nelson citing Demos in Barker, p. 236). To do this, a "multivocal dialogue" is essential for decolonization, liberation, and the very survival of our, and other species, in anticipation of what Barker refers to as collective work which "anticipates a decolonized future of gender and sexual relations" (Ibid).

Battiste and Youngblood Henderson write that: forces of ecologies have taught us a proper kinship order and how to have nourishing relationships; ecosystems are more than places, we are an integral part of them and we inherently belong to them; ecologies are alive with enduring processes of creation; we invest in them with deep respect; and from them we unfold our structure of Indigenous life and thought (Battiste and Youngblood Henderson, p. 9). Citing Cajete on the holistic aspect of Indigenous knowledge – harmony is a "dynamic and multidimensional balancing of interrelationships in their ecologies. Disturbing these interrelations creates disharmony; balance is restored by applying appropriate actions and knowledge" (p. 43). Indigenous languages are vital links to Indigenous peoples' relationship to our ecosystems and to Indigenous knowledge (p. 49). Our ways of knowing have been continually transmitted in the oral tradition from the spirits to the elders who pass it to youth through teachings (Ibid). Language is a significant matter in thinking about gender in this research, especially as gender distinctions and hierarchies are deeply encoded in Western languages and the impossibility of translating or interpreting our societies into the English language without making gendered distinctions (Smith, p. 48).

Sovereign and self-determined Indigenous governments, territories and relationships can only be built through stronger relationships with one another in a way that makes a difference to the health and well-being of future generations (Barker citing Hunt in part, p. 28). Language is a critical part of this relationship-building. Battiste and Youngblood Henderson write:

> Eurocentric structures and methods of logical entailment and causality cannot unravel Indigenous knowledge or its processes of knowing. The methodologies derive from a noun-centred language system, and they are ineffective in verb-centred Indigenous language systems. The best way to be open to understand Indigenous knowledge is to be open to accepting different cognitive maps of particular ecosystems (p. 40).

Kovach adds that while many Indigenous people may not speak their language, cultural values remain alive and reflect the Indigenous worldview (Kovach, p. 26).

Languages keep our oral history alive, and Indigenous reclaiming of history is a critical and essential aspect of decolonization (Smith, p. 31). Drawing on discussions by Indigenous peoples, and by writers such as J. Abu-Lughod, Keith Jenkins, and C. Steadman, Smith identifies a set of interconnected ideas in critiques of Western history that are summarized here (pp. 31-33):

1. The idea that history is a totalizing discourse – i.e., assumes that all known knowledge can be ordered into a coherent, which, in order for this to happen, classification systems, rules of practice and methods, had to be developed to allow for knowledge to be selected and included in what counts as history.
2. The idea that there is a universal history – i.e., linked the notion of totality, assumes that there are fundamental characteristics and values which all human individuals and societies share and it is the development of these universal characteristics which are of historical interest.
3. The idea that history is one large chronology – i.e., history is regarded as developmental progress over time; chronology allows events to be located at a point in time; actual time of events make them 'real' or factual; in order to being chronology, a time of 'discovery' has to be established; and is important for attempting to go back in time to explain how and why things happened in the past.
4. The idea that history is about development – i.e., implicit is the notion of progress – societies moving forward through stages of development with the earliest stages regarded as primitive and as societies move forward, they become more civilized, rational, and their social structures become more complex and bureaucratic.
5. The idea that history is about a self-actualizing human subject – i.e., humans have the potential to reach a stage in their development (much like societies) where they can be in total control of their faculties.
6. The idea that the story of history can be told in one coherent narrative – i.e., all facts can be assembled in an ordered way so that they tell us the truth or give a really good idea of what happened in the past.
7. The idea that history as a discipline is innocent – i.e., once all the known facts are assembled (by the historian), the facts speak for themselves without need for theoretical explanation or interpretation.
8. The idea that history is constructed around binary categories – i.e., this idea is linked to the historical method of chronology in that in order something to being, there has to be a beginning and some criteria for when it begins, and as such is attached to the

concept of ‘discovery’ in the historical sense. Everything before this time belongs to the realm of myths and traditions and ‘outside’ the domain.

9. The idea that history is patriarchal – i.e., this idea is linked to the idea the notions of self-actualization and development, where for example, women were regarded as being incapable of attaining higher orders of development and were insignificant in societal development because they were not present in the hierarchies where changes were being determined.

Smith provides a critical review of western philosophers and historians over time to identify key themes (pp. 33-36). First, literacy is used as a criterion for assessing the development of a society and its progress to a point in time where history is said to have begun. It is therefore a record of what does and does not count as legitimate knowledge. Second, the racialization of the human subject and the social order has enabled comparisons to be made between “us” (Western) and “them” (the Other) with history as the story of those who are “fully human” and those who are not regarded as such, that are incapable of self-realization. Third, those (i.e., men of a certain class and race) who are naturally capable of self-actualizing are those who can make social change, that is, make history. Contested histories are stored within Indigenous oral ways of knowing and other means, but which have been reclassified as oral traditions rather than histories (p. 34).

While some describe as the current time as “post-colonial”, some Indigenous people have resisted the idea that colonialism is over or is finished business (p. 25). Smith states some Indigenous peoples look at post-de-colonial with suspicion and wonder if it has become a strategy for reinscribing or reauthorizing non-Indigenous academics because post-decolonial discourse is defined in ways that still leave out Indigenous peoples, our ways of being, our ways of knowing, and our current concerns (p. 25). Though some Indigenous people assume that “when the truth comes out” it will prove the wrong, the harm, the injustice, and things will be set right (p. 35). However, history is about power, and how the powerful became powerful and they use their power to keep them in a position of dominance which continues to exclude, marginalize or “other” Indigenous people (pp. 35-36). Though there has been some movement in schools to integrate language, histories and cultures into the curriculum and bring elders and knowledge holders into the school or to establish language immersion schools, histories play out in many different ways in society and on a daily basis. History, then, is a significant part of decolonization because, as Smith writes,

> There can be no ‘postmodern for us until we have settled some business of the modern. This does not mean that we do not understand or employ multiple discourses, or act in incredibly contradictory ways, or exercise power ourselves in multiple ways. It means that there is unfinished business that we are still being colonized (and know it), and that we are still searching for justice (pp. 35-36).

Coming to know the past is a critical pedagogy of decolonization – holding alternative histories is holding alternative knowledges which form the basis of alternative ways of doings things (p. 36). Smith writes, “telling our stories from the past, reclaiming the past, giving testimony to injustices of the past are all strategies which are commonly employed by indigenous peoples struggling for justice” (Ibid). While our accounts of history are rarely accepted and acknowledged as valid interpretations as to what has taken place, Indigenous peoples’ “need to tell our stories remains the powerful imperative of a powerful form of resistance” (36). While Indigenous people have critiqued the way in which history has been told by colonizers, it enables us to come to know our past which access to this past has pedological implications – access to alternative knowledges as the basis of alternative ways of doing things (Ibid).

Smith writes, “a critical aspect of the struggle for self-determination has involved questions relating to our history as indigenous peoples and a critique of how we, as the Other, have been represented or excluded from various accounts…[with] every issue…approached by Indigenous people with a view to *re*writing and *re*-righting our position in history” (p. 21). This is why Indigenous peoples want to tell our own, stories in our ways, for our own purposes, which are central to Indigenous self-determination in research.

2.1.3 Systematic Review

A systematic (literature) review is described as

> A review that strives to comprehensively identify, appraise, and synthesize all relevant studies on a given topic. Systematic reviews are often used to test a single hypothesis or a series of related hypotheses (Pettigrew et al, 2012, p. 19).

Main reasons for the appropriateness of this method are:

(1) Its use for situations where there has been little or no relevant research conducted, but where new studies are needed (p. 2).
(2) As opposed to a literature review, it is “more ‘fit for purpose’ to answer and testing hypotheses than the traditional literature review” (p. 19).
(3) It enables a series of related questions to be posed rather than just one (p. 19).

A key feature of systematic review is its close adherence to Western scientific methods that aim to limit bias by identifying, appraising, and synthesizing all relevant studies to answer the question or questions (Ibid).

This systematic review can be useful to Indigenous researchers, communities, organizations including information governance committees or IRBs, and nations as well as academic and research institutes and policy makers. It can be used to embark on new primary research. It can also promote development of new Indigenous methodologies thereby contributing to the continuing shift in the research paradigm regarding Indigenous peoples and their self-determination in research.

This systematic review was conducted and is reported in accordance with the Preferred Reporting Items for Systemic Reviews and Meta-Analysis (PRISMA) Checklist (http://prisma-statement.org/prismastatement/Checklist.aspx). These are outlined in the remaining sections of this document.

2.1.4 Overview of Methodology, Methods and Theoretical Framework

The following table provides a visual representation of how critical discourse analysis, the decolonization theoretical perspective and systematic review method are brought together in this research:

CRITICAL DISCOURSE ANALYSIS	SYSTEMATIC REVIEW	DECOLONIZATION THEORETICAL PERSPECTIVE
Stage 1: Focus on the social wrong, in its semiotic aspects **a) Step 1:** Select a research topic that relates to, or points up, a social wrong and that can productively be approached in a trans-disciplinary way, with particular focus on dialectical relations between semiotic and other "moments". **b) Step 2:** Construct objects of research for initially identified research topics by theorizing them in a trans-disciplinary way.	**Step 1: Define the question** *Utilize PICO (population, intervention, comparison, outcomes, context) to define the question and sub-questions.*	**Statement of Problem:** **a) Step 1:** Concern that gap in knowledge in concept of gender within Indigenous research ethics will be addressed through same approach taken by mainstream when it comes to gender-based analysis – imposition of dominant meaning – with the potential impact of broadening and further entrenching colonial relations and undermining Indigenous self-determination in research. **b) Step 2:** Object(s) of research **i) Gender** within context of Indigenous research ethics and methods (qualitative research focusing on health) **ii) Gender** within context of gender based and balanced analysis (politics) **iii) Gender** within context of Indigenous worldview (Indigenous Governance, Native Studies, Gender Studies, Queer Studies, Political Studies, etc.)
Stage 2: Identify obstacles to addressing the social wrong **a) Step 1:** Analyse dialectical relations between semiosis and other social elements: between orders of discourse and other elements of social practices, between texts and other elements of events.	**Step 2:** Write a protocol a) Eligibility criteria – study & report characteristics b) Information resources **Step 3:** Carry out the literature search Search – including search strategy	**Study Question:** *In what ways does the dominant concept of gender uphold colonial relations within research conducted in accordance with Indigenous research ethics?*

CRITICAL DISCOURSE ANALYSIS	SYSTEMATIC REVIEW	DECOLONIZATION THEORETICAL PERSPECTIVE
b) Step 2: Select texts, and points of focus and categories for their analysis, in light of, and appropriate to the constitution of the object of research. **c) Step 3:** Carry out analysis of texts – both interdiscursive and linguistic/semiotic analysis.	**Step 4:** Screen the references a) Study selection – based on review of title & abstract - inclusion/exclusion b) Note the # of studies included & excluded **Step 5:** Assess the remaining studies against the inclusion/exclusion criteria a) Full text review b) Inclusion/exclusion criteria c) Note the # of studies included & excluded **Step 6: Data extraction** a) Describe method of data extraction b) List & define all variables for which data were sought (e.g., PICO) & any assumptions & simplifications made **Step 7:** Critical appraisal a) Inclusion criteria assessed with respect to methodological soundness b) Risk of bias in individual studies – describe methods used for assessing risk of bias & how this information is to be used in any data synthesis **Step 8:** Synthesis of the studies/results Describe the methods of handling data & combining results of the studies **Step 9:** Consider the effects of publication bias, & any other internal & external bias Specify any risk of bias that may affect the cumulative evidence	**Sub-questions:** *i) What is the dominant concept of gender?* *ii) How is this concept of gender given significance to uphold colonial relations?* *iii) Why is this concept of gender given this meaning to uphold colonial relations?* **Analysis to be conducted:** 1) Within qualitative health and cross-cultural research (meeting inclusion criteria) 2) In comparison to discussions on gender-based and gender-balanced analysis 3) In comparison to discussions on understandings and concepts of gender by Indigenous peoples across a range of disciplines

CRITICAL DISCOURSE ANALYSIS	SYSTEMATIC REVIEW	DECOLONIZATION THEORETICAL PERSPECTIVE
Stage 3: Consider whether the social order "needs" the social wrong.	**Step 10:** Writing up the report a) Results: (i) Study selection - #s of studies screened, assessed for eligibility, & included in the review, with reasons for exclusion at each stage (ii) Study characteristics – for each study (iii) Risk of bias within studies (iv) Results of individuals studies (v) Synthesis of results (vi) Risk of bias across studies (vii) Additional analysis b) Discussion (i) Summary of evidence (ii) Limitations (iii) Conclusions	*What are the recommended next steps for Indigenous research ethics to support Indigenous self-determination in research?*

CHAPTER III: METHODS

As was previously illustrated, this study involves critical analysis discourse and systematic review methods. The latter is conducted according to PRISMA guidelines. This section provides details of methods.

3.1 Search Strategy

Two electronic databases – Google Scholar and PubMed – were used to search for peer-reviewed, English-language journal articles published between January 1, 2019 through July 31, 2019. Test searches were conducted in the selected databases to experiment with various synonyms and refined to obtain the most relevant results. The decision on the final search strings were also determined considering the limitation in characters in some databases and desire to maintain consistency in across both database searches (i.e., population, geography, etc.).

Search Strings				
1. (“Indigenous Ways of Being”) 2. (“Indigenous Ways of Knowing”) 3. (“Indigenous Research Ethics” OR “Research Ethics” and “Indigenous” 4. (“Indigenous Research Methods” OR “culturally relevant research methods AND Indigenous) 5. (“Indigenous Self-Determination in Research”) 6. (“Tribal IRBs”) 7. (“Indigenous Research Governance” OR “research governance” OR “information governance” AND Indigenous) 8. (“Gender Based Analysis” AND Policy AND Indigenous) 9. (GBA+ AND Policy AND Indigenous) 10. (“Gender Balanced Analysis” AND Policy AND Indigenous) 11. (“Culturally Relevant Based Analysis” AND Policy AND Indigenous)	AND	(“traditional roles and responsibilities” OR “two-spirit” OR kinship OR “gender balance” or gender OR “gender diverse” OR LGBTQ2S)	AND	(Canada OR “United States”)

Articles were included if they met the following criteria:

1) Types of articles: Peer-reviewed journal article or presenting primary research (exclude reviews, theses, and dissertations).
2) Published in the English-language
3) Published during the period January 1, 1999 - July 31, 2019

4) Studies:
    - Empirical or theoretical
    - Conducted in Canada and/or the United States
    - Qualitative or quantitative research focused on Indigenous health (in the case of “Aboriginal” research, where First Nations comprised >33% of the sample)
    - Qualitative, cross-cultural health research
    - Quantitative cross-cultural health research
    - If empirical data, gender disaggregated data, description of gender and context/discussion.
    - If theoretical, context/discussion of gender.

Articles were excluded if they did not meet the criteria above and:

1) Primary research conducted in Canada, the US and any other country.
2) Data was not disaggregated by Indigenous (or Aboriginal) identity.
3) Focus of research was on an area other than health.

The total number of returned articles for the 11 search strings was 440 (JSTOR, 383; PubMed, 57). A two-step process was used to remove irrelevant articles:

1) Screening of titles and abstracts (and in the case of JSTOR, “topics”) with reference to inclusion and exclusion criteria. This resulted in removal of 376 articles (JSTOR, 361; PubMed, 15) with 64 articles remaining.
2) These remaining articles were uploaded to EndNote X5®, a reference management software program. Duplicates were removed (15). Full-text publications were retrieved for the remaining 49 articles for an in-depth review to further assess compliance with the eligibility criteria (i.e., inclusion and exclusion). Following this review, # of articles were found to meet the eligibility criteria.

As these search categories did not result in any peer-reviewed or government documents on gender-based analysis, GBA+, or gender balanced analysis, another search was conducted to obtain relevant gray literature with a focus on search strings as follows:

1) (“gender-based analysis” AND policy AND (Canada or “United States”))

2) (“GBA+” AND policy AND (Canada or “United States”))

3) (“gender-balanced analysis” AND (Canada or “United States”))

The first and second search string resulted in 19 total documents. Most of these were duplicates, and those that were not, did not meet inclusion criteria or met exclusion criteria. The second search resulted in 10 total documents. Inclusion criteria included English language, in Canada or the United States, peer-reviewed journal articles, documents from government, Indigenous communities or organizations, or established research or advocacy organizations. Exclusion criteria included: not English language and not in Canada or the United States. Four total documents regarding gender-based analysis and GBA+ and 2 regarding gender-balanced analysis were selected.

3.2 Data Extraction

A codebook was created to extract specific information from each article for synthesis. Information collected included general aspects of the study as well as the specific questions being asked of the literature:

1) *What is the concept or understanding of gender?*
2) *How has this understanding been impacted by colonization?*
3) *How does the concept of understanding of gender relate to Indigenous research ethics?*

Discourse analysis was integrated into data extraction by coding key terms such as gender, ethics, power, colonization, decolonization, self-determination, sovereignty, inherent rights, treaty rights, constitutional, international rights, governance, nation, nationhood, peoplehood, epistemology, Indigenous Ways of Being, methodology, methods, theory, research, research paradigm, collective, relational, relations, Mother Earth, social justice, social benefit, benefit.

3.3 Eligibility Criteria

The following provide an overview of study characteristics and report characteristics and the rationale of these as criteria for eligibility in this study. Study characteristics were identified through using the PICO method (Population, Intervention, Comparison, Outcome).

Study Characteristics	
Population	Indigenous First Nations Native American American Indian
Intervention	Indigenous Ways of Being Indigenous Ways of Knowing Indigenous Research Ethics Indigenous Research Methods Indigenous Self-Determination in Research Gender-Balanced Analysis Culturally Relevant Based Analysis

Study Characteristics

Comparison	Gender as understood/conceptualized from Indigenous worldview
Outcome	Assessment of strengthening Indigenous self-determination in research

Report Characteristics

Report Characteristics	Rationale
1. Peer-reviewed articles in scholarly journals	Research reviewed for validity and evaluation to the scrutiny of others in the same field.
2. Online grey literature	To account for Indigenous community-based documents and primary research reports not submitted to peer-reviewed publication.
3. Reports published between January 1, 1999-July 31, 2019.	To capture Indigenous research developments over a longer period of time.
4. Qualitative study design with a focus on health and cross-cultural research relating to gender identity.	Based on literature review findings conducted in preparation for this systematic review.
5. Research conducted with Indigenous peoples in Canada and the United States.	Cultural relatedness of Indigenous populations; and manageability in research.

3.4 Study Limitations

Databases were limited to an allowable number of search terms which in turn may have limited the number of relevant references in this study. There are no universal terms for expressing the four key concepts in this study – (1) the Indigenous peoples in present-day Canada and the United States; (2) Indigenous self-determination in research; (3) Indigenous gender terminology; and (4) gender-based analysis policy frameworks. This presents a challenge when attempting to search for these key concepts as they relate to one another. For example, in the case of the United States and Canada, Indigenous peoples can be referred to as American Indian, Native American, First Nations, Aboriginal, or any of the 1300+ tribal nations and First Nations (per federal governments' determination) throughout these two countries. Some Indigenous peoples in these two countries also have historical-cultural identities, such as the Oceti Sakowin which translates to the Seven Council Fires and including the Dakota, Lakota, and

Nakota. There is even further distinction of these sub-groups, for example, the Lakota who are: Oglala, Hunkpapa, etc.

Searches for the term “Indigenous” resulted in literature related to “Aboriginal”, “First Nations” (individual/specific and general/as a population), “American Indian/Alaska Native”, “Native American”, specific tribes within present day United States (e.g., Navajo Nation). Where it was able to be determined that the “Aboriginal” population cited within the literature included a majority (>33%) of First Nations, American Indian/Alaska Native, Native American, or specific tribes in present day United States, it was included in this study. This majority threshold was established during initial screening of the possible articles, particularly as it related to cross-cultural research. It was observed early on that in the case of present-day United States, American Indian/Alaska Native, Native American, or specific tribal populations were reported upon alongside African American and Latino/Latina populations. In the context of present-day Canada, it was observed that First Nations were reported upon alongside Metis and Inuit populations or simply were reported under the umbrella term “Aboriginal”. As the focus of this study is on American Indian/Alaska Native, Native American, or specific tribes in present-day United States and First Nations in present-day Canada, and these groups were largely observed to be included in cross-cultural research with two other main groups, the threshold in this study was established at >33%.

“Indigenous self-determination in research” can similarly be expressed via various expressions of this concept. As an example, in the context of First Nations in present day Canada, it could be expressed as First Nations Research Governance or Data Sovereignty, or through the First Nations-developed OCAP® Principles which refer to First Nation’s Ownership, Control, Access and Possession of its own data and are often referred to as a tool for Research Governance. The First Nations Information Governance Centre (FNIGC) describes these principles as “a set of standards that establish how First Nations data should be collected, protected, used, or shared. They are the de facto standards for how to conduct research with First Nations” (FNIGC web site). The FNIGC further explains each of these principles as follows:

> **Ownership** refers to the relationship of First Nations to their cultural knowledge, data, and information. This principles states that a community owns information collectively in the same way that an individual owns his or her personal information.
>
> **Control** affirms that First Nations, their communities, and representative bodies are within their rights in seeking control over all aspects of research and information management processes that impact them. First Nations control of research can

> include all stages of a particular research project – from start to finish. The principle extends to the control of resources and review processes, the planning process, management of information and so on.
>
> **Access** refers to the fact that First Nations must have access to information and data sharing about themselves and their communities regardless of where it is held. The principle of access also refers to the right of First Nations communities and organizations to manage and make decisions regarding access to their collective information. This may be achieved, in practice, through standardized, formal protocols.
>
> **Possession** – While ownership identifies the relationship between a people and their information in principle, possession or stewardship is more concrete: it refers to the physical control of data. Possession is the mechanism by which ownership can be asserted and protected.

Indigenous self-determination in research could also be expressed through a combination of factors. The Assembly of Manitoba Chiefs (AMC), a political advocacy organization with 62 members First Nations in present day Manitoba, Canada, amended its constitution in 2007 "to support research for self-determination" and such must be done with First Nations and follow: 1) Free, Prior and Informed Consent; 2) First Nations OCAP® Principles – First Nations have Ownership, Control, Access and Possession of their own data; and 3) First Nations Ethical Standards (First Nations Health and Social Secretariat web site). The AMC Health Information Governance Committee explains OCAP® in this way: "OCAP® allows a community to make decisions regarding why, how and by whom, information is collected, used and shared for research, evaluation and planning purposes" (First Nations and Social Secretariat of Manitoba web site). Furthermore, HIRGC states that, "OCAP® is fundamentally tied to self-determination, self-governance (First Nations governments like other governments, need data on their people), and the preservation and development of First Nations cultures" (Ibid).

Indigenous nations or representative organizations may have different standards, or they are at different places in the development of those standards, when it comes to self-determination in research. In the present study, the minimum standard for self-determination in research was if the literature identified whether research underwent ethical review by a First Nation or tribal government.

There are various expressions of gender. In this study, any number of search terms could have been used including gender identity, transgender, gender-inclusive, gender-variant, cis, non-conforming gender, Two-Spirit (or Two-Spirited), non-binary, etc. These alone are 10 search terms. Due to the focus on the Indigenous perspective and understanding, it was decided that "Two-Spirit" and "Two-Spirited" would be used to capture various expressions of gender. As was noted earlier, Indigenous languages can include words that akin to concepts of gender. As an example, as it was shared earlier, the Lakota term "winkte". The Catalogue of Endangered Languages reports that in the 21st century, 150 Indigenous languages are still spoken in North America, 112 in present day United States and 60 in present day Canada, with 22 of these having speakers in both present day United States and Canada (Bright and Campbell, Britannica website). When trying to capture the key concept of gender along with the wide variance of the other key concepts of this study, databases did not allow such long search strings. This may have resulted in relevant literature being missed.

Limitations regarding the fourth key concept of this study – gender-based policy analysis – was the result of a few challenges. Given the focus on the Indigenous understandings on gender, "gender *balanced* policy analysis" was the preferred key search term for this study; however, as this continues to be an emerging approach and confined to the context in present day Canada, there was very little published information on this. While gender-based policy analysis, which refers to the Western-based approach, similarly, there was a bit more though still limited published information.

CHAPTER IV: FINDINGS

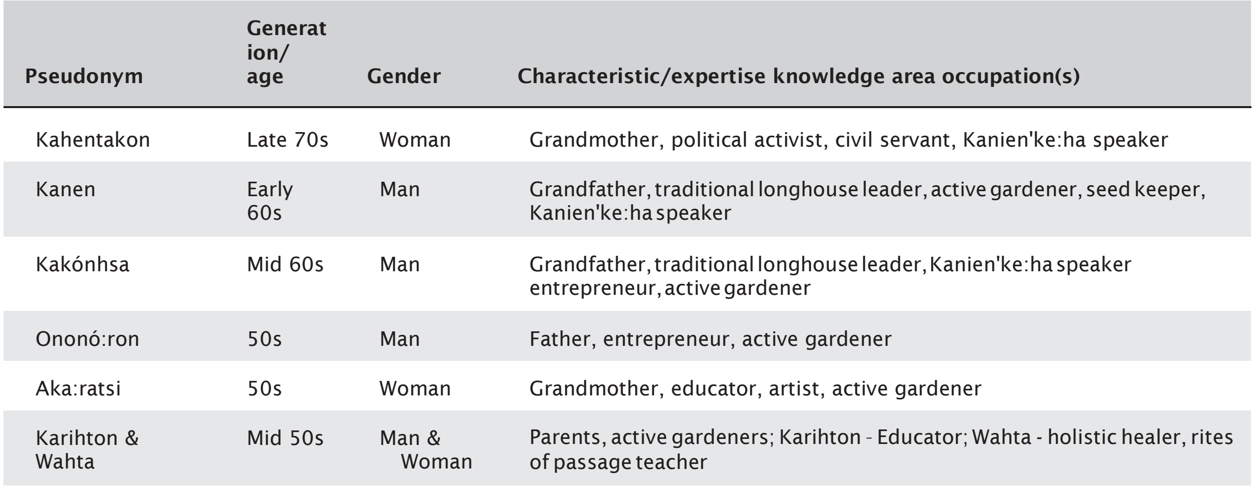
Consistent with the CDA approach, findings are presented in a problematized form.

4.1 The dominant concept and language of gender as binary are being used in Indigenous research conducted in observance of Indigenous research ethics.

Dominant language of gender as male/female and man/woman was used in all 7 studies in this research (Delormier, 2017, p. 5; Gonzales, 2018, p. 2; Graham, 2016, p. 3; Hatala et al, 2016, p. 1915; Hatala et al, 2019, p. 123; Henderson et al, 2018, p. 99; Marsh, 2018, p. 5).

4.2 The dominant concept and language of gender is given significance through its continued use.

The dominant concept of gender continues to be used in research as a matter of practice. In nearly all studies involved in this research, this concept and language was used in relation to research populations and bias. In one study, convenience sampling was used to recruit 24 participants (12 women and 12 men) (Marsh et al, p. 5). In all other studies, gender was not a criterion for research participants, but focused more on place of residence, experience, and knowledge. For example, in Delormier et al (2017), selection of key informants was guided by purposive sampling and consensus-decision making (previously explained as a “hallmark of Haudenosaunee governance”) with the objective of identifying men and women: from different generations, living in Kahnawà:ke, with extensive community knowledge and experience; and who are cultural advocates and practitioners with traditional food interests (p. 5). The following is an excerpt from Delormier et al regarding participant characteristics (p. 6):



Pseudonym	Generation/ age	Gender	Characteristic/expertise knowledge area occupation(s)
Kahentakon	Late 70s	Woman	Grandmother, political activist, civil servant, Kanien'ke:ha speaker
Kanen	Early 60s	Man	Grandfather, traditional longhouse leader, active gardener, seed keeper, Kanien'ke:ha speaker
Kakónhsa	Mid 60s	Man	Grandfather, traditional longhouse leader, Kanien'ke:ha speaker entrepreneur, active gardener
Ononó:ron	50s	Man	Father, entrepreneur, active gardener
Aka:ratsi	50s	Woman	Grandmother, educator, artist, active gardener
Karihton & Wahta	Mid 50s	Man & Woman	Parents, active gardeners; Karihton - Educator; Wahta - holistic healer, rites of passage teacher

Pseudonym	Generation/ age	Gender	Characteristic/expertise knowledge area occupation(s)
Tará:kwi	50s	Woman	Mother, entrepreneur, social, cultural, and economic development of the community, active gardener, medicine gatherer
Ono:ta	Mid 50s	Woman	Grandmother, research trainee, health and community development, active gardener
Tekatsi:tses	Early 50s	Woman	Parent, active gardener, cultural practitioner and teacher, youth rites of passage teacher, Kanien'ke:ha speaker
Kahrhata'kéha	Late 40s	Man	Parent, educator, active gardener, athlete, social and cultural development
Ken'niiohontesha & Shà:iase	Early 40s	Man & woman	Parents, social development, active gardeners, beekeepers; Ken'niiohontesha -public transportation/ carpenter; Sha:iase -environmental protection
Skanekwen'tará:nen	Early 40s	Man	Parent, educator, active gardener, Kanien'ke:ha speaker, cultural practitioner educator
O:nenshte, Onon'onsera & Osahe:ta	Late 20s & early 30s	Man, man & woman	Active community gardeners; parents, educators (O:nenshte & Onon'onsera); town worker (Osaheta); Kanien'ke:ha speaker (Ononosera & Osahe:ta)

Other examples of participant criteria focusing on place of residence, experience and knowledge include the following:

- Adult members of Zuni Pueblo, New Mexico who lived on tribal lands located in southwestern United States (Gonzales et al, p. 2).
- Band member of Thunderchild First Nation, living on or off reserve; 18 years of age and over, and interested in participating in this project. Within this study, Elders were: Band members of Thunderchild First Nation, living on or off reserve; greater than 50 years of age; identified by Chief and Council or other members of the community; and interested in participating in the project (Graham & Martin, p. 3).
- Elders with experiences with historical abuses (i.e. residential schools, marginalization, and forms of racism) and demonstrated abilities and reputations to serve as elders in their communities (Hatala et al, 2016, p. 1915).
- Youth, self-identifying as Indigenous, with a “focus of sampling was placed less on generalizability and sample size, and more on sample adequacy so that depth and breadth of information was achieved as determined by thematic data saturation (Hatala et al, 2019, p. 124, citing Charmaz, 2006).
- Invitations to First Nations Elders, health service directors and community leaders across 48 First Nation communities in Alberta with connections to the

> Alberta First Nations Information Governance Centre (AFNIGC) (Henderson et al, p. 95).

Though gender was not a criterion in these studies, gender representativeness was reported:

- 8 men, 9 women (Delormier et al, p. 6).
- 15 males, 16 females (Gonzales et al, p. 2).
- Néhiyawak 7 males and 8 females; Elders - 2 female and 1 male (Graham & Martin, p. 3).
- 2 males, 2 females (Hatala et al, 2016, p. 1915).
- 12 males, 16 females (Hatala et al, 2019, p. 124).
- 12 women, 12 men (Marsh et al, p. 5).

In one study, Cree pseudonyms (names for animals and birds and thunderbird) were used to ensure confidentiality and gender-neutral terms such as “their” and “they” were used in remaining sections of the report (Hatala et al, 2016, p. 1915). In another study, language used as pseudonyms and used in association with Indigenous concepts (*see* Delormier et al above).

One study discussed balanced representation in relation to bias: “This was not a population-based cohort, as members from only 6 partnered First Nations communities attended, while representation of Elders and health directors from each was uneven and predominantly women” (Henderson et al, p. 99). In this same study, when describing participants, it was stated, “Only three were men, with the majority indicating that they were grandparents” (p. 95). This study was focused on First Nation people’s perspectives on barriers and supports for enhancing HPV vaccinations (p. 93). Participants’ discussions on the involvement of men arose when discussing family and community as supportive resources of knowledge and education, which one participant stating, “[My husband] goes and sits with the men and teaches them; for me, I can go out and explain things to the mothers and the children, and out of respect…he's getting that message across [in his sweat lodge ceremonies with men]” (p. 98). Participants in this study also spoke to the importance of involving men in HPV vaccinations by “transmitting messages of respecting women’s bodies, and in regaining and celebrating the role of all parents as community educators and leaders” (Ibid).

Another study also addressed research bias and its relation to gender:

> We did not attempt to identify reasons for non-participation among the individuals who were recruited but did not attend the focus group. However, given the wide age

> range and equal gender distribution of our participants, we do not anticipate bias in our focus group results (Gonzales et al, p. 6).

Though references to gender representation were made, gender-based data analysis and reporting in results, discussion and conclusion were not evident. Thus, overall, gender did not hold much significance.

4.3 The dominant concept and language of gender is given significance because research involving Indigenous peoples is in response to inequities resulting from colonization.

All studies included in this research were all in response to colonization and the inequities it help create for Indigenous peoples in present-day Canada and the United States. Hatala et al (2019), Marsh and Martin (2018), Graham and Martin (2016), Hatala et al (2016), specifically discuss colonization. Marsh and Martin (2018) recognize that

> the contemporary challenges of violence, substance abuse, intergenerational trauma symptomology, and mental health problems in Indigenous communities are an indication of the impact of colonization, including residential schooling and other factors, on individuals, families, communities and nations (2, citing Aguiar & Halseth, 2015; Bombay et al, 2014; Miller et al., 2011; Spittal et al, 2007).

Hatala et al (2016) emphasize "the connections between colonization and present-day disparities, contemporary health research conducted with Aboriginal populations depicts the unfortunate realities of pervasive and significant health inequities when compared with non-Aboriginal populations." (Hatala et al, 2016, p. 1911, citing Adelson, 2000; 2005; 2008; Bombay et al., 2014; Daschuk, 2013; Dinges & Duong-Tran, 1994; Elias et al., 2012; Gone, 2013; Karmali et al., 2005; Kirmayer & Valaskakis, 2008; Miller, 1996; Million, 2000; Milloy, 1999; Wexler, 2014) Similarly, Hatala et al (2016) recognize that "many accounts of such inequities [health]reference 'historical trauma' as an explanatory model or causal narrative to make sense of and interpret current social and individual ills" (p. 1912).

Graham and Martin (2016) highlight that "there is an abundance of literature that clearly describes the existing health disparities between Indigenous and non-Indigenous people in Canada" (p. 1). Henderson et al (2018) provide a specific example of this disparity between regarding the significant burden of disease associated with the human papillomavirus (HPV) – there are higher rates of infection for Indigenous people in Canada compared to the non-Indigenous population (p. 1, citing Jiang et al, 2013 and 2011; Demers et al, 2011; Colquhoun et al, 2010; Moore et al, 2010). Additionally, Henderson et al report that rates of cervical cancer for Indigenous women is double that of other women and that there is evidence to suggest vaccination is lower in Indigenous populations (94). Lastly, they highlight that data suggests there may be barriers to preventative care and treatment, driving disparities in cervical outcomes for Indigenous people (94).

Delormier et al (2017) focus on why Indigenous peoples suffer higher burdens of food insecurity and poorer health outcomes (p. 2). The history of dispossession of Indigenous peoples to their land and the colonial destruction of Indigenous peoples' social structures are identified as contributing factors to the health inequities Indigenous people experience (pp. 1-2). Similarly, Hatala et al (2019) highlight the historical and contemporary colonization via forced displacement and land dispossession are factors influencing urbanization of First Nations people (p. 123).

4.4 The Indigenous focus is on relations not gender.

I observed that the studies included in this research were centred around human-to-human and human-to-environment relations and not gender. A first example is a study to understand Haudenosaunee experiences and perspectives of food insecurity in relation to health and well-being, land management, and familial and individual roles and responsibilities in the context of one Kanien'kehá:ka (Mohawk) community (Delormier et al, p. 2). Land as a feminine presence, kinship (including human nature) and the concept of balance are also part of Haudenosaunee creation, history, and tradition. Haudenosaunee creation tells how corn, beans, and squash grew from the body of Sky Woman's daughter after she died giving birth (Delormier et al, p. 3). Her body was covered with earth and from it grew corn from her breasts, squash from her navel, and beans and tobacco from her feet, and this was when the Haudenosaunee began referring to earth as "Mother" (p. 3 citing Parker, 1910, and Sakokweniónkwas, 2008). These plants which are planted together in mounds of earth are referred to as *tionhnhéhkwen,* translated as "life sustainers" (p. 3). The mutually supportive relationship represented by the sisterhood reflects the Haudenosaunee philosophy that a strong society depends upon a complementarity of supporting relationships (p. 3). Men and women work together to create a balanced society for social harmony (p. 2). Land was communally based with everyone expected to work together for shared benefit (p. 2). This was evident in Haudenosaunee agricultural knowledge and systems that ensured and abundant, nutritious, and sustainable food supply (pp. 2-3). Early settlers relied on the Haudenosaunee for food and technology to grow their own crops; however, the colonial military targeted Haudenosaunee corn granaries and hundreds of acres of corn fields as a strategy to ensure dominance (p. 14). By the 1800s, Haudenosaunee society had been significantly transformed (p.

14). Food insecurity was experienced in other historical and contemporary events such as the Oka Crisis in 1990, and in response, for the most part, people organized to care and provide for one another (p. 7). In studying current food insecurity in relation to health and well-being, land management, and familial and individual responsibilities, Haudenosaunee concepts of gender were expressed in addition to the dominant male/female binary, animating these otherwise inanimate pronouns according to Haudenosaunee roles and responsibilities:

- Characteristics/expertise knowledge area occupation(s), e.g. “grandmother, political activist, civil servant, Kanien’ke:ha speaker”, “grandfather, traditional longhouse leader, active gardener, seed keeper, Kanien’ke:ha speaker”, etc. (p. 6)
- Gender roles (pp. 2, 8, 9, 12)
- Responsibilities (p. 2)
- Matrilineal society (p. 2)
- Complementary/complimentarity (pp. 2, 3, 8, 9)
- Balanced (pp. 2, 9, 12)
- Mother Earth (p. 2)

In Delormier et al (p. 6), data analysis was conducted with the aim to:

(a) Elaborate community perspectives on food insecurity and what this means from their experiences, past and present;

(b) Describe Haudenosaunee customs, traditions, laws, and norms about food security, with a particular focus on how traditional responsibilities and relationships to land and relating to gender can reveal insights to explain changes in food security and building food security; and

(c) Elaborate how sustainable self-determination can be achieved for food security and well-being.

This study involved concepts of balance, complimentarity, roles and responsibilities, expertise, knowledge, occupations, were identified in Kanien’keha:ka research on food security which was “guided by sustainable self-determination that focuses on Indigenous cultural responsibilities and relationships to land, each other, and the natural world” (Delormier, p. 1, citing Corntassel, 2008). It focused on “revitalizing Indigenous ways of living and cultural practices to ensure these are maintained and transmitted to others” (p. 2). “Sustainable self-determination” is described as:

> A process premised on the notion that evolving indigenous livelihoods, food security, community governance, relationships to homelands and the natural world, and

> ceremonial life can be practiced today locally and regionally, thus enabling the transmission of these traditions and practices to future generations. Operating at multiple levels, sustainable self-determination seeks to regenerate the implementation of indigenous natural laws on indigenous homelands and expand the scope of an indigenous self-determination process (p. 5 citing Corntassel, 2008, p. 119).

A second example of the focus on relations and not gender is a study relating to land-making and wellness among Indigenous youth in an urban Canadian context (Hatala 2019). The concept of *miyo-wicehtowin* is a central feature of the Cree Indigenous philosophy and involves human-nature relationships with the "land" and the environment or "Mother Earth" more broadly (p. 122). It translates to "having or possessing good relations…It asks, directs or admonishes, or requires Cree peoples as individuals and as a nation to conduct themselves in a manner such that they create positive or good relations in all relationships" (p. 122, citing Cardinal and Hildebrandt, 2000, p. 14). In Hatala et al (2019), the focus was on "how urban Indigenous construct a contemporary sense of themselves as being-in-relation to land and nature within urban contexts" (p. 122).

> Re-imagining nature as familial and kinship relations for youth often involved a "displaced" love; that is, a love that was needed or wanting from the absence of family bonds, and yet somehow experienced in subtle ways through human-nature interactions, such as giving and receiving hugs from trees (p. 126).

Descriptions of the land were often expressed with feminine pronouns like "she" or with the term often used by Indigenous people – "Mother Earth". In this way, nature and land became relations "as embodied and differentiated network of feminine presence, exhibiting the capacity to sustain, care and nurture belonging and safety" (p. 126). Kinship ties and relations with the land require an offering or gift to the land to restore and maintain balance and are a practice of contemporary cultural and spiritual relationships with nature (Hatala, 126). Hatala et al states that the insights provided by youth in their study demonstrates "how young people re-conceptualize and decolonize the boundedness of place, identity, and nature in more porous and idiosyncratic ways. Such ways expose the fluidity, multiplicity, and relational boundaries categorizing humans, land, and nature" (p. 127).

In Marsh et al the concept of balance was mentioned in a study on the sweatlodge ceremony as a healing intervention for intergenerational trauma and substance abuse (p. 1). Participants shared that they would have liked to have had women and men participate in this ceremony together for "balanced energy" (p. 9).

In addition to Delormier and Hatala (above), Graham and Martin (2016) also discussed the recognition of Mother Earth in a study on narrative descriptions of what improved Cree peoples' mental health and well-being and what they needed to attain optimal mental health and well-being from a contemporary néhiyawak (Plains Cree) perspective (p. 1). As an example, for a participant, this included daily spiritual practices such as picking only what you need from Mother Earth and leaving tobacco for what you have taken (p. 5).

4.5 The Indigenous focus on relations is apparent where Indigenous Ways of Being and Ways of Knowing are used.

Studies strongly rooted in Indigenous Ways of Being and Ways of Knowing were observed to significantly focus on relations. In the present study, Indigenous Ways of Being is used to refer to epistemology and Ways of Knowing is used to refer to methodology.

Delormier et al set the foundation of its study by providing an overview of key Haudenosaunee Ways of Being – societal aspects including understanding of food security (study topic):

- Based on balance, mutual respect, and shared responsibilities between women and men (p. 2).
- The Kaianerekó:wa or Great Law of Peace was "held up" by Jigonsaseh, a woman, and Peacemaker, a man (p. 2).
- The Haudenosaunee are a matrilineal society. Family descent (clan) is passed through the female line. Social harmony is evident through a complementarity where women and men work together creating a balanced society (p. 2, citing Horn-Miller, 2005).
- *Tionhnhéhkwen* refers to life-sustaining foods and that understanding is conveyed through stories of Haudenosaunee creation including the role of Sky Woman and Haudenosaunee agriculture (p. 3).
- Discussion of food abundance due to Haudenosaunee agricultural knowledge and systems (p. 3).
- Providing the social and demographic context of Kahnawà:ke today, including management according to customary law until disruption by colonial government and impact of trauma (pp. 3-4).

The following are key aspects of methodology in Delormier et al:

- Qualitative study based on interviews with individuals, over one season in one Indigenous community, that "blends Indigenous and decolonizing methods and qualitative methods. Consensus-based decision-making is a hallmark of Haudenosaunee governance" (p. 5, citing Horn-Miller, 2013).

- A conceptual framework of “sustainable self-determination, a concept developed by Jeff Corntassel, a Cherokee political scientist. It focuses our research on revitalizing Indigenous ways of living and cultural practices to ensure these are maintained and transmitted to others (p. 5).

- Selection of 17 key informants guided by purposive sampling and consensus-decision making with “the objective of identifying women and men from different generations, living in Kahnawà:ke with extensive community knowledge and experience, who are cultural advocates and practitioners with traditional food interests” (p. 5).

The aims of the analysis were to:

- Elaborate community perspectives on food insecurity and what this means from their experience, past and present.
- Describe Haudenosaunee customs, traditions, laws, and norms about food security, with a particular focus on how traditional responsibilities and relationships to land and relating to gender can reveal insights to explain changes in food insecurity and building food security.
- Elaborate how sustainable self-determination can be achieved for food security and well-being (p. 7).

The following illustrate the result of the study approach of Delormier et al on discussion of gender:

- Characteristics/expertise knowledge area occupation(s), e.g. “grandmother, political activist, civil servant, Kanien’ke:ha speaker”, “grandfather, traditional longhouse leader, active gardener, seed keeper, Kanien’ke:ha speaker”, etc. (p. 6)
- Gender roles (pp. 2, 8, 9, 12)
- Responsibilities (p. 2)
- Matrilineal society (p. 2)
- Complementary/complimentarity (pp. 2, 3, 8, 9)
- Balanced (pp. 2, 9, 12)
- Mother Earth (p. 2)

Both Hatala et al studies (2019 and 2016) utilized a social constructivist lens. In Hatala et al (2016), this is described as a lens that involves framing which is explained as “the process by which individuals and groups organize, perceive and communicate realities and the ways in which social forces discursively influence perceptions of and attitudes toward certain social events” (p. 1912, citing Goffman 1974). It enables the researchers in this study to “bolster the narrative of and research around a strengths-based concept of resilience to counteract the potentially negative implications of historical trauma narratives that can frame Aboriginal health issues within a narrative of pathology, victimization, and disparity" (p. 1912). Furthermore, this approach enables the researchers of this study with constructive means to deal with colonial trauma:

- Rather than replace discourses of historical trauma altogether, we suggest a movement toward the establishment of a plurality of perspectives, where resilience and historical trauma hang together as multiple overlapping voices, as opposed to health discourses that are 'unified, singular or closed' (p. 1912, citing Good, 1994, p. 62).

- Rather than framing the analysis around historical abuses or suffering, our findings emphasize the elders' resilience through three primary strategies: (1) resistance and survival, (2) negotiating between worlds, and (3) the continuity and spirit of the story. To conclude, the concept of "framing" health narratives more generally is discussed, and some clinical implications are presented (p. 1913).

Hatala et al further state that resilience among Aboriginal populations "also involves moving beyond processes of returning to a previous state (i.e., springing back) toward embracing ideas of transformation and adaptation into something new" (p. 1914).

The epistemological and methodological approach taken in Hatala et al (2016) results in discussions that focus on the centrality of inclusivity and (inter)relationships. This is illustrated by the following statement by Hatala et al (2016): "The goal is to reframe discourses of Indigenous health and healing in Canada around a notion that many voices are needed and an understanding of how they interact and relate to each other in a perspective of reality, health inequity, well-being, and social life" (p. 1923).

Hatala et al (2019) is also situated within a social constructivist epistemological perspective. This epistemology is centred around the concept of *miyo-wicehtowin*, which is explained as a "central feature of the Cree Indigenous philosophy and involves human-nature relationships with the 'land' and the environment or 'Mother Earth' more broadly" (p. 122). It translates to "having or possessing good relations…" (Ibid, citing Cardinal and Hildebrandt, 2000:14). They further explain that their study involves "qualitative research combined Indigenous Methodologies (IM) with a modified grounded theory (GT) approach for data generation, interpretation, and analysis" (p. 124, citing Charmaz, 2006; Kovach, 2009). This framework "infuses decisions concerning the choice of methods, how methods are employed, and how the data are analyzed and interpreted with Indigenous perspectives of ontology and epistemology" (p. 124, citing Kovach, 2009). As they seek to address urban First Nations wellness, this approach enables “centering notions of place within health research supports decolonization processes to recover land” (p. 123). The impact of this approach on discussion of gender in the following ways:

- Human-nature relationship with the land and Mother Earth (p. 122)
- Re-imagining nature as familial and kinship relations (p. 126)
- Offering or gift giving to land to restore and maintain balance as practice of cultural and spiritual relationships with nature (p. 126)
- Re-conceptualize and decolonize place, identity, and nature to expose fluidity, multiplicity, and relational boundaries between humans, lands, and nature (p. 127)

Like Hatala et al (2019), Marsh and Martin (2018) recognize the importance of decolonizing methodology to explore Indigenous health. More specifically, their methodology was the “two-eyed seeing approach” which was selected because “it aligns with decolonizing and Indigenous research methodologies” (p. 4, citing Kovach, 2010; Smith, 1999; Wilson, 2008) Understanding of the sweat-lodge ceremony and the role of the elders was shared. Marsh and Martin (2018) explained these things in this way:

- Evidence of North American Indigenous Peoples using the sweat lodge ceremony can be found as early as 400 B.C. (p. 2, citing Abdullah & Stringer, 1999; Brave Heart, 1998; Colmant et al., 2005).

- Elders teach that the sweat lodge ceremony serves a sacred purpose through the ritual healing or cleansing of body, mind, and spirit while bringing people together to honour the energy of life (p. 3, personal communication Elders Julie and Frank Ozawagosh, January 5, 2013).

- The Elders teach that each person enters the lodge with his or her own challenges, suffering, conflicts, addiction, and concerns. This sitting together brings connection, truth, harmony, and peace through sweating, praying, drumming, sharing, stories, and singing (p. 3).

- Although sweat lodge ceremonies have historically been an important part of Indigenous cultures throughout North America, little evidence supports the efficacy of this intervention (p. 2).

Gender and relations were discussed in the following ways by Marsh and Martin:

- The sweat-lodge ceremony is a return to the womb of Mother Earth (pp. 7-8).
- Trauma destroys bonds and connections at many levels (p. 9).

- Participants felt a deep sense of connections with the Elders who provided the teachings and conducted the ceremony – they brought forth safety and enactment of mother and father during this time (p. 12).

Storytelling was used by Graham and Martin (2016), Henderson et al (2018), and Gonzalez et al (2018). More specifically, Graham and Martin selected narrative inquiry to guide their research process and thematic narrative analysis to analyze data. Citing Clandinin and Connelly (2000, p. 20) narrative inquiry is described as "stories lived and told … a way of understanding experience" that allows all of us to learn. Narrative inquiry is culturally appropriate and congruent with the Plains Cree worldview because of its alignment with Indigenous epistemology" (pp. 2-3, citing Kovach, 2009, and Roberts, 2005). Graham and Martin discuss gender and relations in the following way:

- Recognition of Mother Earth in a study on narrative descriptions of what improved Cree peoples' mental health and well-being and what they needed to attain optimal mental health and well-being from a contemporary néhiyawak (Plains Cree) perspective (p. 1).

- As an example, for a participant, this included daily spiritual practices such as picking only what you need from Mother Earth and leaving tobacco for what you have taken (p. 5).

Like Marsh and Martin, Henderson et al (2018) recognize the role of elders in storytelling. They state, "Elders are individuals recognized in distinct ways by their communities as having accumulated knowledge and skills with which they mentor and/or lead others for the benefit of their culture and communities" (p. 96, citing Stiegelhauer et al, 2017). Their method was sharing circles which they explained in the following way:

- Sharing circles are considered safe spaces in which to share knowledge, such as through stories, that address spiritual and emotional aspects of daily life, in addition to mental and physical well-being (p. 9, citing Nabigon et al, 1990).

- The process of exchanging information in small groups facilitated a strengths-based, realist approach to eliciting stories about drivers of HPV infection in First Nations and opportunities for enhanced prevention (p. 9).

- The narrative and exploratory nature of findings are relevant to health services and policy research (citing Sofaer, 1999), particularly for generating new hypotheses around barriers and supports to vaccination, framing context for critical appraisal (citing 2011) of existing best practices and identifying needed changes within healthcare delivery (p. 9, citing Berkwitz and Inui, 1998).

This approach was selected “in order to ensure EHVINA's alignment with community experiences and perspectives on cervical cancer” shared at different, previously held gathering of Elders and health directors (p. 9). The following are illustrative of the nature of discussion on gender and relations in Henderson et al resulting from their study approach:

- Role of Elders and language to strengthen sense of connection to each as early sexual health education (p. 98).
- The involvement of men on several fronts: transmitting messages of respecting women’s bodies and regaining and celebrating the role of all parents as community educators and leaders; and role of traditional teachings, for intergenerational connections to foster kindness and openness believed to be protective of health (p. 98).

Focus groups were used by Gonzalez et al which included facilitation and note-taking in Shiwi, the language of the Zuni (p. 3). Gonzalez et al describe their research process in the following way:

- The focus group process is similar in manner to talking circles used by Native American communities (p. 2).
- Content analysis was conducted by the authors and the focus group facilitator and final thematic constructs were identified by comparison of the coding utilized by all reviewers (p. 3).

Though personal choice was identified, there were no gender-based differences identified in Gonzalez et al. They did state that personal choices relate to risk avoidance, individual/family/community benefit (p. 4).

4.6 Indigenous peoples must be empowered.

All studies included in this research emphasized the need to empower Indigenous peoples. This can be done through decolonization, asserting self-determination, promotion and use of Indigenous knowledge including healing knowledge, and community voice. Delorier et al state that,

> Addressing Indigenous Peoples’ food insecurity and health inequities requires promoting research and policy that decolonizes food and knowledge systems, coupled with health promotion endeavors supporting Indigenous ownership and governance. Decolonizing food systems calls for centering Indigenous Peoples’ self-determination, the revitalization of knowledge systems, cultural practices, and language in nutrition research and practice (p. 2, citing Elliot, Brown, & Corbett, 2012; Lemke & Delormier, 2017; Mundel & Chapman, 2010; Tuck & Yang, 2012).

Hatala et al (2019) recommend Indigenous social determinants of health (SDOH) that include access to and stewardship over land as indicators because land is central to physical, mental, and spiritual wellness (p. 123). This recommendation is based upon two perspectives:

1) An **environmental dispossession perspective** described as "social, cultural and political processes through which Indigenous people become unfairly disconnected from their ancestral homelands" (Ibid, citing Richmond and Ross, 2009).

2) An **environmental repossession perspective** described as "reframe[ing] [a] potentially pathologizing and deficit-based approach associated with illness and victimhood, and involve[ing] social, cultural and political processes through which Indigenous people re-cover ancestral homelands and revitalize cultural lifeways" (Ibid, citing Hatala et al, 2016; Big Canoe and Richmond, 2014).

Graham and Martin (2016) write that, "It is time to collaborate respectfully with Indigenous peoples by asking them what contributes to their mental health and well- being. Having this first-hand knowledge is an important first step in mental health program planning and in delivering effective mental health care to Indigenous peoples" (p. 1).

Marsh and Martin (2018, pp. 2-3) highlight that recent studies demonstrate the following:

- Benefit of incorporating Indigenous healing practices
- This integration could enhance health and wellbeing of those specific mental health issues in this study
- The sweat-lodge ceremony was discussed elsewhere as part of a broader intervention on this population
- Reclaiming individual and collective identity is key to healing from intergenerational trauma
- Traditional knowledge must be restored and practiced

While Gonzalez et al (2018) did not explicitly identify how Native American communities in present day United States should be empowered, the following statement suggests their research highlights opportunity of these voices on matters that directly affects their lives:

> Reliance on natural resources brings Native American communities into frequent contact with environmental media, which, if contaminated, represents an exposure route for environmental pollutants. Native American communities vary in their perspectives on research and relatively little is known about the range of perspectives regarding the use of biological samples for environmental exposure assessment (p. 1).

4.7 Voices of all relations are required.

The need to include voices of all relations is a prominent theme amongst the findings of studies included in this research. Hatala et al noted that "The goal is to reframe discourses of Indigenous health and healing in Canada around a notion that many voices are needed and an understanding of how they interact and relate to each other in a perspective of reality, health inequity, well-being, and social life" (2016, p. 1923). The theme of many voices was also evident in other study findings. Delormier et al highlighted the importance of family and interpersonal relationships, socio-economic drivers, community and historical knowledge with collective responses, and relationship to land (pp. 6-9). Contemplation of "large scale social transformations imposed through patriarchy to explain shifts in Haudenosaunee ideals of gendered responsibilities but value the principles of gender complimentarity and what it means in Kahnawake today" were encouraged (pp. 8-9). Just as Indigenous voices are individual and collective, they are present and past. Gonzales et al highlighted that traditional beliefs having been passed down by parents and grandparents and personal choice balanced with traditional perspectives (p. 4). Though personal choice was identified, there were no gender-based differences identified; but rather, relates to risk avoidance for individual/family/community benefit (Ibid).

Indigenous voice is not only individual and collective, the past and present, but is evident in the seen and unseen. Graham and Martin highlighted relationships based on spiritual beliefs and practices using the Cree language - *tānis si wāpahtaman pimātisiwin* (worldview) and *ēkwa hi kikwaya piko ka-ispayiki k spin ka-nohtē-miyo-mahcihoyān* (these are the things that need to happen if I want to be healthy) (pp. 4-9). Graham and Martin write:

- "The impacts of colonization and Indian residential school make it essential to understand the significance of relationships in on Indigenous peoples' mental health and well-being today" (p. 5).
- "Cree worldview is contained in the Cree language which can help to restore imbalance created with colonization for structural changes required to address health disparities" (p. 10).

Indigenous voice is not only individual and collective, past and present, in the seen and unseen, it is boundless – it is not limited to on- or off-reserve. Hatala et al highlighted the need to contest boundaries and re-locate place through various means such as the act of hugging trees as family-making, gift-giving and land-making, story-making and land-based teachings, and recognizing the soothing power of places to regulate emotions (pp. 125-127). Further details include:

- "Re-imagining rural/urban conceptual boundaries as porous and relational, and therefore, connections with land and nature are accessible in diverse ways within urban spaces" (p. 125).

- “Re-imaging nature as familial and kinship relations as providing love that has been displaced” (Ibid).
- “Gift-giving to restore or maintain balance with the land which signify interrelationship and intimacy” (p. 126).
- “Land as the teacher” – youth interactions and interrelationships with nature are a means of providing life teachings, ways of living, wellness, and resilience (p. 127).
- Access to and relationships with nature create a soothing relationship that “helped to regulate potentially harmful emotions that can disrupt social connections and family bonds” (Ibid).

Indigenous voice is not only individual and collective, past and present, in the seen and unseen, unbounded by arbitrary borders, it is also healing. Marsh et al highlighted healing through traditional Aboriginal healing methods; education and knowledge about seeking safety and material; awareness and understanding of the link between trauma, substance abuse, and the impact of colonization; and integration and application of knowledge (6). Marsh et al documented that trauma destroys bonds and connections at many levels and can negatively affect sense of community and belonging, moving people further into isolation, shame, guilt and self-blame (9) but that through connecting with each other and the natural environment, healing comes:

- The sweat-lodge itself is a return to the womb of Mother Earth and cultural protocols must be observed in this sacred relationship including through teachings and specific preparations such as the collection of rocks which are referred to as grandfathers (pp. 7-8).
- It was found that participants felt a deep sense of connections with the Elders who provided the teachings and conducted the ceremony – they brought forth safety and enactment of mother and father during this time (p. 12).

Lastly, Indigenous voice is not only individual and collective, in the past and present, in the seen and unseen, unbounded by arbitrary borders, and healing, but it involves language and is interconnected because we are all connected. Henderson et al focused on contextualizing the impact of colonization and social change on women’s health, including impacts on screening, prevention, and treatment practices, as well as possibilities for enhancing community-driven prevention (pp. 96-99). Their findings (p. 98) highlight that we all have roles and responsibilities not only to ourselves but to others because we are inter-connected:

- The need for early sexual health education from Elders especially within indigenous language which strengthens the sense of commitment to one another.
- The involvement of men on several fronts were highlighted: transmitting messages of respecting women's bodies and regaining and celebrating the role of all parents as community educators and leaders; and role of traditional teachings, for intergenerational connections to foster kindness and openness believed to be protective of health.

4.8 Recent iterations of mainstream Gender Based Analysis fail to address previously identified concerns and Indigenous-based Gender Balanced Analysis is not publicly available.

Gender-Based Analysis Plus (GBA+) is used by the Government of Canada (GOC) to examine the impact of legislation, policies, programs, and budgetary measures on diverse groups of women, men, and gender-diverse people by taking into consideration sex, gender, and other factors. ("Gender-based Analysis Plus in Canada", HillNotes, Library of Parliament https://hillnotes.ca/2017/05/26/gender-based-analysis-plus-in-canada/) The Status of Women Canada (SWC, as of December 13, 2018, became a federal department named Women and Gender Equality Canada) leads promotion of GBA+ across the federal government by providing guidance, facilitating knowledge transfer and developing tools and training; however, application is a shared responsibility across all departments and agencies. SWC stresses that GBA+ should be incorporated at "all stages of the policy cycle, from development, to implementation, to evaluation." (Library of Parliament website) SWC continues to promote a gender and diversity lens through the "intersectionality" concept that:

> Investigates and attempts to account for differences in the outcomes of federal initiatives on diverse groups of women, men and gender-diverse people based on gender, sex, age, ethnicity, disability, immigration, and other factors that, based on data, are deemed likely to influence an individual's access to, and ability to benefit from, federal policies, programs, and legislation. GBA+ is, by its nature, an intersectional analysis: it ensures that all aspects of diversity are considered when an initiative is analyzed and aligns initiatives with the Government's commitment to inclusivity (Minister of Status of Women Canada, Final Progress Report on the Implementation of Gender-based Analysis Plus, March 2018, 8).

Prior to 2013, the Government of Canada used gender-based analysis (GBA) to assess the different impacts of legislation, policies and programs on men and women. Internationally, this is often referred to as gender mainstreaming. Stakeholders promoted the use of intersectional analysis which examines how relationships among different identity factors shape individuals' experiences of inequality and discrimination (Ibid).

The Library of Parliament provides the following timeline of GBA and GBA+ developments in Canada, summarized here:

- The Government of Canada developed the *Federal Plan for Gender Equality* in response to the 1995 *Beijing Declaration and Platform for Action* adopted at the Fourth United Nations World Conference on Women.
- In April 2005, the House of Commons Standing Committee on the Status of Women (FEWO) tabled a report (*Gender-Based Analysis: Building Blocks for Success*) outlining uneven application of GBA by federal departments. In response, the GOC appointed the Expert Panel on Accountability Mechanisms for Gender Equality which release its report in 2005, recommending establishing legislation to enforce the "use of gender-based analysis, monitoring and reporting" by the federal government.
- The Status of Women Canada (SWC) leads promotion of GBA+ across the federal government by providing guidance, facilitating knowledge transfer, and developing tools and training; however, application is a shared responsibility across all departments and agencies. SWC stresses that GBA+ should be incorporated at "all stages of the policy cycle, from development, to implementation, to evaluation."
- In a 2015 report, the Auditor General concluded that certain departments had not adequately performed GBA+ to inform government decisions, and SWC, the Privy Council Office, and the Treasury Board Secretariat, had made progress in supporting the implementation throughout the federal government by providing guidance and training to staff of departments and agencies.
- As a response to this report, SWC, PCO and TBS released an *Action Plan on Gender-based Analysis* covering the period from 2016-2020.
- Several parliamentary committees (the House of Commons Standing Committee on Public Accounts, FEWO and the Standing Senate Committee on Human Rights) recently examined the implementation of GBA+. The June 2016 FEWO report recommended the GOC introduce legislation to create the Office of the Commissioner for Gender Equality who would be an Agent of Parliament with the mandate to promote implementation of GBA+ in federal departments. The 2017 and 2017 mandate letters for the Minister of Status of Women prioritized efforts to strengthen the application of GBA+. In March 2017, Budget 2017 included a GBA of the budget's measures in the form of a Gender Statement.
- In March 2017, SWC tabled an interim progress report on the implementation of GBA+ to the Public Accounts Committee followed by a final report in 2018. The

March 2017 report noted that the federal government has made the application of GBA+ mandatory for all Memorandums to Cabinet and Treasury Board submissions.

The March 2018 final report (Minister of Status of Women Canada, Final Progress Report on the Implementation of Gender-based Analysis Plus, March 2018) included a number of activities, summarized here:

- Work is underway to make GBA+ a mandatory part of the analysis and development of regulations through a new Cabinet Directive on Regulations that requires departments and agencies to undertake GBA+ as part of regulatory impact analysis, for which TBS in consultation with SWC is currently developing guidance (p. 3).
- Work is underway to integrate GBA+ in the way the Government consults with Canadians and stakeholders on the potential impacts of its policies with the provision of guidelines to ensure consultations capture the experiences of diverse groups of women, men and gender-diverse individuals “in order that outcomes of policies, programs and initiatives meet the needs of all Canadians” (Ibid).
- Addition options to strengthen GBA+ include: Create an Office of the Commissioner for Gender Equality; set out obligations of federal departments and agencies with regard to the implementation of GBA+; ensure GBA+ is applied to all proposals before they arrive at Cabinet for decision-making; make GBA+ mandatory in PCO, TBS and Finance Canada submissions; and mandate PCO and TBS to return policies and programs that do not demonstrate the application of GBA+ (p. 4).
- GBA+ training and tools to strengthen GBA+ because it “involves more than making sure that it is completed, but as importantly, that it reflects high quality, thorough analysis” which will also foster “a culture across Government that instinctively applies GBA+ to all that we do” (pp. 4-5).
- Efforts to ensure access to gender-disaggregated data (men, women, and gender-diverse people) because to conduct robust GBA+ this is essential. Access to gender-disaggregated data has been cited as a barrier to implementation. The Government is enhancing access by supporting research in Canada that will create data in priority areas such as gender-based violence, sexual victimization among students enrolled at post-secondary institutions, the economic well-being of women, new research commissioned by the SWC and conducted by Statistics Canada to support SWC policy pillars (e.g. labour force participation and earnings, work-life balance, etc.) and a feasibility study on available data on women’s representation in leadership positions, as examples.

- SWC, "as the centre of expertise on GBA+" plays a pivotal role in ensuring that departments and agencies are supported to implement GBA+ with "recent meetings focused on developing learning assessment needs, and tools to assess the quality of GBA+" and to help raise awareness across government departments and in the university community to raise awareness with studies who are potentially considering working in government (pp. 7-8).
- Recently, there is greater awareness of "issues that challenge traditional definitions of gender, and this will impact the Government's approach to GBA+"; for example, the introduction of Bill C-16 which integrates gender identity and gender expression into the *Canadian Human Rights Act*. "Gender identifiers are integral to measuring progress toward gender equality and demonstrating the impact of policies, programs, and other initiatives" for this reason Statistics Canada is working to promote collection of sex and gender markers as part of administrative data and in consultation with provincial and territorial governments and service providers, is testing different approach to collecting information on gender (p. 9).
- Improving monitoring and accountability for GBA+ through continued monitoring and assessment of the implementation of GBA+ Action Plan, review processes for MCs and TB submissions, follow-up to a survey federal deputy ministers to assess the state of GBA+ implementation in their departments and agencies, and ensure the public is informed on the progress of implementation (pp. 9-10).
- Broader engagement and collaboration with departments and agencies, engagement with provinces and territories to share best practices, resources and tools, a national roundtable on GBA+ engaging Canadians which will provide options to strengthen GBA+ and inform the work on enhancing the 2016-2020 GBA+ Implementation Plan (pp. 10-11).

GBA+ (SWC website, "Government of Canada's Approach: GBA +". Available at: https://cfc-swc.gc.ca/gba-acs/approach-approche-en.html) provides a distinction between sex and gender. An understanding and careful consideration of both are needed to determine the impact and effectiveness of government initiatives. At the SWC website, it is stated,

> Often, there is a combination of physical and socio-cultural factors at play. Not all individuals identify with a binary concept of sex and gender categories of male and female, masculine and feminine. Important dialogue on gender identity is ongoing in Canada and around the world. Our understanding of sex and gender and how and when to use these designations continues to grow and shift.

The "plus" in GBA+ is not only about gender but relates to the effect of intersecting parts of identity in the context one is in and in one's lived realities (SWC website). It is explained in the following way:

> We all have multiple identity factors that intersect to make us who we are. This is called intersectionality. The “plus” highlights the fact that GBA has always gone beyond sex and gender. It examines how sex and gender intersect with other identities such as: race, ethnicity, religion, age and mental or physical disability (SWC website).

GBA+ includes the following definitions adapted from The Gender Integration Framework from the Canadian Human Rights Commission, the Ontario Human Rights Commission, and the Canadian Institutes of health Research, and by the Government of Canada’s LGBTQ2 Secretariat (SWC website, GBA+ Course: Module 1 – Sex and gender – a place to begin. Available at: https://cfc-swc.gc.ca/gba-acs/course-cours/eng/mod01/mod01_02_04.html):

GBA+ Definitions

Sex refers to a person’s biological and physiological characteristics. A person’s sex is most often designated by a medical assessment at the moment of birth. This is also referred to as birth-assigned sex.

Gender refers to the roles, behaviours, activities, and attributes that a given society may construct or consider appropriate for the categories of “men” and “women”. It can result in stereotyping and limited expectations about what people can and cannot do.

Gender expression refers to the various ways in which people choose to express their gender identity. For example: clothes, voice, hair, make-up, etc. A person’s gender expression may not align with societal expectations of gender. It is therefore not a reliable indicator of a person’s gender identity.

Gender identity is an internal and deeply felt sense of being a man or woman, both or neither. A person’s gender identity may or may not align with the gender typically associated with their sex.

Cisgender is a person who identifies with the gender they were assigned at birth.

Intersex people are born with any of several variations in sex characteristics, including chromosomes, gonads, sex hormones, or genitals that do not fit with typical conceptions of “male” or “female” bodies.

LGBTQ2 is an acronym standing for the categories of lesbian, gay, bisexual (those who are attracted to both men and women), transgender, intersex, queer (a self-identifying term used in some gay communities, typically by younger persons) and two-spirit. There are many different acronyms that may be used by various communities. It should be noted that acronyms like these may combine sex, gender, and sexual orientation attributes into one community. This combination may or may not be appropriate in all circumstances, and GBA+ analysis should be specific where appropriate.

Non-Binary (also ‘genderqueer’) refers to a person whose gender identity does not align with a binary understanding of gender such as man or woman. A gender identity which may include man and woman, androgynous, fluid, multiple, no gender, or a different gender outside of the “woman—man” spectrum.

Trans or transgender is a person whose gender identity differs from what is typically associated with the sex they were assigned at birth. It includes people who identify with binary genders (i.e., trans men and women), and people who do not fit within the gender binary, i.e., non-binary, gender non-conforming, genderqueer, agender, etc.

Transexual is a term that is no longer commonly used, though may be more frequently used by transgender individuals of an older cohort. The term defines a person whose gender identity differs from their sex assigned at birth, who has undertaken physical transition which may include medical and/or surgical interventions. The term has fallen out of favour as it implies that physical transition is necessary in order to claim a trans identity.

Two-spirit (also Two Spirit or Two-Spirited) is an English term used to broadly capture concepts traditional to many Indigenous cultures. It is a culturally specific identity used by some Indigenous people to indicate a person whose gender identity, spiritual identity and/or sexual orientation comprises both male and female spirits.

The importance of GBA+ is explained in this way:

> Without GBA+, we risk missing or misreading the experiences of a significant portion of the Canadian population and – as a consequence – risk developing policies and initiatives that can inadvertently increase inequalities. It is therefore critical that we apply GBA+ to optimize the impact and effectiveness of all federal initiatives (SWC website).

It is reported that the federal departments that have had the most success in implementing GBA+ are those which developed detailed internal protocols that reflect the reality of policy-making in their departments (MacDonnell, 2018, Gender-Based Analysis Plus (GBA+) as Constitutional Implementation, CanLIIDocs 180, 378). Crown-Indigenous Relations and Northern Affairs Canada and Indigenous Services Canada have implemented their own process modeled on elements of instructions to civil servants: (1) identify issue; (2) challenge assumptions; (3) gather the facts – research and consult; (4) develop options and make recommendations; (5) monitor and evaluate; (6) communicate; and (7) document (MacDonnell, pp. 377-378). Its working guides provide worksheets and checklists that can be used by departmental personnel to conduct GBA+ as well as how each step should be conducted (p. 378).

There is little or no web-based publicly available information on the Assembly of First Nations Gender Balanced Analysis Framework. A 2009 AFN resolution provides limited information with no substantive information that would allow for analysis and inclusion in this discussion.

CHAPTER V: DISCUSSION

5.1 Introduction

> We need to take back control of research so that it is relevant and useful. By defining the research inquiry based on actual, not presumed, need and by designing a research process that is most effective in responding to our inquiries, we can use research as a practical tool. In the larger struggle for self-determination, we need to engage in what Tuhiwai Smith terms "researching back". Like "talking back," it implies resistance, recovery, and renewal (Kovach, 2005, p. 33, citing Tuhiwai Smith, 2001, p. 7).

This study represents what Smith describes of "researching back" by demonstrating that relations-based research facilitates resistance, recovery, and renewal towards Indigenous self-determination in research and Indigenous Data Sovereignty. My research found that the dominant concept of gender as binary is being used in Indigenous research that observes Indigenous research ethics. The gender binary in Indigenous research is given significance through its continued use and because such research is in response to colonizing inequities. McKegney recognizes that the power imbalance in Indigenous-colonial relations is due to dominant concepts of gender and how it relates to Indigenous lands. He writes that a key element in the dispossessive colonial policy in Canada and the United States is the manipulation of Indigenous gender systems (McKegney, 2014: 3). Colonial discourses and practices are focused on maintaining the heteronormative nation-state in order to appropriate Indigenous land and culture (Finley, 2011, p. 37). The present research further found that Indigenous resistance to the dominant concept and language of gender occurs through re-orientating the focus on relations, including that of people with the land and all of nature. This is our Indigenous Way of Being. This is facilitated through elevation of Indigenous Ways of Being and Indigenous Ways of Knowing within research paradigms. These paradigms (Indigenous Ways of Being and Ways of Knowing) not only demonstrate resistance to colonialism, but recovery and renewal of Indigenous Data Sovereignty. These paradigms are interrelated – resistance is recovery and renewal, and recovery is renewal. This study also found that integral to exercising resistance, recovery, and renewal is the empowerment of Indigenous peoples in research. This requires the voices of all relations, consistent with and supportive of Indigenous nation-(re)building.

5.2 How this Research was Conducted

This study was conducted using the decolonization theoretical perspective, critical discourse analysis (CDA) methodology and CDA and systematic review methods. The convergence of these three research tools enabled the determination of the study questions. Decolonization and critical discourse analysis were key in data analysis which produced the study findings. These are also used in consideration of next steps.

The convergence of these tools is best explained by a review of what these three tools are separately. First, the decolonization perspective centers Indigenous concerns and worldviews and enables coming to know and understand theory and research from the Indigenous perspective and for Indigenous purposes (Battiste and Youngblood Henderson, citing Smith, pp. 12-13). Additionally, reclaiming history is an essential component of decolonization (Smith, 2012, p. 31).

Second, critical discourse analysis is a normative and explanatory critique that does not simply describe existing realities of language and its relation to power but seeks to explain how and why such realities came into existence to identify possibilities to transform them for social justice (Fairclough, p. 10). Consequently, three concepts figure indispensable to CDA – power, history, and ideology. CDA requires identifying an object of the study which is understood as a social construct and is performative, i.e., social actors are “doing” what the object is every day (Coates, p. 7). In this study, that object is “gender”. Therefore, CDA does not merely reflect how gender is understood within discourse and practice but it seeks to build understanding as to how and why this understanding came into reality to identify possibilities of gender within Indigenous research ethics to support self-determination in this area.

Third, a systematic literature review provided comprehensive identification, appraisal and synthesis of all relevant studies on this topic and enabled the identification of new studies that are needed (discussed in the next section and conclusion) and where a series of related questions can be posed (identified below) (Pettigrew et al, 2006, pp. 2 & 19). This aligns it with CDA methodology. A systematic literature review was selected as a method because there were indications that there was little or no research on this specific topic (p. 2). As opposed to a literature review, the systematic literature review enabled a “more ‘fit for purpose’ to answer and testing hypotheses than the traditional literature review” (p. 19). Furthermore, it enabled a series of related questions to be posed rather than just one (Ibid). A key feature of systematic review is its close adherence to Western scientific methods that aim to limit bias by identifying, appraising, and synthesizing all relevant studies to answer the question or questions (p. 9). It can be used to embark on new primary research. It can also promote development of new Indigenous methodologies thereby contributing to the continuing shift in the research paradigm regarding Indigenous peoples and their self-determination in research. This is evident in the subsequent discussion and conclusion sections. In these ways, I found systematic review can be useful to Indigenous researchers, communities, organizations including information governance committees or IRBs, and nations.

To help answer the study question of, "In what ways does the dominant concept of gender uphold colonial relations within research conducted in accordance with Indigenous research ethics", a few sub-questions were determined:

a) What is the dominant concept of gender?
b) How is this concept of gender given significance to uphold colonial relations?
c) Why is this concept of gender given this meaning to uphold colonial relations?

The first sub-question was determined by focusing on the object of study – gender – as per the CDA methodology. To know if gender upholds colonial relations, it is important that we know what that concept of gender is. As this is an English word and Western concept which are dominant in current contexts in present day Canada and the United States, this study examined how this word was used in discussions to determine its use in the literature included in this research. The phrase "dominant concept of gender" was constructed in part met to meet the requirement of CDA which is to identify the object of study which is "gender". When "dominant concept" is added to this term, it provides more context and hence meaning for the object of study. The term "dominant" also reflects ongoing colonization that Indigenous people experience. In doings so, it aligns with the CDA approach of examining relations of power, history, and ideology, three concepts that figure indispensable to this approach.

The additional sub-questions (i.e., b and c) were determined to be able to examine how and why this concept of gender is given significance to uphold colonial relations within studies included in this study. The phrase "colonial relations" are intended to refer to past and present context of the oppressive and harmful ways in which settlers have conducted themselves in relation to Indigenous peoples. Thus, "colonial relations" in this study can be described as "how settlers relate with Indigenous peoples that seeks to extend or retain settler authority over Indigenous peoples' land, culture, belief system, language, social structures, situation, experiences, and identity". In research, this can be done through choice of theoretical perspective, methodology and/or methods. It can also refer to objects of study, and their meaning and use in relation to Indigenous people. In this study, it is the use of the dominant concept of gender and how that relates to research conducted on, with, and by Indigenous people, that is explored. The site of this examination is within research conducted in accordance with Indigenous research ethics. One might ask, how can there be colonial relations and how can they be upheld in research if the research is conducted in accordance with Indigenous research ethics? This is what is being explored in this study.

Lastly, on this matter of determination of study questions, because CDA involves considering whether the social order "needs" the social wrong and the identification of possible ways past obstacles, this study also involves the question "what are the recommended next steps for Indigenous research ethics to support indigenous self-determination in research?" Systematic review enables posing series of questions which have been reviewed and discussed here.

5.3 Rationale for Discussion of Findings

This discussion is guided by Kovach and draws greatly upon discussion of Indigenous Sovereignty by Carroll et al. The former provides the Indigenous research paradigm, and the latter provides the self-determination lens. Each key finding of this research are presented sequentially and are discussed as they relate to an Indigenous research paradigm and Indigenous Data Sovereignty. The rationale for this approach is provided here.

Kovach's proposal that epistemology, theory, methods, and ethical protocols (i.e. research paradigm) are integral to Indigenous methodology because Indigenous Ways of Knowing are intricately connected to Indigenous Ways of Being (2005, p. 32). This proposal is appropriate and useful in discussing findings of this research for two reasons. First, it enables a process-focused approach to take what was learned from the research and apply it to what is known about Indigenous Data Sovereignty and Indigenous Data Governance, which are being used in to illustrate relation of research findings to Indigenous self-determination in research. While this research set out to identify Indigenous concepts of gender, there was limited discussion in the literature about this topic. McKegney observes that "in North American contexts, critical work focused on [Indigenous] masculinity has been limited and is just now emerging" and that the "richest source of critical information…has been non-academic work by knowledge keepers…who embed discussions of male roles and responsibilities within broader explorations of tribal specific worldviews" (p. 7). McKegney further writes that in the past three decades, there have been increased efforts by Indigenous peoples to struggle to locate, theorize, and affirm traditional nation-specific understandings of gender to overturn "the insidious normalization of settler heteropatriarchy on Turtle Island" through restoring rootedness and balance (2014, p. 3). The present research identified the significance of and the need for relations-based research by illustrating how this occurs and can occur within Indigenous research, particularly with respect to Indigenous Data Sovereignty and Indigenous Data Governance. Kovach's proposal enables a focus on what was learned through the research – e.g., the significance of relations-based research – and to make suggestions for the further development in these two areas towards Indigenous self-determination in research.

A second reason for using Kovach's proposal is that these matters align with the theoretical (decolonization), methodology (critical discourse analysis) and methods (CDA and systematic literature review) used in this research. For example, Kovach states that Indigenous epistemologies align with the narrative aspect of the constructivist paradigm because of the interpretive nature of Indigenous knowledge (2009, p. 30). Additionally, this must be done ethically through introducing a decolonizing perspective to the critical paradigm (Ibid).

The First Nations Information Governance Centre (FNIGC) observes that the concept of Indigenous data sovereignty emerged in the late 20th century and has developed significantly during this time (p. 58). The United States Indigenous Data Sovereignty Network defines Indigenous data sovereignty as "the right of a nation to maintain govern the collection, ownership, and application of its own data" which "derives from the tribes' inherent right to govern their peoples, lands, and resources. This conception of data sovereignty positions Indigenous nations' activities to govern data within an Indigenous rights framework" (Ibid, citing US Indigenous Data Sovereignty Network, 2018).

Many Indigenous knowledge systems are based on generations of data gathering through observation and experience that then formed into Indigenous practices (Carroll et al, 2019, p. 2). Citing the National Congress of the American Indians, Carroll et al write that, "data are not a foreign concept in the Indigenous world. Indigenous people have always been data creators, data users, and data stewards. Data were and are embedded in Indigenous instructional practices and cultural principles" (Ibid). Similarly, the FNIGC recognizes that,

> Since time immemorial, First Nations people had the ability to determine all their needs and how to best meet those needs using the plants, herbs, animals, and the environment to survive, heal and maintain balance. Their abilities and decisions were based on years of knowledge gained through observations, experiences, and information gathered from their surrounding environments. Thousands of years or relating to the land, provided the occupants, as stewards with the knowledge and ability to harness their knowledge and pass it down to succeeding generations. In this

> way, First Nations, as sophisticated societies with sophisticated governance structures, were engaged in research processes, policymaking, and knowledge sharing as part of their ethical responsibilities as stewards of the land (citing McGregor et al, 2018).

It is within this historical context and recognition that Indigenous people have always been creators, users, and stewards of data that Carroll et al describe Indigenous Data as:

- A concept that has always been a part of the Indigenous world (p. 2).
- Indigenous Data Systems centre on interdependence and encompasses both collective and individual level data (ibid). Carroll et al write, "While the acquisition and transmission of knowledge by individuals is necessary to support the collective base, Indigenous knowledge systems rely on shared responsibilities to ensure that Indigenous ways of knowing, being and doing are transmitted from one generation to the next. Within this context, knowledge belongs to the collective and is fundamental to who Indigenous nations are as peoples" (Ibid).
- Data, information, and knowledge is more fluid that Western contexts, "extend[ing] far beyond bits and bytes" (citing De Beer 2016). Quoting Rainie et al (2017b), it (Indigenous Data) is "any facts, knowledge, or information about a Native nation and its tribal citizens, lands, resources, cultures, and communities. Information ranging from demographic profiles, to educational attainment rates, maps of sacred lands, and social media activities", among others (p. 2). Furthermore, it "has implications for the governance of both data born digital and that which emerges from knowledge, language and information" (Ibid).

Carrol et al state, "the suppression, usurpation, and co-optation of Indigenous knowledge systems perpetuates the data divide, furthering data dependency and maintaining the paradox of scarcity and abundance. Indigenous data sovereignty disrupts the current paradigm, offering a way to shift power dynamics and realize Indigenous goals and vision" (p. 3). Indigenous Data Sovereignty and Data Governance are critical nation building tools (FNIGC, p. 58; Carroll et al, p. 4). The FNIGC explains that Indigenous Data Sovereignty "is linked with Indigenous peoples' right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as their right to maintain, control, protect and develop their intellectual property over this" (p. 58). The FNIGC has "given expression and practical meaning" to this concept as it relates to First Nations data and information which "reflects First Nations desires and interests to govern and manage information in ways that are consistent with Nations' respective laws, practices, and customs" (Ibid).

Carroll et al argue that "the core of a nation's 'foundational capacity' must include strong tribal data systems'" (p. 4). Indigenous data sovereignty (IDS) is achieved through data governance. Native nations exercise IDS through interrelated processes of Indigenous data governance and decolonization data (Carroll et al., p. 4). **Indigenous data governance** is described as

> The act of harnessing tribal cultures, values, principles, and mechanisms – Indigenous ways of knowing and doing – and applying them to the management and control of an Indigenous nation's data ecosystem (Carroll et al, p. 5, citing Rainie et al. 2017b, Walter et al. 2018). [It is] decision making. It is the power to decide how and when Indigenous data are gathered, analyzed, accessed, and used (Ibid, citing Walter et al. 2018, p. 3).

5.4 What this Research Found

5.4.1 Resistance

The legacy of colonialism manifests in many ways – demarcation of reserve boundaries, socio-economic inequalities, and persistent health disparities – and remains a "central organizing force in Indigenous-settler relations across the world" (Carroll et al, p. 2). Citing Bruhn (2014), Carroll et al observe that "a less explored area is the role of data as a tool to marginalizing Indigenous peoples, eradicate their ways of life, and rewrite their histories to advance the colonial project" (p. 3). This reflects "epistemicide" or "the killing and co-optation of knowledge systems" (Ibid, citing Sousa, 2007).

Epistemology is described as the "the philosophy of knowledge" with language as the means of interpreting and communicating ideas (Kovach, 2005, p. 26 quoting Manu Aluli Meyer, 2001). Thus, the relation of Indigenous language to Indigenous epistemology is significant and is central to understanding and developing Indigenous research ethics. Postmodern de-constructivists have demonstrated the link between dominant society's use of language and silencing of the voices of those who are marginally located, making it "a tool by which a meta-narrative of 'truth' and 'normalcy' is perpetually reproduced" (Kovach, 2005, p. 25). A **first key finding** in this research is that the dominant concept and language of gender as binary is being used in Indigenous research conducted in observance of Indigenous research ethics. All studies in this research used the dominant concept and language of gender as binary which is illustrated by the use of "woman/man", "male/female", and "he/she" (Delormier et al, 2017, p. 6; Gonzales et al, 2018, p. 2; Graham and Martin, 2016, p. 3; Hatala et al, 2019, p. 124; Hatala et al, 2016, p. 1915; Marsh and Martin, 2018, p. 5). On its face, the use of these English words for gender may appear insignificant or even harmless; however, quite the opposite is true. Brant Castellano's explanation of research and ethics is helpful in illustrating this. She prefaces her explanation by situating herself in by stating that the "language, images and perspectives" she provides are "of a Mohawk woman and academic of a certain generation" and suggests that the principles she describes "are relevant more broadly to Aboriginal research" (p. 99). Castellano Brant describes "Aboriginal research" as,

> Research that touches the life and well-being of Aboriginal peoples. It may involve Aboriginal Peoples and their communities directly. It may assemble data that describes or claims to describe Aboriginal people and their heritage. Or, it may affect the human and natural environment in which Aboriginal Peoples live (Ibid).

Brant Castellano explains that "ethics" "refer to rules of conduct that express and reinforce important social and cultural values of a society. The rules may be formal and written, spoken, or simply understood by groups who subscribe to them" (p. 99). In this understanding of research and ethics, she recognizes the important role of language which "carries the code for interpreting reality" for Aboriginal people and "skills for decoding complex messages from the social and natural environment are embedded in traditional languages". The word for "woman" in the Lakota language and the English language are provided here to illustrate the significant difference between the dominant and Indigenous languages. Lakota spiritual leader, Warfield Moose, Jr., describes *winyan*, the Lakota word for "woman" in the following way:

> *Winyan* is as special person and the Lakota word is derived from *Wi* (sun), the beginning of time, and *Inya*(n), the first spirit of creation or stone, a foundation of the people. We all have mothers and grandmothers who have done so much for our families, and it reminds us that we are grateful for the strength and presence of the *winyan* on this earth. We say *wopila* to all of you.

Conversely, Merriam-Webster dictionary defines "woman" as,

> 1: a. an adult female; b. a woman belonging to a particular category (as by birth, residence, membership, or occupation – usually used in combination. 2: woman kind. 3: distinctly feminine nature: womanliness. 4: a woman who is a servant or a personal attendant. 5: a. chiefly dialectical: wife; b. mistress, c. girlfriend sense 2. 6: a woman who is extremely fond of or devoted to something specified (Merriam Webster Online Dictionary).

Battiste and Henderson have remarked on these significant differences between Indigenous and the English language. They write that the Mi'kmaw language is not gender conscious, and that most speakers initially have trouble with the "he/she" forms of European languages and interchange them repeatedly (p. 91).

While this research resulted in limited understanding of Indigenous concepts and language of gender, it raises important questions to be explored in further research. An overall question may be, "how do concepts of gender and associated language relate to how Indigenous research is understood by the Indigenous nation?" Using Brant Castellano's descriptions of Aboriginal research, the following questions can be posed to help answer this question:

1) How do Indigenous concepts of gender and associated language "touch upon the life and well-being of Indigenous peoples and nations"?
2) How do Indigenous concepts of gender and associated language "refer to rules of conduct that express and reinforce important social cultural values of the society"?
3) How do Indigenous concepts of gender and associated language result in "data that describes or claims to describe Indigenous people and their heritage"?

Of course, questions must be orientated to the fundamental tenants of how Indigenous peoples and nations understand research.

Another aspect of ethical Aboriginal research according to Brant Castellano is that "it may affect the human and natural environment in which Aboriginal Peoples live." Research solely using other than Indigenous concepts and language may not count as ethical Aboriginal research because it fails to capture Indigenous worldview. This is particularly salient when discussion human-nature relations later in this section.

Overall, these questions point to the broader need for Indigenous peoples and nations to consider the significance of the language of gender and how it relates to Indigenous understanding of research and ethical research. While it was stated earlier that this research provided limited understanding of gender within Indigenous research ethics, it reaffirms the importance of exploring this matter further in a nation-based approach.

A **second key finding** of this research is that the dominant concept and language of gender is given significance through its continued used. This was particularly evident in the literature where Western research methods for participant sampling (including gender representativeness) and bias were discussed. Though not identified as a criterion, six of the seven studies included in this research reported on gender representativeness of the participant sample (Delormier et al, p. 6; Gonzales et al, p. 2; Graham and Martin, 3; Hatala et al, 2019, p. 124; Hatala et al, 2016, p. 1925; and Marsh and Martin, 2018, p. 5). Marsh and Martin reported that convenience sampling was used to recruit 24 participants, 12 of which were women and 12 were men (5). Henderson et al stated that their study was not population-based and that participants were “primarily women” and “only three men” (p. 95).

Despite the continued use of the dominant language and concept of gender, the literature included in this research demonstrated resistance to its significance by elevating other participant criteria - place of residence, experience and knowledge, and the use of Indigenous languages. Place of residence, most often described as the reserve or reservation, was identified as participant criteria in Delormier et al (p. 5), Gonzales et al (p. 2), Graham and Martin (p. 3), and Henderson et al (p. 95). One might question whether it is resistance and/or self-determination if Indigenous people focus on the reserve, reservation or “tribal lands”, which are colonial constructs? In all four studies, the phrasing for this participant criterion was “place of residence” which does not necessarily infer whether these things are significant to Indigenous identity. This issue is out of scope for the present research. Graham and Martin identified participants are to be band members living on or off reserve (p. 3). “Band membership” is a colonial construct too and similarly raises a question regarding identity, and it too is out of scope of this research. However, it is worth noting that the expansion of participant criteria to those living off reserve suggests a broader view of First Nation’s citizenship beyond the reserve borders. While “place of residence” was a common participant criterion in the literature, what was more significant was participants’ relation with the land. This will be discussed more fully later in this section.

A second way in which these studies demonstrated resistance to the significance of the dominant language and concept of gender through its use in participant criteria is by elevating Indigenous experience and knowledge. Delormier et al conducted purposive sampling and consensus-making amongst men and women, and it was required that research participants possess “extensive community knowledge and experience” as well as being “cultural advocates and practitioners with traditional food interests” (p. 5). In Hatala et al (2016), participants were “elders with experiences with historical abuses and demonstrated abilities and reputations in their communities” (p. 1915). Graham and Martin also involved Elders and described them as “greater than 50 years of age” and identified by Chief and Council or other members of the community (p. 3). Elders were also a targeted population in the study conducted by Henderson et al (95). Recognition of the lived experience and perspectives of other age groups was evident in Hatala et at (2019) where the focus was on youth (p. 12).

The elevation of experience and knowledge, especially those of elders, are consistent with the central role of Elders which Brant Castellano recognizes as the “most knowledgeable” about spiritual and physical reality, culture, and languages, who "carry credentials that are recognizable within Aboriginal society" and "enjoy respect as source of wisdom because their way of life expresses the deepest values of their respectful cultures" (2004, p. 101). Furthermore, this is an example of Indigenous Data Sovereignty and a challenge to the "privileging of Western science and knowledge systems [that] favors current power dynamics, maintaining the paradox of data scarcity and abundance and perpetuating data dependency" by "providing space for data governance that reflects Indigenous nations' voices, values, and vision" (p. 3, citing United Nations, 2018).

Delormier et al highlighted another significance of elevating experience and knowledge – animating otherwise inanimate English words as a means of privileging the knowledge and experience in an approach consistent with Indigenous governance, i.e., consensus decision-making explained as a "hallmark of Haudenosaunee governance". Indigenous scholars and academics have identified significant and meaningful differences between Indigenous languages and the English language. Kovach states, "language is a central system of how cultures code, create, and transmit meaning" (2005, p. 26). Kovach (2005) and Battiste and Henderson (p. 90) write that most Indigenous languages are verb-based, as opposed to the English language which is noun-based. Battiste and Henderson further explain that Mi'kmaw as a verb-based language, provides consciousness of what it is to be Mi'kmaw and the interdependence of all things (pp. 89-90). Through providing "characteristics/expertise knowledge area occupation(s)" which included grandmother, grandfather, mother, parent, political activist, active gardener, social and cultural development, etc., Delormier et al effectively animated the English words used for gender (man/woman). They augmented the description by using *Kanien'ke:ha* words such as *Karihton* (educator), *Wahta* (holistic healer), *Ken'niiohontesha* (public transportation/carpenter), and *Sha:iase* (environmental protector), as examples. This second example overlaps with the third area of resistance to the dominant language and concept of gender in participant sampling is the use of Indigenous languages.

In Hatala et al (2019), Cree pseudonyms (names for animals and birds and thunderbird) were used to refer to participants (p. 1915). Gender-neutral terms such as "their" and "they" were used in remaining sections of the report when referring to these participants (Ibid). Delormier et al also used pseudonyms in the language (p. 6). While it was not explained why this was done, and one might assume it was to ensure participant anonymity and confidentiality, it is nevertheless a creative way to use Indigenous languages. In doing so, it has the effect of displacing the tendency of Western-based research to impart central significance on gender as a defining characteristic and common descriptor of research participants.

Resistance to giving significance to the dominant concept and language of gender in participant sampling suggests more meaningful approaches on this topic (participant/population sample) specifically, which in turn, reflects a more significant understanding of Indigenous populations within research. By elevating experience and knowledge and using Indigenous languages, research participants are portrayed as self-determining actors rather than as mere objects of research. Research participants are recognized to have a level of expertise and wisdom that enables them to be active contributors to the topic of inquiry. This relates to the concept of peoplehood and its alignment with Indigenous Data Sovereignty (IDS). Carroll et al write that peoplehood “underscores Indigenous nations’ inherent responsibilities to the system of inter-relationships, to the natural world, and to their peoples. Through this communal lens, Indigenous peoples conceptualize IDS not only as a right but a responsibility” (p. 3). In elevating these things, participants in research are enabled to observe and fulfill their responsibilities and exercise their rights. This dramatically shifts the concerns about the position of Indigenous people in research – they go from objects to actors.

The concept of peoplehood expands beyond ethical considerations of participant or population sampling in research. It goes to the fundamental notion of Indigenous Peoplehood and how that must be captured and reflected in all aspects of ethical Indigenous research. Carroll et al referenced “inherent responsibilities” and the conceptualization of IDS as a right and a responsibility, as discussed above. The FNIGC writes that “as sovereign nations, First Nations have the right (inherent and constitutionally-protected) to exercise authority over their data and information” (p. 58). Furthermore, data sovereignty “is a crucial step toward realizing full self-government of First Nations” (Ibid). Simply stated, ethical Indigenous research must contemplate and express Peoplehood in all aspects of the research to achieve Indigenous Data Sovereignty.

This discussion suggests that further research should explore how Indigenous concepts of gender and associated language relate to Indigenous Data Sovereignty and whether such concepts recognize participants as actors and facilitate their observation and fulfillment of responsibilities and exercise of rights as People of the Nation.

As was stated earlier, Carroll et al observe the legacy of colonialism to manifests in a myriad of ways and remains as a central organizing force of Indigenous settler-relations. While they a provide examples of this within the context of Native Nations in the United States, including federal policies of assimilation, forced removal, relocation, residential schools, and other cultural ruptures (p. 3), these are also evident in the context of First Nations in Canada as demonstrated by the First Nations Information Governance Centre. It writes, "the dominant colonial government-imposed patriarchy on First Nations societies and negatively influenced traditional gender roles, leadership structures, and governance – diminishing women's roles and reinforcing inequality between the sexes" (FNIGC, 2019, p. 49). Such efforts were intended to "erase Indigenous knowledge and force many tribes to rely on external sources of information about their communities' economic, environmental, and health status" (Carroll et al, p. 3). The result is "a state of data dependency for US Native nations is precipitated by such processes of colonization" and "is sustained through a paradox of scarcity and abundance" (p. 3). "Scarcity" refers to the fact that this data is rarely for or by Indigenous peoples' or nations' purposes (Ibid, citing Walter 2018 and United Nations 2018) and "abundance" refers to the extensive amount of data that is collected about Indigenous peoples and nations and many data does not recognize or privilege Indigenous worldview or benefit Indigenous Peoples (Ibid, citing United Nations 2018). Similarly, the FNIGC writes,

> Much of the literature on First Nations peoples has been written from a colonial perspective resulting in a limited representation and oftentimes stereotypical and damaging depictions of First Nations peoples. For years, different types of research and research instruments have been conducted on First Nations in an attempt to better understand their experiences, health status, and their socio-economic and cultural environments. Although data can help to identify priorities, set strategic goals, and support community planning, many First Nations communities have experienced their community's data being used for other purposes and not in their best interest or benefit (p. 50).

Brant Castellano emphasizes that ethical Aboriginal research is that which socially benefits Aboriginal Peoples. She writes,

> It is essential that Aboriginal Peoples and their organizations put forward, not only concerns, but also solutions to the ethical problems that too often have made research affecting them inaccurate or irrelevant. Reframing ethical codes and practice is necessary to ensure the social benefit that motivates research also extends to the Aboriginal Peoples whose universe is being studied (100).

As a result of data dependency and the paradox of "scarcity and abundance", Carroll et al state that Indigenous data ecosystems are characterized by data that describe Indigenous peoples and lifeways through a deficit lens, among other characteristics (citing Rodriguez-Lonebear 2016, Rainie et al 2017, Kukutai and Taylor 2016, Walter 2016). A **third key finding** of this research is that the dominant (Western) concept and language of gender as binary is given significance because research involving Indigenous peoples is in response to inequities resulting from colonization. However, the literature included in this research also demonstrates resistance to remaining situated within the context of colonization by utilizing Indigenous-based theory, methodologies, and methods, or those that compliment or are consistent with them.

Ponting and Voyageur write that a “deficit paradigm” has been very prominent in social science treatment of First Nations (2001, p. 276). This involves “a focus on the woes, conflicts, and other problems of First Nations and on their status as victims” (Ibid). Ponting and Voyageur speculate that the deficit paradigm is probably due to a variety of factors such as (pp. 276-277):

- Vast disparities between the socio-economic realities (e.g., poverty and racism) experienced by much of the First Nations population and the egalitarian ideals (e.g. Pierre Trudeau’s “just society”) of the larger Canadian population.
- The persistence of some stereotypes of First Nations individuals and the claims to victimization made by First Nation political leaders.

The First Nations Information Governance Centre (FNIGC) recognizes that “data on Indigenous communities has typically been collected and interpreted through a deficit lens, with focus on statistics that reflect disadvantage and negative stereotyping” (2019, p. 59). Persistent health disparities are just one example that stands as evidence of the “legacy of colonialism…as a central organizing force in Indigenous-settler relations across the world” (Carroll et al, 2019, p. 2). First Nations’ resistance to sharing their information is due to “a history of exploitation and misuse of data and research in First Nations that has led to non-First Nations parties to ‘pathologize [First Nations] and justify unnecessary intervention’” (FNIGC, 2019, p. 59).

The literature included in this research resisted remaining situated within the context of colonization and the narrative of deficit by utilizing Indigenous-based theory, methodologies, and methods, or those that compliment or are consistent with such approaches. Delormier et al (2019), Hatala et al (2019), Marsh and Martin (2018), Hatala et al (2016), and Graham and Martin (2016), specifically discuss colonization. Delormier et al (2019) focus their study on why Indigenous people suffer higher burdens of food insecurity and poorer health outcomes (p. 2). The history of dispossession of Indigenous peoples to their land and the colonial destruction of Indigenous peoples’ social structures are identified as contributing factors to the health inequities Indigenous people experience (pp. 1-2). Delormier et al utilized “sustainable self-determination”, a concept developed by Cherokee political scientist, Jeff Corntassel. This concept focuses on research that revitalizes Indigenous ways of living and cultural practices to ensure these are maintained and transmitted to others (p. 5).

Hatala et al (2019) highlights the historical and contemporary colonization via forced displacement and land dispossession as factors influencing urbanization of First Nations people (p. 123). Hatala et al (2017) emphasize “the connections between colonization and present-day disparities, contemporary health research conducted with Aboriginal populations depicts the unfortunate realities of pervasive and significant health inequities when compared with non-Aboriginal populations” (p. 1911, citing Adelson, 2000; 2008; Bombay et al., 2014; Daschuk, 2013; Dinges & Duong-Tran, 1994; Elias et al., 2012; Gone, 2013; Karmali et al., 2005; Kirmayer & Valaskakis, 2008; Miller, 1996; Million, 2000; Milloy, 1999; Wexler, 2014). This study recognizes that “many accounts of such [health] inequities reference ‘historical trauma’ as an explanatory model or causal narrative to make sense of and interpret current social and individual ills” (p. 1912). Both Hatala et al (2019) and Hatala et al (2017) are situated within a social constructionist perspective. The former utilized combined Indigenous Methodologies (IM) with a modified grounded theory (GT) approach for data generation, interpretation, and analysis (p. 124, citing Charmaz, 2006; Kovach, 2009). Hatala et al (2019) notes that “centering notions of place within health research supports decolonization processes to recover land” (p. 123). This can involve access to and stewardship over land as an Indigenous social determinant of health based upon:

- An environmental dispossession perspective: social, cultural, and political processes through which Indigenous people become unfairly disconnected from their ancestral homelands (p. 123, citing Richmond and Ross, 2009); and
- An environmental repossession perspective: reframes potentially pathologizing and deficit-based approach associated with illness and victimhood, and involves social, cultural and political processes through which Indigenous people re-cover ancestral homelands and revitalize cultural lifeways (Ibid, citing Hatala et al, 2016; Big Canoe and Richmond, 2014).

Hatala et al (2016) notes that framing inequities resulting from colonization as “societal injustice can reduce stigma and help mobilize action” (p. 1912, citing Kim et al, 2009). Their study findings “emphasize the elders’ resilience through three primary strategies: (1) resistance and survival, (2) negotiating between worlds, and (3) the continuity and spirit of the story” (p. 1913). Furthermore, Hatala et al (2016) found that “resilience among Aboriginal populations also involves moving beyond processes of returning to a previous state (i.e., springing back) toward embracing ideas of transformation and adaptation into something new” (p. 1914).

Marsh and Martin (2018) recognize that

> the contemporary challenges of violence, substance abuse, intergenerational trauma symptomology, and mental health problems in Indigenous communities are an indication of the impact of colonization, including residential schooling and other factors, on individuals, families, communities and nations (p. 2, citing Aguiar & Halseth, 2015; Bombay et al, 2014; Miller et al., 2011; Spittal et al, 2007).

Marsh and Martin utilized the “two-eyed seeing approach” because “it aligns with decolonizing and Indigenous research methodologies” (p. 4, citing Kovach, 2010; Smith, 1999; Wilson, 2008). Their method involved the sweat-lodge ceremony and engaging elders. They explained that evidence of North American Indigenous Peoples using the sweat-lodge ceremony can be found as early as 400 B.C. (p. 2, citing Abdullah & Stringer, 1999; Brave Heart, 1998; Colmant et al., 2005). Marsh and Martin also explained that the elders teach that the sweat lodge ceremony serves a sacred purpose through the ritual healing or cleansing of body, mind, and spirit while bringing people together to honour the energy of life (p. 3). The elders explain that each person enters the lodge with his or her own challenges, suffering, conflicts, addiction, and concerns. It was observed that sitting together brings connection, truth, harmony, and peace through sweating, praying, drumming, sharing, stories, and singing (Ibid). Marsh and Martin noted that trauma destroys bonds and connections at many levels (p. 9). They recognize that the sweat-lodge ceremony is a return to the womb of the mother. They reported that participants felt a deep sense of connection with the Elders who provided the teachings and conducted the ceremony – they brought forth safety and enacted the roles of mother and father during this time (p. 12).

Graham and Martin (2016) highlight that “there is an abundance of literature that clearly describes the existing health disparities between Indigenous and non-Indigenous people in Canada” (p. 1). Graham and Martin (2016) used narrative inquiry as an approach based on Plains Cree worldview to gain understanding through lived experience (pp. 2-3).

Henderson et al (2018) provide a specific example of this disparity between regarding the significant burden of disease associated with the human papillomavirus (HPV) – there are higher rates of infection for Indigenous people in Canada compared to the non-Indigenous population (p. 1, citing Jiang et al, 2013 and 2011; Demers et al, 2011; Colquhoun et al, 2010; Moore et al, 2010). Additionally, Henderson et al report that rates of cervical cancer for Indigenous women is double that of other women and that there is evidence to suggest vaccination is lower in Indigenous populations (p. 94).

Lastly, they highlight that data suggests there may be barriers to preventative care and treatment, driving disparities in cervical outcomes for Indigenous people (Ibid).

Literature included in this research illustrate possible responses to what Snow et al identify as "the need for more specific practices that researchers can use to unpack what Indigenous research is, can and should be" in moving beyond "'telling pain stories' (citing Tuck & Yang, 2014) which serves intentionally or unintentionally to further pathologize or disempower communities, towards humanizing common struggles while privileging communities' conceptualization, ownership and knowledge" (Snow et al, 2016, p. 361). Carroll et al write "while the inherent right to exercise IDS extends to all Native nations in principle, the extent to which Indigenous peoples can exercise IDS is constrained by their position in the problematic colonial paradigm of recognition and acknowledgement" (Carroll et al, p. 3). Furthermore, they write that, "IDS is a site of tension and opportunity that signals a departure from the mainstream construct of government recognition towards inherent sovereignty and self-determination" (Ibid). While the approaches utilized in the literature included in this study effectively illustrated how Indigenous research can resist remaining situated within the colonial context, more can be done to further strengthen IDS. This will be taken up in the remaining sections of this discussion.

5.4.2 Recovery and Renewal

A **fourth key finding** of this research is that the Indigenous focus is on relations not gender. A **fifth key finding** is that this focus on relations is apparent where Indigenous Ways of Being and Ways of Knowing are evident. The previous section demonstrated that there is resistance to the dominant binary concept and language of gender. It was also noted that the vehicle for this resistance is Indigenous-based epistemology, methodologies, and methods or those that complimentary to or consistent with it. This section continues with that discussion.

As was shared earlier, epistemology is described as the "the philosophy of knowledge" with language as the means of interpreting and communicating ideas (Kovach, 2005, p. 26 quoting Manu Aluli Meyer, 2001). Drawing upon other Indigenous scholars and academics, Kovach further describes Indigenous epistemology, which is summarized here (pp. 27-28):

- It includes a way of knowing that is fluid and experiential, derived from teachings transmitted intergenerationally through storytelling (citing Little Bear, 2000).
- Each story of Indigenous epistemology is alive with the nuances and wisdom of the storyteller (citing King, 2003).

- Indigenous epistemology emerges from traditional languages emphasizing verbs, not nouns (citing Cajete, 1999).
- Indigenous epistemology involves a knowing within the subconscious that is garnered through dreams and vision (citing Castellano, 2000).
- Indigenous epistemology is a knowledge that is both intuitive and quiet.
- Indigenous epistemology is based on Indigenous ways of knowing that arise from interrelationships with the human world, the spirit, and the inanimate entities of the ecosystem (citing Battiste and Henderson, 2000).
- Indigenous epistemology encompasses the spirit of collectivity, reciprocity, and respect (citing Wilson, 2001).
- Indigenous epistemology is born of the land and the locality of the tribe.
- Indigenous epistemology ought to be purposeful and practical.

As was also stated earlier, Carroll et all describe and provide examples of epistemicide (the killing and co-option of knowledge systems) that has occurred and continues to occur throughout the Indigenous world and how this results in data dependency of Indigenous nations which is sustained through “a paradox of scarcity and abundance” (p. 3). This paradox involves extensive data collection about Indigenous peoples and nations but rarely by or for Indigenous peoples’ and nations’ purposes (Ibid, citing Walter 2018, United Nations 2018), many do not recognize or privilege Indigenous worldviews, or benefit Indigenous Peoples (Ibid, citing United Nations 2018).

In discerning the epistemology of the literature included in this research, human-to-human and human-to-nature relations were a significant and overriding theme. Although Delormier et al used dominant gender language and concepts, the discussion on gender was situated within Haudenosaunee philosophy of *Kaianerekó:wa* (Great Law of Peace), the principles of *skén:nen, ka'shatsténhsera*, and *karihwí:io* (peace, power, and a good mind), and knowledge and guidance provided by the Haudenosaunee creation story (p. 14). It was explained that *tionhnhéhkwen*, or life sustaining foods, are grown from Sky Woman’s daughter, and is the point at which the Haudenosaunee began referring to the earth as “Mother” (p. 3).

In Graham and Martin, the phrase *tānisīsi wāpahtaman pimātisiwin*, translates to the Cree worldview of “how you see life, how you see the whole piece of life” (p. 7). Study participants described how their worldview improves their mental health and well-being: taking personal responsibility; their attitude; and *wícihisowin* which translates to “helping oneself” (Ibid). Relation of Cree epistemology to positive mental health and well-being connected to spiritual beliefs and daily cultural practices of connecting with Mother Earth by picking sweet grass, taking only what you need and providing a tobacco offering for what you need (p. 5).

Similarly, in Hatala et al (2019) *miyo-wicehtowin* was explained as a central feature of the Cree Indigenous philosophy (p. 122). It translates to "'having or possessing good relations…It asks, directs or admonishes, or requires Cree peoples as individuals and as a nation to conduct themselves in a manner such that they create positive or good relations in all relationships" (Ibid, citing Cardinal and Hildebrandt, 2000, p. 14). In this study, the focus was on "how urban Indigenous construct a contemporary sense of themselves as being-in-relation to land and nature within urban contexts" (p. 122). Nature was re-imagined as familial and kinship relations (p. 126). Descriptions of the land were often expressed with feminine pronouns like "she" or with the term often used by Indigenous people – "Mother Earth". In this way, nature and land became relations "as embodied and differentiated network of feminine presence, exhibiting the capacity to sustain, care and nurture belonging and safety" (Ibid). Furthermore, the interrelations aspect of Indigenous epistemology was evident through the discussion of how kinship ties and relations with the land require an offering or gift to the land to restore and maintain balance, which is a practice of contemporary cultural and spiritual relationships with nature (Ibid). This is similar to Graham and Martin. Lastly, in Hatala et al (2019), youths' insights demonstrate "how young people re-conceptualize and decolonize the boundedness of place, identity, and nature in more porous and idiosyncratic ways. Such ways expose the fluidity, multiplicity, and relational boundaries categorizing humans, land, and nature" (p. 127). The issue of colonial constructs related to research participants' "place of residence" (i.e., reserves, reservations, "tribal lands") was raised earlier in this discussion. This study (Hatala et al, 2019) demonstrates Indigenous understandings of land outside of colonial constructs.

Henderson et al (2018) and Gonzalez et al (2018) elevated Indigenous epistemology through methodology and methods. Henderson et al utilized sharing circles with Elders and other knowledge holders (p. 9). Elders are described as "individuals recognized in distinct ways by their communities as having accumulated knowledge and skills with which they mentor and/or lead others for the benefit of their culture and communities" (p. 96, citing Stiegelhauer et al, 2017). Furthermore, sharing circles are described as "considered as safe spaces in which to share knowledge, such as through stories, that address spiritual and emotional aspects of daily life, in addition to mental and physical well-being" (p. 9, citing Nabigon et al, 1990). Gonzalez et al utilized focus groups which were described as a similar process to "talking circles used by Native American communities" (2018, p. 2). These were conducted with the assistance of a facilitator and two note-takers who were Zuni and fluent in the Zuni language of Shiwi (p.3).

These findings contribute to the liberating impact of Indigenous Ways of Knowing and Indigenous Ways of Doing from research remaining situated in inequalities resulting from colonialism and the unjust narrative of deficiency. McGinnis et al (2013) observe that much health research "continues to be driven by deficit-based approaches that fail to acknowledge and consider the role of more-than-human beings in the lives of Indigenous peoples" (p. 2, citing Crooks, Snowshoe, Chiodo, & Brunette-Debassige, 2013; Mohatt, Fok, Burket, Henry, & Allen, 2011). The impact is the silencing of the more-than-human world that "subsequently serves to undermine and trivialize the very healing resources that support wellness in Indigenous contexts" (Ibid, citing Castellano, 2015; LaFromboise, Trimble, & Mohatt, 1990; Mussell, Cardiff, & White, 2004). Conversely, in order to fully understand "the unique health needs of Indigenous peoples require strengths-based approaches that focus on (re)connecting individuals, families, and communities to a cultural way of being that is grounded in a more-than-human worldview" (Ibid, citing Duran & Duran, 1996; McCormick, 1998; Snowshoe, Crooks, Tremblay, & Hinson, 2017). Therefore, McGinnis et al promote a

> A significant paradigm shift…to align health promotion approaches with Indigenous epistemologies, ontologies, and methodologies where an all-inclusive relationship with the world is positioned as pertinent and central to Indigenous peoples' holistic health (p. 3, citing Greenwood, de Leeuw, Lindsay, & Reading, 2015; Kirmayer, Tait, & Simpson, 2009; Snowshoe et al., 2017).

Similarly, Carrol et al promote a drastic shift which aim is to achieve Indigenous Data Sovereignty (IDS) (2019, p. 4). Native nations exercise IDS "through the interrelated processes of Indigenous data governance and decolonizing data" (Ibid). The former (Indigenous data governance) is described as "the act of harnessing tribal cultures, values, principles, and mechanisms – Indigenous ways of knowing and doing – and applying them to the management and control of an Indigenous nation's data ecosystem" (p. 5, citing Rainie et al, 2017b; Walter et al., 2018). Furthermore, it is about "decision-making…the power to decide how and when Indigenous data are gathered, analysed, accessed and used" (Ibid). Decolonizing data occurs "as Indigenous nations and other data agents replace external, non-Indigenous norms with Indigenous systems that define data, and inform how it is collected and used. It results in findings…that reflect the understandings of those people" (pp. 4-5). This latter impact of decolonizing data will be discussed in the next section.

The essential nature of such relations – human-to-human and human-to-nature - for Indigenous research paradigms including ethics is explained by Brant Castellano. She states that "when Aboriginal

People speak about maintaining and revitalizing their cultures…they are talking about restoring order to their daily living in conformity with ancient and enduring values that affirm life" (2004, p. 100).

While this section of the discussion focused on epistemology because it links with methodology, methodology is also discussed here. Methodology is described as the theory that guides the method and methods is the techniques that a researcher uses (Kovach, 29, citing Esterberg, 2002; Harding, 1987; Van Manen, 2001). Indigenous research is becoming a methodology on its own and is about process. (Kovach, 2005: 29). Shawn Wilson defines methodology in this way: "when we talk about methodology, we are talking about how you are going to use your ways of thinking (epistemology) to gain more knowledge about your reality" (Kovach, 2005, p. 29, citing Wilson, 2001, p. 175). Kovach identifies the relational and the collective as two of three key themes of Indigenous methodology grounded in Indigenous epistemology and theory.

The finding of this research on relation-based research ethics within the Indigenous research paradigm, including epistemology and methodology discussed above, further align with Indigenous Data Sovereignty on a few levels. Fundamentally, Indigenous data is relational and as such, is the basis of Indigenous data stewardship. Caroll et al write that,

> Indigenous knowledge systems were based on generations of data gathering through observation and experience that then informed Indigenous practices, protocols and ways of interacting with other people and with the natural world. The translation of knowledge into data was similarly evident. Indigenous data were recorded in Indigenous oral histories, stories, winter counts, calendar sticks, totem poles, and other instruments that stored information for the benefit of the entire community (p. 2, citing Rodriguez-Lonebear 2016).

Indigenous Ways of Knowing or our relationships with each other and with the natural world inform Indigenous Ways of Doing which include stewardship. In this case, stewardship is looking after the knowledge that was obtained or passed on an individual basis but also to share it responsibly with the collective. Carroll et al explain that Indigenous data systems centre on inter-dependence and not on the acquisition of individual knowledge (p. 3). They explain this in the following way:

> While the acquisition of and transmission of knowledge by individuals is necessary to support the collective base, Indigenous data systems rely on shared responsibilities to ensure that Indigenous ways of knowing, being and doing are transmitted from one generation to the next. Within this context, knowledge belongs to the collective and is fundamental to who Indigenous people are as peoples. Similarly, data that inform Indigenous ways of knowing are also collectively held. While individuals have

> roles and responsibilities to the collective to steward this knowledge (Ibid., citing Cajete 2000).

Other research scholars agree with this understanding of stewardship as ethical Indigenous research. Snow et al writes that, "research must recognize that indigenous participants and communities own and serve as stewards for all data and the researchers are only borrowing these data for specific uses under the guidance from shared decisions with participants" (p. 365, citing Smith, 2012). Stewardship directly relates to such matters as seeking permission from and collaborating with community members and elders at the outset of research, leads to determination of research methods, whether the research objective(s) benefit participants, as examples (Ibid). A relationship-based model of research is critical for carrying out research with Indigenous communities on several levels (Kovach, 2005, p. 30). Relationship is understood as: authentic and sincere investment in the community; the ability to be humble about goals; and conversations at the start about who owns the research, its use and purpose (Ibid). It emphasizes self-determination in recognizing people's ability to shape and change their own destiny, and it is respectful (Ibid). In this way stewardship relates to Indigenous Data Governance.

Indigenous data stewardship is both human-to-human and human-to-nature relations. Indigenous Ways of Knowing (epistemology) are based on relationships inclusive of all life forms with the philosophical underpinning of you take only what you need, you give back, and offer thanks out of deep respect for other living things (Ibid). Kovach writes that the philosophy regarding Indigenous Ways of Knowing as inclusive of all life and being respectful of that life is foundational to Indigenous methodologies. Just as bad research has treated Indigenous people as objects, it has also objectified the environment. Brant Castellano writes that,

> Scientific research conflicts with Aboriginal sensibilities when it sets ethical guidelines for research involving human subjects, but assumes that the earth and the waters are inanimate or lifeless…[and they are] treated as objects of research rather than co-inhabitants with humans of a living biosphere. Because many Aboriginal societies maintain primary dependence on a healthy natural environment to meet their needs, industrial development that sacrifices environmental values directly infringes on their well-being and human rights. Ethical regimes for Aboriginal research must therefore extend beyond current definitions of research involving human subjects to include research that affects Aboriginal well-being (p. 104).

Findings in this research affirm that relation-based Indigenous epistemologies contribute to decolonizing data and strengthening Indigenous Data Governance and Indigenous Data Sovereignty by revitalizing Indigenous knowledge systems, resulting in findings that promote Indigenous-based interventions.

Another aspect of a research paradigm is theory. Theory refers to a perspective, a lens, or framework, and it is inextricably linked to methodology (Kovach, 2005, p. 28). According to Kovach, the theoretical lens is integral to qualitative research and functions to (Ibid):

- Guide the researcher's in determining which issues are important to study
- Determine the participants that ought to be included in the study
- Determine the role of the research in relation to the research participants
- Determine how the research is presented and written

Kovach further writes that an Indigenous perspective/theory (pp. 28-29):

- Encompasses an Indigenous way of knowing (e.g., Indigenous epistemology)
- Incorporates what Tuhiwai Smith refers to as "researching back", indicating a decolonization objective (citing Smith, 1999, p. 7)
- Is founded on collectivist research principles (and respects the inherent ethics and protocols associated)
- Has an ecological basis that is respectful of the natural world
- Values the authentic/organic techniques in data collection

All literature included in this research involved qualitative studies. As was discussed earlier, sustainable self-determination, constructivist (or similar) and decolonization theories provided the frameworks for some of these studies and are either based on Indigenous epistemology or elevate it (Delormier et al, 2017; Hatala et al, 2019; Hatala et al, 2016; Graham and Martin, 2018; Marsh and Martin, 2018).

This research also highlights the prominence of relations and suggests that future research on Indigenous concepts of gender in research ethics be situated within human-to-human and human-to-nature relations as a starting point of (re)articulating Indigenous Ways of Being. Whitridge writes,

> For many years, the conventional starting point for archaeologists of gender was the observation that gender is a cultural construct rather than a natural mode of being male or female (or something else)…It has now become apparent that this dichotomization of the cultural and natural creates as many difficulties as it was expected to resolve (2002, pp. 166-67).

Indigenous Ways of Being are embedded in the earliest and most central expressions of Indigenous worldview where they powerfully capture humans' relation to the environment. Anderson writes,

> To many Indigenous women, reclaiming a relationship to land is as important as recreating social and human relations because the land is something through which we define ourselves, and it is the essential in our creation. Indigenous women do not see the land as a material resources that needs to be developed, possessed, or controlled; rather, the land is a relative with whom we have a special relationship (2016, p. 159).

Battiste and Henderson explain this meaningful, essential, and defining relationship. Lands are more than places, settings, or homelands, we are an integral part of them, and we inherently belong to them (p. 1). Ecologies are alive, we have deep respect for them, and from them unfold our structures of Indigenous life and thought (Ibid). Ecological forces teach Indigenous people proper kinship order and how to have nourishing relations in all that is around us and within us (Ibid). Ecological teachings define for us the meaning of life, our responsibilities, and our duties (Ibid). They develop our consciousness, our languages, and what others have categorized as our "culture" (Ibid). A relation-based conceptualization gender presents an opportunity to strengthen it because it relates to an equally important aspect of the Indigenous Data Ecosystem – Indigenous Way of Being (ontology). When Elder Shawani Campbell Starr was asked about the "role of Native women" her response was, "The role of women? I would have difficulty with the word role, actually. More and more as I get older, I see this sort of recognition of being as more important than role" (Anderson, 2016, p. xxv).

The finding of relations-based Indigenous research ethics aligns with Indigenous Data Sovereignty because of its Indigenous Data Governance aspect. Carroll et al (p. 7) write,

> Relationships are also at the core of IDG (Smith 2016. Indigenous peoples and nations are more than mere stakeholders (Banerjee 2003); as sovereign polities, they are rights-holders with the right to govern data about their peoples, lands and resources. Choosing what, when how and how much control to exert. That right is the fundamental difference in the relationship between Indigenous peoples and non-Indigenous stakeholders with regard to Indigenous data (Banerjee 2003, Rainie et al, 2019).

A **sixth key finding** of this research is that Indigenous people must be empowered. While the literature included in this study was research conducted in response to inequities resulting from colonization which made significant the Western idea of gender as binary, studies rooted in Indigenous epistemology resulted in findings that either promoted Indigenous-based interventions or encouraged further community engagement. This aligns with decolonizing data as part of Indigenous Data Sovereignty. As was described earlier, decolonizing data occurs “as Indigenous nations and other data agents replace external, non-Indigenous norms with Indigenous systems that define data, and inform how it is collected and used. It results in findings…that reflect the understandings of those people” (Ibid., pp. 4-5). The following is an overview of such findings from the literature included in this research:

- Decolonized food systems that centre Indigenous peoples’ self-determination, the revitalization of knowledge systems, cultural practices, and language in nutrition research and practice (Delormier et al, 2017, p. 2, citing Elliot, Brown, & Corbett, 2012; Lemke & Delormier, 2017; Mundel & Chapman, 2010; Tuck & Yang, 2012).

- Indigenous social determinants of health (SDOH) that include access to and stewardship over land as indicators because land is central to physical, mental, and spiritual wellness (Hatala et al, 2019, p. 123).

- Respectful collaboration with Indigenous peoples to ask them what contribute to their mental health and well-being in recognition that first-hand knowledge is an important first step in mental health program planning and delivering effective mental health care to this population (Graham and Martin, 2016, p. 1).

- Positive changes in spirituality amongst study participants who attended the sweat lodge ceremony “because such changes are a fundamental component of healing within an Indigenous paradigm”. Reclaiming Indigenous identity means recovering traditional values, beliefs, etc., and adapting them today, which was clearly seen and reported by participants throughout the sweat lodge ceremonies that were conducted (Marsh and Martin, 2018, p. 15; citing Bombay et al., 2014; Brave Heart, 1999; Chansonneuve, 2007; Duran & Duran, 1995; Evans-Campbell, 2008; Marsh, Coholic, et al., 2015).

- Address healing from colonization’s disruption of family and community connectedness where traditional ties between youth, their parents and their grandparents may offer possibilities for enhanced HPV update including involvement of men, school-based programs with inter-generational community resources (i.e., grandparents), as examples (Henderson et al 2018; 99).

Hatala et al (2016, p. 1923) stated,

> Cree elders’ narratives highlight the various overlapping ways in which health and well-being are sought in contexts of distress, suffering, and historical trauma, and thereby challenge the notion that individuals are passive in the face of such cultural processes or that all individuals within a population are subject to and influenced by larger social forces in the same ways. Future research would do well to contemplate the dominant narrative forms or frameworks within which they operate. This reflexivity would arguably assist Aboriginal health discourse between the poles of

> resilience and trauma, while allowing a more accurate understanding of human life and suffering to come into view.

This finding is also connected with the social benefit aspect of ethical Aboriginal research that Brant Castellano highlights. Again, she stated, “it is essential that Aboriginal Peoples and their organizations put forward, not only concerns, but also solutions to the ethical problems that too often have made research effecting them inaccurate and irrelevant” (2004, p. 100). A litany of such problems are well documented (Carrol et al, 2019; FNIGC, 2019; Snow et al, 2016; Brant Castellano, 2004) and include as examples:

- Historically, data on Indigenous communities collected by nation state institutions have been of little use to Indigenous communities, “further distancing First Nations” (p. 60).
- Fragmented and incomplete picture of realities of Aboriginal peoples in Canada (FNIGC, p. 53).
- Data not being effectively analyzed or used to advance the well-being of First Nations despite arduous federal funding reporting requirements. Data created and used to administer the Indian Act and federal programs are federal data. Successive reports of the Auditor General of Canada have highlighted that the relevance of these reports is unclear. The multiple reports required to be filed correspond little to community plans or priorities (Ibid).
- Absence of ethnic identifiers at all levels as a key challenge to Indigenous coverage in health data systems. While data linkages between provincial/territorial health datasets to First Nations registry lists are a partial solution, the quality of the lists are potentially inaccurate and limited to First Nations people that are registered under the Indian Act (p. 56).
- Inconsistent, inaccurate, and irrelevant data for Indigenous people (Carroll et al, p. 3).
- Outcomes of conventional research as a “cultural bomb” that weakens Indigenous communities’ belief systems, senses of unity and languaging, and understandings of common struggle (Snow et al, p. 358, citing wa.Thiong’o 1986).
- Researchers and those being researched holding vastly different notions of what constitutes social benefit and how it is achieved (Brant Castellano, p. 103).

Brant Castellano writes,

> Fundamental to the exercise of self-determination is the right of peoples to construct knowledge in accordance with self-determined definitions of what is real and what is valuable. Just as colonial policies have denied Aboriginal Peoples access to their traditional lands, so also colonial definitions of truth and value have denied Aboriginal Peoples the tools to assert and implement their knowledge. Research under control of outsiders to the Aboriginal community has been instrumental in rationalizing colonialist perceptions of Aboriginal incapacity and the need for paternalistic control (pp. 102-103).

Indigenous exercise of self-determination in research is inherently political, and the political nature of Indigenous Data Sovereignty is unique. Caroll et al write,

> Unlike other racial or ethnic groups, Indigenous peoples and nations are political entities with rights and interests in data about their peoples, lands, and resources (p. 3, citing Banerjee 2003, United Nations 2018, Rainie et al 2019). The status as political entities is a fundamental difference in the relationship between Indigenous peoples and nations with Indigenous data, and other racial and ethnic groups' relationships with data about their populations and peoples. As IDS asserts Indigenous nations as rights-holders of their data, it challenges dominant data discourses, articulating power and colonial dynamics within data agendas that apply to outside Indigenous contexts (p. 4, citing Rainie et al. 2019).

As was stated earlier, Indigenous Data Sovereignty derives from the inherent right of Indigenous nations to govern their peoples, lands, and resources (Carrol et al, p. 3). The right of Indigenous nations to govern themselves is recognized through treaty and other legal mechanisms negotiated on a nation-to-nation basis (Carrol et al, p. 3; FNIGC, p. 58). The concept of IDS as collective right is positioned with an international rights framework through, more specifically, the United Nations Declaration on the Rights of Indigenous Peoples which were adopted by both Canada and the United States (Carroll et al, p. 3; FNIGC, p. 49). While the inherent right to exercise IDS extends to all Indigenous nations in principle, "the extent to which Indigenous people exercise it is constrained by their position in the problematic settler colonial paradigm of recognition and acknowledgement" representing "a site of tension and opportunity" towards inherent sovereignty and self-determination (Carroll et al, p. 3).

Opportunities to move towards inherent sovereignty and self-determination include strategies to move away from data dependency and scarcity towards reclamation and decolonization of Indigenous data systems. These include rebuilding community trust in research, improving data accuracy and quality, promoting Indigenous methodologies and epistemologies, developing local capability, supporting self-determination, and producing meaningful and relevant data for decision-making (Carroll et al, p. 7, citing Rainie et al 2017c). Opportunity is disrupting colonial research paradigms. Carroll et al write, that,

> Fundamentally, enhancing Indigenous data governance efforts towards Indigenous data sovereignty require a commitment to changing the current power dynamics…we must make the invisible, visible by including and listening to Indigenous peoples and nations in data decisions and discussions that affect them…(p. 12).

Changed power dynamics are long overdue. It has been over three decades since the Royal Commission on Aboriginal Peoples (1996) called for government support of indigenous information management systems, which includes infrastructure, training, and capacity at the nation level (FNIGC, 2019, p. 64). The FNIGC states that "this priority is central to self-determination…data created by and for First Nations reflect their goals, priorities, and worldviews than those of distant federal programs" (Ibid). It advocates for development of information governance capacity at the regional level and then wraps up into national First Nations data (Ibid). The FNIGC's vision is "to see every First Nation achieve data sovereignty in alignment with its distinct worldview. The national and regional organizations work together strengthen both the data sovereignty and the development of governance and information systems at the community level" (p. 65). At the July 2016, the Assembly of First Nations (AFN) Chiefs-in-Assembly agreed that "Indigenous data sovereignty be recognized as 'the cornerstone of nation-building'" (pp. 64-65, citing AFN 2016).

Citing Jorgenson (2007), Carrol et al identify the Native nation rebuilding movement which refers to "Indigenous governance systems…undergoing processes of reclamation of self-rule and increased self-determination" (p. 4). It is further described in the following way:

> It occurs as tribes 'enhance their foundational capacity' to make and implement strategic decisions about their own affairs. It is a comprehensive effort to rebuild Indigenous societies that work on Indigenous nations' terms in the continued wake of colonization. This includes political, economic, social and cultural development that requires accurate and relevant tribal data (Rodriguez-Lonebear, 2016, Kikutai and Taylor 2016, Rainie et al 2017c, United Nations 2018).

A strong Indigenous data system is at the core of a nation's "foundational capacity" (Carroll et al, p. 4). Data is required for decision-making about a government's citizens, lands, and resources. For Indigenous nations, Indigenous Data Sovereignty reflects connections among Indigenous data, data governance and Indigenous nation rebuilding (Carrol et al, p. 4).

A **seventh key finding** is that the voices of all relations are required. The literature in this research demonstrated that the Indigenous voice is individual and collective (Hatala et al, 2016, pp. 1923; Delormier et al, 2017, pp. 6-9) present and past (Gonzalez et al, 4), in the seen and unseen (Graham and Martin, pp. 4-9), unbounded by arbitrary borders (Hatala et al, pp. 125-127), healing (Marsh and Martin, 2018, pp. 6-9, 12), it involves language and is an interconnected endeavor because we are all connected (Henderson et al, pp. 96-99). Kovach writes that the collective as a relational underpinning of Indigenous research is juxtaposed to Western research that tends to be individualistic with the principal researcher defining and determining all aspects of the research process – defining the question, determining the participants, designing the methodologies, documenting the findings, and publishing the report (2005, p. 30). Protocols for Indigenous research include criteria of collective responsibility and accountability (p. 31).

The collective refers to collective nature of Indigenous culture that is evident in traditional economic, political, and cultural systems and it is woven with the relational philosophical underpinning of Indigenous research (p. 30). Carroll et al write, "IDS operationalized through IDG provides a framework and mechanisms for protecting Indigenous rights with respect to data and promoting ethical use of data for development according to Indigenous values and interest. Solutions require engagement with Indigenous peoples and the use of IDG principles by others when stewarding Indigenous data" (Carroll et al, p. 6, citing Smith 2016, Rainie et al, 2019, Garrison et al 2019).

Inherent in the collective is that you take care of your relatives, and that you show reciprocity and accountability to each other (Kovach, 2005, p. 30). Carroll et al write,

> Indigenous data governance and data sovereignty are integral to rebuilding strong Native nations…Without investment in people and infrastructure, Indigenous data governance is unlikely to be fully realized. This brings us back to the value of people and relationships. At its core, practicing Indigenous data governance is about being a good ancestor, partnering with other data stewards, and ensuring data-driven futures by Indigenous peoples for Indigenous peoples (p. 12).

As Carrol et al state that, "reclaiming Indigenous data sovereignty is a journey, not a destination" (p. 12). This ongoing effort includes "the process of decolonizing data and the mechanisms of data governance will be continuously revisited, revised, and remembered (in the case of traditional cultural methods of data governance)" (p. 5). This research represents another step in this journey by recommending an exploration of "gender" within the context of Indigenous relations in Indigenous research ethics. This issue has potentially far-reaching implications. Given the focus on Indigenous Data Sovereignty, some additional key questions are, how does the Indigenous Ways of Being (ontology) and specifically the Indigenous concept of "gender" within the context of relations (human-to-human and human-to-nature) impact:

1) Understandings of Indigenous Peoples or Nation Citizens (Peoplehood)?
2) Understandings of Indigenous Data?

3) Support Indigenous Data Sovereignty?
4) Enhance Indigenous Data Governance (stewardship, decision-making)?
5) Facilitate decolonizing data?
6) Contribute to Nation Building?

A **final finding** of this research is that recent iterations of mainstream Gender Based Analysis fail to address previously identified concerns and Indigenous-based Gender Balanced Analysis is not publicly available as to be considered and discussed in this research. As was previously stated, Paterson is critical of the way gender mainstreaming is currently practiced in Canada because it cannot provide insight about the ways in which “difference” comes to be and how or why this is politically important, and that a binary concept of sex or gender limits equality to this concept (Paterson, 2010, p. 411). While GBA+, the most recent iteration of the Government of Canada, moves away from this binary concept, other concerns remain. Additionally, the Western worldview continues to be the foundation of the GBA+ approach.

While the new “intersectionality” approach considers a broader range of factors of identity such as race, ethnicity, religion, age, and mental or physical disability, these are still a fragmented view of being as opposed to the more holistic understanding of Indigenous peoples. It is not only on the individual level but on an inter-relational level as previously discussed (i.e., human-to-human and human-to-nature relations). It is a continuation of categorization based on Western worldview.

GBA+ undermines and further entrenches colonialism because it is tool created by government, for government, using government data. As it was previously stated, GBA+ is used to examine the impact of legislation, policies, programs, and budgetary measures on diverse groups of women, men, and gender-diverse people by taking into consideration sex, gender, and other factors. Data created, extracted, and analyzed is that which is created with the colonial government context which is contrary to the concept of Indigenous Data Governance and decolonizing data, and hence, actively undermines Indigenous Data Sovereignty. Such policies and legislation are well-documented as creating poverty and poor health situations which further entrenches the deficit paradigm.

CHAPTER VI: CONCLUSION AND NEXT STEPS

This section provides research pathways to Indigenous Data Sovereignty based on Indigenous Ways of Being (relation-based approaches) and its significance for Indigenous research ethics and Indigenous Data Sovereignty.

The significance of a relations-based research approach is the reaffirmation of Indigenous research ethics and of Indigenous Data Sovereignty. This interconnected Way of Being, which comes to be known by Indigenous knowledge systems, including languages, is reflected in Indigenous worldview. It is exercised through Indigenous self-determination and Indigenous governance and reaffirms Indigenous research ethics highlighted in findings of this research. The following table provides a detailed overview of the significance of key research findings for affirmation of Indigenous research ethics:

Table 1: Significance of Research Findings for Indigenous Research Ethics

RESEARCH FINDINGS	***SIGNIFICANCE FOR***	INDIGENOUS RESEARCH ETHICS
Resist the use of dominant (Western) concept & language of gender. ***Recover & renew*** Indigenous concepts & language of Our Ways of Being. (Regarding key finding 1.)	→	• Elevate Indigenous worldview • Utilize Indigenous languages as central to research
Resist the dominant concept and language of gender by giving it significance through its continued use. ***Recover & renew*** Indigenous concepts & language of Our Ways of Being. (Regarding key finding 2.)	→	• Privilege Indigenous knowledge systems & elevate knowledge holders (i.e. elders) • Utilize Indigenous languages as central to research • Research is in accordance with Indigenous participants as self-determining
Resist the dominant concept and language of gender by decolonizing research & integrating self-determination. ***Recover & renew*** Indigenous concepts & language of Our Ways of Being. (Regarding key finding 3.)	→	• Decolonize research (moving past being situated within colonial context) • Elevate Indigenous worldview

RESEARCH FINDINGS	***SIGNIFICANCE FOR***	INDIGENOUS RESEARCH ETHICS
Recover & renew a focus on relations and use of Indigenous Ways of Being and Ways of Knowing in doing this. (Regarding key findings 4 & 5.)	→	• Observe Indigenous ethical regime as extending beyond human subjects to include interconnectedness with all of creation • Utilize Indigenous Ways of Knowing & Indigenous Ways of Knowing • Take a strengths-based approach • Conduct research that is culturally- and life-affirming for Indigenous peoples • Ensure Indigenous research stewardship
Recover & renew Indigenous people empowerment in research. (Regarding key finding 6.)	→	• Conduct research that has a social benefit for Indigenous people: concerns & solutions that are accurate & relevant • Observe the Indigenous Right to construct knowledge of what is real & valuable in accordance with exercising self-determination
Recover & renew research that requires the voices of all relations. (Regarding key finding 7.)	→	• Operationalize Indigenous Data Governance (IDG) • Engage Indigenous people and use of IDG principles by others when stewarding Indigenous data and developing solutions

The significance of a relations-based research approach is also the reaffirmation of Indigenous Data Sovereignty. This interconnected Way of Being elevates Indigenous Ways of Knowing and Indigenous Ways of Knowing for Indigenous Governance of Data toward Data Rebuilding and for Indigenous Data Governance toward Nation Rebuilding. The following tables highlight how key findings in this research reaffirm each of these Indigenous Data Sovereignty components (i.e., Governance for Data and Data Governance):

Table 2: Significance of Research Findings for Governance of Data (Stewardship and Control) towards Data Rebuilding

RESEARCH FINDINGS	*SIGNIFICANCE FOR*	INDIGENOUS DATA SOVEREIGNTY
Resist the dominant concept and language of gender by giving it significance through its continued use. ***Recover & renew*** Indigenous concepts & language of Our Ways of Being. (Regarding key finding 2.)	→	• Privilege of Indigenous knowledge systems and languages • Empower Indigenous people and nations • Create useful Indigenous data systems
Resist the dominant concept and language of gender by decolonizing research & integrating self-determination. ***Recover & renew*** Indigenous concepts & language of Our Ways of Being. (Regarding key finding 3.)	→	• Privilege Indigenous knowledge systems and language • Empower Indigenous people and nations • Create useful Indigenous data systems • Utilize decolonizing research approaches to move past the colonial deficit paradigm
Recover & renew a focus on relations and use of Indigenous Ways of Being and Ways of Knowing in doing this. (Regarding key findings 4 & 5.)	→	• Undertake a paradigm shift away from data dependency toward Indigenous Data Sovereignty • Ensure Indigenous Data Stewardship – Indigenous control of its data ecosystem • Conduct research that recognizes Indigenous people and nations as Rights Holders
Recover & renew Indigenous people empowerment in research.	→	• Decolonize data • Conduct research that recognizes Indigenous people and nations as Rights Holders • Conduct research in accordance with Indigenous Data Sovereignty which derives from Indigenous Inherent Rights over people, lands, & resources • Conduct research in accordance with Indigenous Data Sovereignty

RESEARCH FINDINGS	***SIGNIFICANCE FOR***	**INDIGENOUS DATA SOVEREIGNTY**
(Regarding key finding 6.)		which is aligns with an international human rights framework
Recover & renew research that requires the voices of all relations. (Regarding key finding 7.)	→	• Require ethical engagement of Indigenous peoples • Ensure Indigenous data stewardship

Table 3: Significance of Research Findings for Data for Governance (Data for use in Decision-making) towards Nation Rebuilding

RESEARCH FINDINGS	*SIGNIFICANCE FOR*	INDIGENOUS DATA SOVEREIGNTY
Resist the dominant concept and language of gender by giving it significance through its continued use. ***Recover & renew*** Indigenous concepts & language of Our Ways of Being. (Regarding key finding 2.)	➡	• Privilege Indigenous knowledge systems • Conduct research where Indigenous languages are central • Creates space for Indigenous voice, values, & vision • Conduct research based on the concept of Peoplehood underscoring Indigenous Inherent Rights & Responsibilities
Resist the dominant concept and language of gender by decolonizing research & integrating self-determination. ***Recover & renew*** Indigenous concepts & language of Our Ways of Being. (Regarding key finding 3.)	➡	• Conduct strengths-based research • Conduct self-determining research
Recover & renew a focus on relations and use of Indigenous Ways of Being and Ways of Knowing in doing this. (Regarding key findings 4 & 5.)	➡	• Elevate Indigenous Ways of Being • Utilize Indigenous Ways of Knowing • Utilize Indigenous Ways of Doing • Conduct research in accordance with Indigenous self-determination
Recover & renew Indigenous people empowerment in research. (Regarding key finding 6.)	➡	• Establish Indigenous data governance systems for a nation's citizens, lands, & resources • Undertake Indigenous nation rebuilding
Recover & renew research that requires the voices of all relations.	➡	• Operationalize Indigenous Data Sovereignty

RESEARCH FINDINGS	*SIGNIFICANCE FOR*	INDIGENOUS DATA SOVEREIGNTY
(Regarding key finding 7.)		• Undertake Indigenous nation rebuilding • Contribute to data-driven futures by Indigenous peoples for Indigenous peoples

Adaptation of “Reclaiming Indigenous Data Sovereignty Through Indigenous Data Governance and Decolonizing Data” by Carroll et al (p. 4) is used to summarize the research findings and its implications as the basis for current and future pathways for Indigenous Data Sovereignty as it relates to Nation-based Ways of Being.

Figure 1. Future Research: Nation-based Research on Indigenous Ways of Being for Indigenous Data Sovereignty – Governance of Data toward Data Rebuilding

Recover and renew Indigenous Nation-based concepts and language of Our Way of Being (relation-based) through examining their implications for Indigenous Governance of Data in the following areas:

- Facilitation of a paradigm shift away from data dependency toward the Nation's Data Sovereignty – derives from the Nation's Inherent Rights over its citizens, lands, & resources
- Recognition of Nation's citizens and the Nation as Rights Holders
- Identifies requirements for ethical engagement of the Nation's citizens
- Empowerment of the Nation and its citizens
- Decolonizes research to move past deficit paradigm
- Privileging of the Nation's knowledge system & language
- Decolonizes data
- Creation of a useful data systems for the Nation
- Ensures data stewardship – the Nation controls its data ecosystem

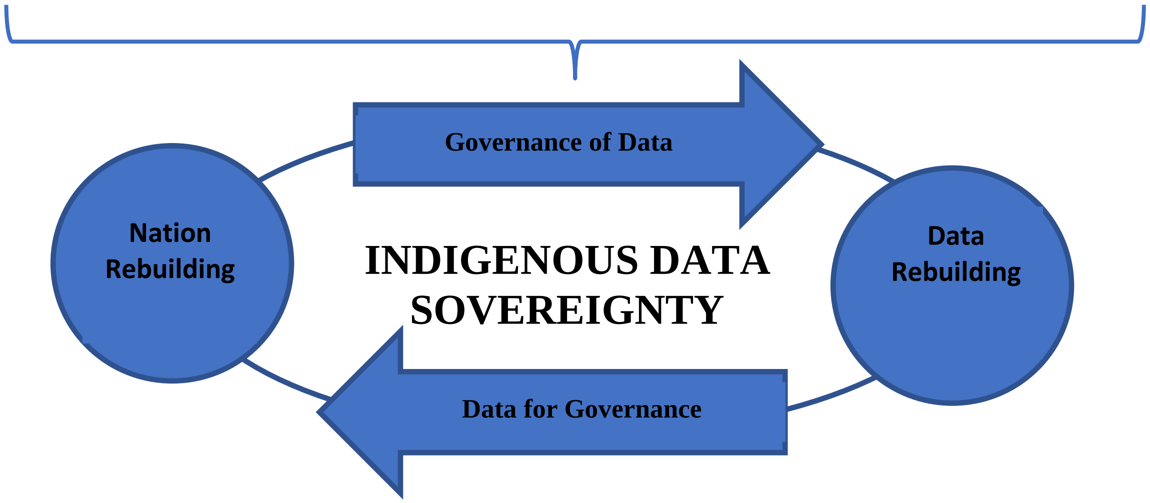
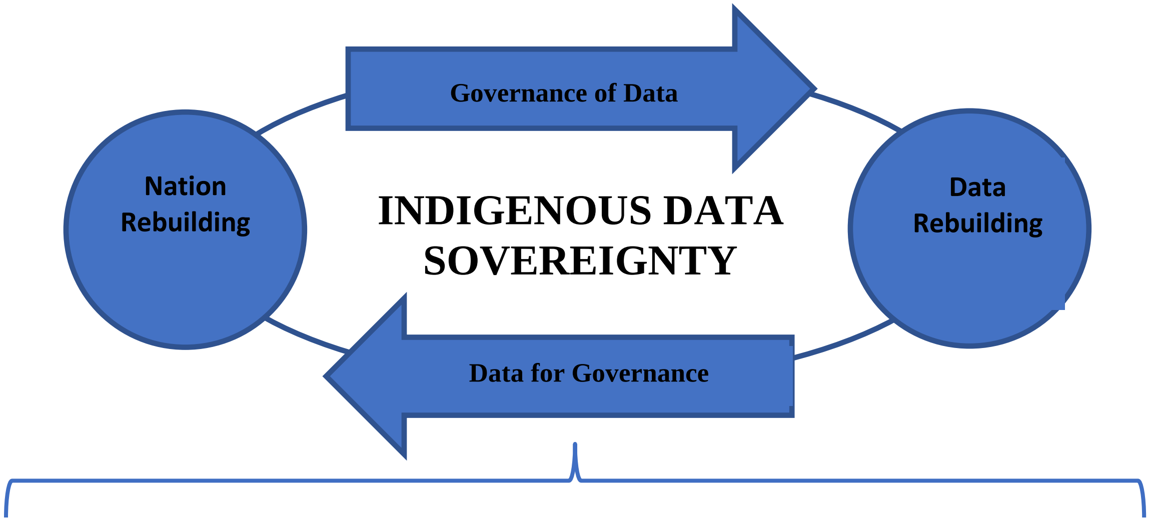

Governance of Data
Nation Rebuilding
INDIGENOUS DATA SOVEREIGNTY
Data Rebuilding
Data for Governance

Figure 2. Future Research: Nation-based Research on Indigenous Ways of Being for Indigenous Data Sovereignty – Data for Governance toward Nation Rebuilding



Recover and renew Indigenous Nation-based concepts and language of Our Way of Being (relation-based) through examining their implications for Data for Governance in the following areas:

- Privileging of the Nation’s knowledge system
- Research is conducted where the Nation’s language is central
- Creates for Indigenous voice, values, & vision
- Research is conducted based on concept of Peoplehood underscoring the Nation’s Inherent Rights & Responsibilities
- Nation data governance systems are established for its citizens, lands, and resources
- Nation rebuilding is facilitated

- Strengths-based research is conducted
- Self-determining research is conducted
- The Nation’s Ways of Being are elevated
- The Nation’s Ways of Knowing are utilized
- The Nation’s Ways of Doing are utilized
- The Nation’s Data Sovereignty is operationalized
- Future is data-driven by the Nation and its citizens for the Nation and its citizens

Furthermore, consistent with building on research findings, the following Indigenous research ethics are to be applied when conducting future research proposed in this section:

- Utilizing the Nation's Ways of Knowing and Ways of Doing
- Privileging Nation-based knowledge system
- Elevating knowledge holders (i.e., elders)
- Engaging citizens and using IDG principles by others
- Decolonizing research approach
- Operationalizing a strengths-based approach
- Observing the Nation's ethical regime as extending to include the interconnection amongst all of creation
- Conducting research that is culturally- and life-affirming for the Nation's citizens
- Conducting research that has a social benefit for the Nation – concerns and solutions that are accurate and relevant
- Observing the Nation's right to construct knowledge in accordance with exercising self-determination
- Operationalizing the Nation's data governance
- Ensuring the Nation's research stewardship

Decolonization as a key characteristic of Indigenous Data Sovereignty and as an Indigenous research methodology, must continue to be utilized in future research on this topic because of its effectiveness in highlighting Indigenous-based approaches and outcomes. Continuing with the critical Discourse Analysis approach continues to be appropriate as well; however, it is recommended that Critical linguistic analysis be used as Nation-based research is at the proximate or local level and would involve study of the respective Nation's language, e.g., Lakota, Anishinabemowin, etc.

Reclaiming Indigenous Data Sovereignty is not a destination but a journey that must go back to the beginning – to our very being as Indigenous peoples. Indigenous Way of Being gives rise to our Ways of Knowing and our Ways of Doing within the Indigenous research paradigm. In "researching ourselves back to life", this exploratory research demonstrates that "ourselves" is our Indigenous Way of Being – an understanding of self in relation to all of creation, guided by sacred instructions to live a purpose life as a good relative to each other, within our families, to past, present and future generations, to the land, water, air, animals, plants, and spirits. Indigenous Inherent Rights come from these sacred instructions. As Indigenous people, we are provided understanding of our Way of Being through language, creation stories, oral history, dreams, ceremonies, cultural protocols, spiritual guides, mentors, and kinship and governance structures. Exercising our Inherent Right through self-determination is how we animate Our Way of Being to fulfill our sacred roles, responsibilities, and obligations, in everything we do, including in research. This is a renewed and recovered pathway back to Indigenous Data Sovereignty.

In conclusion, a personal note because research is not just research as a Lakota. This research journey has taken, and continues to take, many serendipitous turns. This leads me to believe this topic is, and will continue to be, what I am supposed to do. It has manifested itself in numerous ways, academic and personal. My Way of Being through this research journey now includes my spiritual name, which was gifted by Dennis McKay, Anishinabe Elder from Rolling River First Nation, Manitoba. For this special gift and journey to which I am committed, I say *Wopila Mitakuye Oyasin*. Thank you (with much respect), All My Relations.

BIBLIOGRAPHY

Australian Institute of Aboriginal and Torres Strait Islander Studies. (2012). Guidelines for ethical research in Australian Indigenous studies. Retrieved from: http://www.aiatsis.gov.au/_files/research/ethics.pdf.

Anderson, K. (2016). A recognition of being: Reconstructing native womanhood. (2nd ed.) Toronto: Women's Press.

Assembly of First Nations. (2009). Enhanced gender balanced analysis framework. Ottawa: Assembly of First Nations.

Assembly of Manitoba Chiefs. (2017). Application of Ownership, Control, Access, and Possession (OCAP) in the Context of Child and Family Services and the Child and Family Services Information System. Winnipeg: Assembly of Manitoba Chiefs.

Baines, D. Gender Mainstreaming in a Development Project: Intersectionality in a Post-Colonial Undoing? Gender, Work and Organization. 17, 2 (2010): 119-149.

Ball, J. (2009). Fathering in the Shadows: Indigenous Fathers and Canada's Colonial Legacies. *The Annals of the American Academic of Political and Social Science, 624*(29), 29-48.

Ball, J. (2010). Indigenous fathers' involvement in reconstituting "Circles of care". *American Journal of Psychology, 45*, 124-138.

Ball, J. & Janyst, P. (June 2008). Enacting research ethics in partnership with Indigenous communities in Canada: "Do it in a good way". *Journal of Empirical Research on Human Research Ethics, 3*(2), 33-51.

Battiste, M., & Youngblood Henderson, J. (2000). Protecting Indigenous Knowledge and Heritage: A Global Challenge. Saskatoon, SK: Purich Publishing Ltd.

Brant Castellano, M. (2004). Ethics of aboriginal research. *Journal of Aboriginal Health*, 98-114.

Bauer, G. R. (2014). Incorporating intersectionality theory into population health research methodology: Challenges and the potential to advance health equity. *Social Science & Medicine, 110,* 10-17.

Bauer, G. R, Braimoh, J., Scheim, A.I., & Dharma, C. (2017). Transgender-inclusive measures of sex/gender for population surveys: Mixed-methods evaluation and recommendations. *PLoS One, 12*(5): e0178043.

Bubar, R. (2013). Decolonizing sexual violence professional indigenous women shape the research. *International Review of Qualitative Research, 6*(4), 526-543.

Carroll, S. R., Rodriguez-Lonebear, D., & Martinez, A. (2019) Indigenous data governance: strategies from United States Native Nations. *Data Science Journal*, 18: 31.

Cole, B. A. (2009). Gender, narratives and intersectionality: Can personal experience approach to research contribute to “undoing gender”? *International Review of Education, 55*(5/6), 561-578.

Deloria, E. (1988). *Speaking of Indians.* Lincoln: University of Nebraska Press.

Delormier, T., Horn-Miller, K., McComber, A.M., & Marquis, K. (2017). Reclaiming food security in the Mohawk community of Kahnawà:ke through Haudenosaunee responsibilities. *Maternal Child Nutrition*, 13(53).

Driskell, Q., Finley, C., Gilley, B.J., & Morgensen, S.L. (2011). Queer indigenous studies: Critical interventions in theory, politics, and literature. Tuscon: The University of Arizona Press.

Ermine, W., Sinclair, R., & Browne, M. (March 2005) Kwayask Itotamowin: Indigenous Research Ethics - Report of the Indigenous Peoples’ Health Research Centre to the Institute of Aboriginal Peoples’ Health and the Canadian Institutes of Health Research. Retrieved from: http://iphrc.ca/assets/Documents/IPHRC_ACADRE_Ethics_Report_final.pdf.

First Nations Information Governance Centre, 2014: 4

Gee, J.P. (2011) An introduction to discourse analysis: theory and method. (3rd Edition) New York: Routledge.

Getty, G. A. (2010). The journey between western and indigenous research paradigms. *Journal of Transcultural Nursing, 21*(1), 5-14.

Gonzalez, M., King, E., Bobelu, J., Ghahate, D.M., Madrid, T., Lesansee, S., & Shah, V. (2018). Perspectives on biological monitoring in environmental health research: a focus group study in a Native American community. *International Journal of Environmental Health Research and Public Health*, 15, 1129.

Graham, H., & Martin, S. (2016) Narrative descriptions of miyo-mahcihoyān (physical, emotional, mental, and spiritual well-being) from a contemporary nèhiyawak (Plains Cree) perspective. *International Journal of Mental Health Systems*, 10:58.

Hackett, P. (2005). From past to present: Understanding first nations health patterns in a historical context. *Canadian Journal of Public Health, 96,* 17-21.

Hankivsky, O., & Christofferson, A. (2008). Intersectionality and the determinants of health: a Canadian perspective. *Critical Public Health, 18*(3), 271-283.

Hatala, A.R., Desjardins, M., & Bombay, A. (2016) Reframing narratives of Aboriginal health inequity: exploring Cree elder resilience and well-being in contexts of historical trauma. *Qualitative Health Research*, 26(14): 1911-1927.

Hatala, A.R., Morton, D., Njeze, C., Bird-Naytowhow, K., & Pearl. T. (2019). Re-imagining miyo-wichetowin: Human-nature relations, land-making, and wellness among Indigenous youth in a Canadian urban context. *Social Science & Medicine*, 230: 122-130.

Health Canada. Retrieved from: "What is Gender-Based Analysis" at website: http://www.hc-sc.gc.ca/hl-vs/women-femmes/gender-sexe/gender-sexes-eng.php)

Henderson, R.I., Shea-Budgell, M., Healy, C., Letendre, A., Bill, L., Healy, B., Bednarczyk, R.A., Mrklas, K., Barnabe, C., Guichon, J., Bedingfield, N., MacDonald, S., Colquhoun, A., Glaze, S., Nash, T., Bell, C., Kellner, J., Richardson, R., Dixon, T., Starlight, J., Runner, G., & Nelson, G. (2018). First nations people's perspectives on barriers and supports for enhancing HPV vaccination: Foundations for sustainable, community-driven strategies. *Gynecology Oncology*, 149: 93-100.

Hudson, M., Milne, M., Reynolds, P., Khyla, R., & Smith, B. (2010). Te ara tika guidelines for Maori research ethics: A framework for researchers and ethics committee members. Retrieved from: http://chrr.info/images/stories/Te_Ara_Tika_Guidelines_for_Maori_research_ethics_A_framework_for_researchers_and_ethics_committtee_members.pdf

Indigenous Peoples' Health Centre Research, 2004.

Jacobs, S.E. (1997). Is the "North American Berdache" Merely a Phantom in the Imagination of Western Social Scientists? In S.E. Jacobs, W. Thomas, & S. Lang (Eds.) *Two-Spirit People: Native American Gender Identity, Sexuality, and Spirituality* (21-44) Chicago: University of Illinois Press.

Kovach, M. (2010). Indigenous methodologies: Characteristics, conversations, and contexts. Toronto: University of Toronto Press.

Lawrence, B. (2003). Gender, race, and regulation of native identity in Canada and the United States: an overview. *Hypatia: A Journal of Feminist Philosophy, 18*(2), 3-31.

MacKinnon, M. (2005). A First Nations voice in the present creates healing in the future. *Canadian Journal of Public Health, 96,* S13-S16.

Marsh, T.N., Marsh, D.C., & Ozawagosh, F. (2018) The sweat lodge ceremony: a healing intervention for intergenerational trauma and substance abuse. *The International Indigenous Policy Journal*, 9(2).

Meadows, L.M., Lagendyk, L.E., Thurston, W.E., & Eisener, A.C. (2003). Balancing culture, ethics, and methods in qualitative health research with aboriginal peoples. *International Journal of Qualitative Methods, 2*(4), 1-25.

McCaslin, W.D. & Breton, D.C. (2008). Justice as Healing: Going Outside the Colonizers' Cage. In N.K. Denzin, Y.S. Lincoln, & L.T. Smith. (Eds.), *Handbook of Critical and Indigenous Methodologies* (531-546) Thousand Oaks: SAGE Publications, Inc.

McGinnis, A., Tesarak Kincaid, A., & Barrett, M.J. (2019) Strengthening animal-human relationships as a doorway to Indigenous holistic wellness. *Ecopsychology*, 11(3): 162-173.

McKegney, S. (2014). Masculindians: Conversations about Indigenous manhood. Winnipeg: University of Manitoba Press.

Morgensen, S.L. (2011). *Spaces Between Us: Queer Settler Colonialism and Indigenous Decolonization.* Minneapolis: University of Minnesota Press.

Native Women's Association of Canada. (n.d.). Culturally relevant gender based analysis. Retrieved from: https://www.nwac.ca/policy-areas/health/cr-gba/ .

Norris, M.J. (2009). The role of first nations women in language continuity and transition. In Valaskakis, G.G., Stout, M.D., & Guimond, E. (Eds.), Restoring the balance: first nations Women, community, and culture (313-353). Winnipeg: University of Manitoba Press.

Olsen, T.J. (2016). Gender and/in indigenous methodologies: on trouble and harmony in indigenous studies. *Ethnicities,17*(4), 509-525

Paterson, S. (2010). What's the problem with gender-based analysis? Gender mainstreaming policy and practice in Canada. *Canadian Public Administration, 53*(3), 396-416.

Phillips, N. & Hardy, C. (2002) Discourse analysis: investigating processes of social construction. Qualitative Research Methods Volume 50. Thousand Oaks, CA: Sage Publications.

Ponting, J. Rick & Voyageur, Cora J. (2001) Challenging the deficit paradigm: grounds for optimism among First Nations in Canada. *The Canadian Journal of Native Studies* XXI, 2: 275-307.

Preferred Reporting Items for Systemic Reviews and Meta-Analysis (PRISMA). PRISMA Checklist. Retrieved from: http://prisma-statement.org/

Rifkin, M. (2011). When did Indians become straight? Kinship, the history of sexuality, and native sovereignty. New York: Oxford University Press, Inc.

Rink, E., Ricker, A., FourStar, K., & Hallum-Montes, R. (2016). "A balance that we walk": Characteristics, attributes and behaviors that promote healthy American Indian heterosexual couple relationships. *Journal of Family Issues*, 1-24.

Schnarch, B. (2004). Ownership, control, access and possession (OCAP) or self-determination applied to research: A critical analysis of contemporary First Nations research and some options for First Nations communities. *Journal of Aboriginal Health*, *1*(1), 80–95.

Snow, K.C., Hays, D.G., Caliwagan, G., Ford, D.J. Jr., Mariotie, D., Mwendwa, J.M., & Scott, W.E. (2016) Guiding principles for Indigenous research practices. *Action Research*, 14(4): 357-375.

Status of Women Canada. (n.d.). Government of Canada's approach: Gender-based analysis plus. Retrieved from: http://www.swc-cfc.gc.ca/gba-acs/approach-approche-en.html

Status of Women Canada. (n.d.). What is gba+?: Gender-based analysis plus. Retrieved from: http://www.swc-cfc.gc.ca/gba-acs/index-en.html)

Status of Women Canada. (n.d.). Introduction to gba+. Retrieved from: http://www.swc-cfc.gc.ca/gba-acs/course-cours/eng/mod04/mod04_03_01.html)

Stirbys, C. D. (Winter/Spring 2008). Gender-based analysis and differing worldviews. *Canadian Women's Studies, 26*(3/4),138-145.

The First Nations Information Governance Centre. (2019). First Nations data sovereignty in Canada. Statistical Journal of the IAOS, 35: 47-69.

Tri-Council. (2010). Tri-council policy statement 2 (TPS 2): Research involving the First Nations, Metis and Inuit Peoples. Retrieved from: http://www.pre.ethics.gc.ca/eng/policy-politique/initiatives/tcps2-eptc2/chapter9-chapitre9/

GLOSSARY

Battiste and Youngblood Henderson write, “The Eurocentric quest for universal definitions has raised suspicions among Indigenous peoples, who do not want to be assimilated into Eurocentric categories” (Battiste and Youngblood Henderson, 2000). It is for this reason that I find it extremely challenging to provide even “operational” definitions and meanings of key terms in this literature review, particularly, when Indigenous knowledge is highly localized (p. 44). However, Battiste and Youngblood Henderson also write, “From the Indigenous vantage point, the process of understanding is more important that the process of classification” (p. 37). Because the focus of this research is not to be prescriptive, but to explore gender-balanced Indigenous research ethics, I provide descriptions of key terms used for purposes of this research. Definitions and meanings should come from the people of the locality in which Indigenous research ethics are considered and developed, based on their cultural knowledge, heritage, language, and other ways of knowing. Descriptions of key terms, where possible, are drawn upon or inspired by Indigenous scholars or organizations whose writings and thoughts are the basis of this research.

Decolonizing Data - occurs “as Indigenous nations and other data agents replace external, non-Indigenous norms with Indigenous systems that define data, and inform how it is collected and used. It results in findings…that reflect the understandings of those people” (Carroll et al., pp. 4-5).

Indigenous – In this research, refers to First Nations people in present-day Canada and Native America, American Indian, Native Nations in present-day United States.

Indigenous Data Governance - “the act of harnessing tribal cultures, values, principles, and mechanisms – Indigenous ways of knowing and doing – and applying them to the management and control of an Indigenous nation’s data ecosystem (p. 5, citing Rainie et al. 2017b, Walter et al. 2018). [It is] decision making. It is the power to decide how and when Indigenous data are gathered, analyzed, accessed and used” (Ibid, citing Walter et al. 2018, p. 3).

Indigenous Data Sovereignty - The United States Indigenous Data Sovereignty Network defines this as “the right of a nation to maintain govern the collection, ownership, and application of its own data” which “derives from the tribes’ inherent right to govern their peoples, lands, and resources. This conception of data sovereignty positions Indigenous nations’ activities to govern data within an Indigenous rights framework” (FNIGC,p. 58 citing US Indigenous Data Sovereignty Network, 2018).

Indigenous Research – Research that touches the life and well-being of Indigenous Peoples. It may involve them and their community directly, may assembly data that describes or claims to describe them and their heritage; or, it may affect the human and natural environment in which Indigenous Peoples lives (Adapted from Castellano Brant, 2004, p. 99). Research is knowledge for social benefit (p. 103).

Ethics – Rules of conduct that express and reinforce important social and cultural values of a society. The rules may be formal and written, spoken, or simply understood by groups who subscribe to them (p. 99). Ethics are the values, principles, intentions, personal sense of responsibility and self-definition that guide behaviors, practices, and action towards others (Indigenous Peoples Health Research Centre, 2004, p. 22). It is important to note that, "the language of ethics coming from Indigenous Peoples, scholars and from the communities, indicates that the interpretation of ethics in one society may not necessarily be the ethics of another with a different worldview" (Ibid).

Gender-Based Analysis – Health Canada describes GBA as: An analytical tool rooted in a systematic process; evidence – based; assesses actual or potential impact of a policy, program, or research; uncovers social, economic, biological, and other differences between women and men, girls, and boys; questions basic assumptions and values about biological and social differences; corrects stereotyping and discrimination (historical bias); and shows the way to gender equality. (Health Canada. Retrieved from: "What is Gender-Based Analysis" at website: http://www.hc-sc.gc.ca/hl-vs/women-femmes/gender-sexe/gender-sexes-eng.php)

Gender-Balanced Analysis Framework – The Assembly of First Nations describes its GBA framework as culturally-affirming "critical teaching and decision-making tool to assist First Nations in remembering, restoring and renewing the life-giving ways of our ancestors which included balance of the vital roles of men and women that once made our families strong and nations vibrant" (Assembly of First Nations, 2009, p. 23).

Gender Diversity - While not specifically identified as the definition in any literature reviewed for this proposal, the identification of gay, lesbian, bisexual, transgender, queer and Two-Spirit as the populations of focus in the literature suggest this is what is meant by gender diversity (Driskell et al, p. 1).

Culturally Relevant Gender-Balanced Analysis – The Native Women's Association of Canada describes its CR-GBA as recognizing "the need for gender-based analysis that encompasses the interconnected relationship between culture and gender. For Aboriginal women, this creates a more meaningful and relevant analysis that better reflects historical and contemporary contexts and lived realities. Funders, policymakers, researchers, and analysts are encouraged to use this workbook as a guide to complement their existing processes" (Native Women's Association of Canada, 2010). Retrieved from: https://www.nwac.ca/policy-areas/health/cr-gba/). It developed a Culturally Relevant Gender Application Protocol (CR-GAP) to "establish a simple mechanism to incorporate culture and gender perspectives into existing policy development processes" (Native Women's Association of Canada, 2010, p. 3), which "examines how socially constructed identity has shaped the cultural, economic, social and political status of Aboriginal people" (p. 2).

Discourse Analysis – described by Gee (2011) as: the analysis of language-in-use whether spoken or written. Linguistic forms of disclosure analysis pay attention to the details of grammar and function in communication. Other forms of discourse analysis pay attention only to themes and messages (sometimes this is called "content analysis") (p. 205).