HARVESTING WELLNESS WITH OKANAGAN Sockeye Salmon

by

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Committee Recommendation Form

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Dedication

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Abstract

Prior to colonization the Syilx Okanagan people were healthy and strong, by honouring reciprocal relationships with salmon and all living things. Colonization contributed to a loss of salmon abundance that is now being restored by the Syilx Okanagan Nation. The relationship that Syilx people have with salmon is also being reintroduced to those who are not familiar with it. This study explores how restoring Syilx connections to salmon have impacted the well-being of Syilx Okanagan peoples by asking, how do Syilx Okanagan Nation members understand the influence of Sockeye Salmon reintroduction on their wellness? and how can an Indigenous centered relational research process promote a diversity of knowledge in regard to the role of traditional foods within an Indigenous context?

A relational methodology that is fundamentally informed by Syilx knowledge utilizing an En’owkinwixw methodology through a postcolonial lens and an interpretive phenomenological (IP) method was applied to increase understanding of a collective experience of wellness. Eight participant interviews with Syilx Okanagan Nation members increased my understanding of the influence of Sockeye Salmon reintroduction on their wellness.

This inquiry revealed that for participants, wellness was not fully present in the absence of salmon and that participants’ understandings of wellness reflected a uniquely Syilx perspective. An element of this perspective is that salmon creates a spiritual connectedness that is at the core of Syilx wellness with Salmon. Findings reveal that spiritual connectedness is comprised of the senses of belief, identity and reciprocity and is supported by Syilx traits of wellness that include relationships, connections, responsibility, participating and sharing and purpose. A storied account of the salmon cycle from the literature draws from generations of Syilx perspective to provide agreement that salmon brings strength to Syilx wellness and
stability to social and governing structures in communities while contributing to the sustainability of ecology throughout the salmon system.

We conclude that salmon restores Syilx wellness and has potential to create health equity. Indigenous foods restoration is an important way to apply Indigenous knowledge within current systems to further the well-being of Syilx people.
Lay Summary

This study explores how colonial impacts that reduced salmon populations have contributed to the un-wellness of Syilx Okanagan Nation members. It also explores how the restoration of salmon, an important Syilx Okanagan food source, contributes to Syilx Okanagan well-being. By combining Western knowledge within Indigenous knowledge this study is able to reveal a wholistic understanding of wellness that includes spiritual aspects that are not easily discussed in Western health systems. For Syilx Okanagan people, returning salmon shows that wellness can also return if you participate. Restoring Indigenous foods is an important way to understand and apply Indigenous knowledge and can help to provide fairness in terms of health and wellness for both individuals and groups as well as the ecosystems that they live in.
Preface
This research was completed as a component of a Canadian Institute of Health Research (CIHR) Operating Grant ref #145121 entitled “Evaluation of the Health and Health Equity Outcomes of Okanagan sockeye salmon Reintroduction Initiatives”. This project represents a collaboration among investigators from the University of Montreal, the University of Alberta and UBC Okanagan (including myself as graduate student). As a graduate student researcher, I served as the community representative of the Okanagan Nation Alliance, facilitating the engagement of staff and membership in the development and design of the proposal. In many ways, this engagement contributed to the topic and design of this graduate study that I have developed based on knowledge user input and with the mentorship of co-supervisors. The mentorship of co-supervisors guided all stages of the research process, which I developed and conducted myself including participant interviews and data analysis. To carry out this graduate study, institutional approval was granted by the University of British Columbia Okanagan Research Services Behavioural Research Ethics Board H17-01515 and the Okanagan Nation Alliance Letter of Research Support dated August 15, 2017. Institutional approval was also granted by the University of Alberta Research Ethics Board Study ID Pro00067679.
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“I couldn’t have done it without you.” These are words that I have heard from my family throughout my life. In completing this graduate research, it couldn’t be truer because it represents a continuous feeding of knowledge through experiences, listening, conversations, dreams and knowing that began with family early in my life. The work has come to fruition with the experiences and efforts of far too many people to name lest I risk the chance of missing someone, but I hope that you know who you are. Specifically, I would like to thank the Syilx Okanagan Nation including staff, leadership and membership who have in many ways facilitated this opportunity. I was blessed to have such an academically tremendous and inspiring Supervisory committee and would like to extend my deepest gratitude to them for their mentorship: Dr. Susana Caxaj who helped me to keep pushing through the resistance by asking the questions that go beyond the surface to provide innovation; Dr. Jeannette Armstrong who was integral to my personal preparations and has shown her dedication to making trails for Indigenous knowledge and research on behalf of the environment; Dr. Noreen Willows who beyond her expertise understands the importance of relationships in Indigenous research and provided the resistance required to make this work stronger; and Dr. John Wagner who with his own understanding of relationships brought an academic and institutional wisdom that helped to create a needed clarity and calmness. I am also grateful to the influences that helped to create the conditions that allowed me to focus while maintaining some sense of balance. This included financial support from various sources including research grant funding (CIHR), academic scholarships (Aboriginal Graduate Fellowship - UBC) and band education funding. Most importantly, without the endless support of my family who showed ongoing encouragement and patience, while stepping up to provide what was needed during this time, I could not have completed this study.
List of Abbreviations

Okanagan Nation Alliance ................................................................. ONA
Confederated Tribes of the Colville Reservation ........................................ CTCR
also known as Colville Confederated Tribes ........................................ CCT
Four R’s of Higher Learning: Respect, Relevance, Reciprocity and Responsibility ........ 4 R’s
Truth and Reconciliation Commission of Canada ........................................ TRC
First Nations Health Authority .............................................................. FNHA
Social Determinants of Health ............................................................... SDOH
Public Health Agency of Canada ............................................................ PHAC
Canadian Institute of Health Research .................................................... CIHR
Interpretive Phenomenology ................................................................. IP
Postcolonial Criticism ............................................................................. PC
Glossary

Nsyilxcən Terms

Captikwel ........................................................ history as teachings, values and principles

Enowkinwixw ........................................................ consensus making dialogue

ntytyix ............................................................... spring salmon chief (applications)

siyaʔ ................................................................. service berry (innovations)

sk’məxist ............................................................. black bear (traditions)

sp’iʔ’m ............................................................... bitterroot (relations)

kəknʔiʔ ............................................................. kokanee salmon

kł cpˈółk stim ...................................................... cause to come back

nsyilxcən ........................................................... the language spoken by Syilx/Okanagan peoples

sówin ................................................................. early Sockeye Salmon/dried salmon

snk’lip ................................................................. coyote

sqiłxʷ ................................................................. for Indigenous/people

Syilx ................................................................. Okanagan peoples

timixʷ ............................................................... sacred life forces [all living things]

Nsyilxcən Place Names

sxʷóxʷn̓itkʷ ........................................................... Okanagan Falls

t’ucin ................................................................. Skaha Lake

s̓q̓awsitkʷ .......................................................... Okanagan River

sxʷənitkʷ ............................................................ Kettle Falls

n̓xʷntkʷitkʷ ........................................................ Columbia River

klúsxənitkʷ ........................................................ Okanagan Lake
Relevant Terminology

In this thesis I often maintain the terminology of the authors or reports cited.

Aboriginal refers to First Nations, Métis, and Inuit peoples who are recognized under the Canadian Constitution.

First Nations refers to Aboriginal peoples of Canada who are not ethnically Métis nor Inuit. It refers to ethnicity and does not have a legal definition.

Indigenous refers to the original peoples worldwide with a long-standing relationship to a particular geographical land base (First Nations Studies Program, 2009).

The Syilx Okanagan Nation or Syilx peoples have a long-standing relationship to the Okanagan and Columbia River systems and to the Okanagan sockeye salmon in which their reintroduction initiative has worked to restore.
Chapter 1: Introduction

The restoration of Okanagan sockeye salmon and the revival of our understanding of the Syilx social and cultural relationship with salmon provides a unique backdrop to understanding how Indigenous food and harvesting practices contribute to health and a wholistic sense of well-being. Understanding the Syilx social and cultural relationship with salmon also provides an opportunity to transform and broaden existing public health policies and practices by focusing on Syilx Okanagan community strengths to promote well-being. After years of near total absence, the return of Sockeye Salmon (*Oncorhynchus nerka*) to the Okanagan River systems marks an important moment for the health and well-being of the Syilx Okanagan Nation (Okanagan Nation Alliance, 2017a). What it means to eat traditional foods is rooted in Indigenous understandings of wellness, which differ from Western biomedical conceptualizations of wellness (Adelson, 1998). As Syilx our wellness is understood to be inextricably linked to the wellness of family, community and all living things (Okanagan Nation Alliance, 2017e).

In the creation stories of Syilx Okanagan people, Salmon\(^1\) is one of four Food Chiefs that agreed to fulfill a responsibility to provide for the people, much as we provide for our own families (Okanagan Tribal Council, 1984). Through these stories, the Syilx Okanagan people recognize salmon as having equal stature to humans including the recognition that salmon, like people, have rights. While the Syilx ability to harvest and eat salmon has been impaired through historical circumstances of exploitation and colonization, at the same time Syilx Okanagan peoples also endure resulting intergenerational impacts of these events (Glavin, 1996). The impacts of the loss of salmon experienced by Syilx Okanagan people occurred within a much

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\(^1\) Use of capital letters for salmon and other common names of species indicates a specific context - Syilx people having a kinship relation with the species.
broader context of colonization for Syilx people that forced dietary assimilation and negatively influenced their well-being. Although the colonial impediments to salmon continue in the Okanagan River system, salmon revitalization by Syilx Okanagan peoples, which began in the early 90s, has been realized through the honouring of the Syilx worldview and its relation-based protocols and the inclusion of Western scientific knowledge. The customary relation-based protocols that were applied in the salmon reintroduction initiative itself establish that Western methods can be more successful and effective within Indigenous world views. This has been demonstrated by the return of a food, social and ceremonial fishery to the Syilx Okanagan Nation (Okanagan Nation Alliance, 2013).

**Syilx Okanagan Nation**

The Syilx Okanagan Nation is comprised of eight member communities of the Okanagan Nation Alliance, which include Okanagan Indian Band, Upper Nicola Indian Band, Westbank First Nation, Penticton Indian Band, Osoyoos Indian Band, Lower Similkameen Indian Band and the Upper Similkameen Indian Band as well as the Colville Confederated Tribes (Okanagan Nation Alliance, 2017a). The original people of the Okanagan (Syilx) were said to be wished here by the creator (Armstrong J.C., Derickson, Maracle & Young-Ing, 1993). They speak the Syilx language *nsyilxən*, which carries the teachings of the land and together holds “thousands of years of knowledge of healthy living” with the land and waters (Armstrong J.C. et.al., 1993). Archaeological evidence suggests that the lands of Syilx Okanagan people were occupied between 10,000 and 15,000 years ago (Baker in Webber & The En’öwkin Centre, 1990). The history of the meaning of being Syilx is recorded through oral teachings, often in the form of stories. Some of these teachings and stories tell about how the creator sent Coyote (genus,
Canis; multiple subspecies) to help change the world so that people could survive on this planet (Armstrong, Derickson, Maracle & Young-Ing, 1993; Hunn, 1999). Through this journey, Coyote wrote the laws on the land of why, where and how the Syilx Okanagan Nation are to have a full economy of everything that is needed including salmon (Okanagan Nation Alliance, 2018). These laws continue to have a permanent presence in Syilx knowledge systems. In fact, physical land markers that were placed by Coyote at distinct locations throughout the river systems indicate that agreements were made with the people to grant access to salmon. The markers of Muskrat, Beaver and Fisher that are present at a historic fishing camp at sx̱w̓sx̱n̓itkʷ (Okanagan Falls) at the south end of t’ucin (Skaha Lake) are an example of Coyote’s law that gives access to salmon to Syilx Okanagan in that area (Okanagan Nation Alliance, 2017b).

**Study Purpose**

As a Syilx scholar, my study was designed with a specific research approach that is intended to integrate diverse knowledges to answer the research questions. The research approach has a relational design that is fundamentally informed by Syilx knowledge utilizing an En’owkinwixw methodology through a postcolonial lens and applies an interpretive phenomenological (IP) method. I conducted interviews with Syilx Okanagan Nation members to increase my understanding of how the return of salmon has influenced the well-being of the Syilx Okanagan Nation community. I focused on two questions:

1) **How do Syilx Okanagan Nation members understand the influence of Sockeye Salmon reintroduction on their wellness?**

2) **How can an Indigenous centered relational research process promote a diversity of knowledge in regard to the role of traditional foods within an Indigenous context?**
To both appreciate and understand the meaning of Salmon’s return to Syilx Okanagan Nation communities it was important to understand the context of the loss and the associated state of un-wellness that is experienced as a result of this loss. This line of inquiry was informed by my own professional background as a registered dietician, and my awareness of the limitations of the field of dietetics to address the larger dimensions of wellness in my community. I therefore present the findings of this research in terms of what participants said about un-wellness and wellness. I then present spiritual connectedness, that is comprised of the senses of belief, identity and reciprocity, as a core to Syilx wellness, followed by the supporting Syilx traits of wellness. Understanding these terms in the context of salmon supports a further goal of the research to restore and integrate Indigenous understandings of wellness in public health disciplines for a more comprehensive approach for Indigenous people. Further, amidst timely concerns of climate change threats to local ecosystems, an examination of this Indigenous salmon restoration project can point towards important strategies and values to foster community resilience.

**Study significance**

The study provides an opportunity to explore the influence of a traditional food, which is a culturally accepted food from the natural environment (Willows, 2005) to culturally focused determinants of health and well-being. With the return of Okanagan sockeye salmon, there is an important relationship of the Syilx Okanagan people that is being strengthened. At this time, the value of traditional foods is often limited to the Western scientific construct of the nutritional value of food in the health literature (Washines & Peltier, 2010; Willows, 2005). As well, the value of food is framed within biomedical constructs of illness and healing (Adelson, 1998) that
are focused on individual behaviours. However, Indigenous understandings of the nutritional and non-nutritional values of food have been documented to be quite different than Western constructs (Adelson, 1992, p.185). At the same time, Indigenous values of traditional foods are “easily marginalized in comparison to the values of other cultures” and this influences management practices and approaches to research (Inuit Circumpolar Council, 2015, p.50). Such marginalization of traditional food values may also influence public health nutrition, programming, planning, policy and research.

What it means to eat traditional foods from an Indigenous perspective is rooted in Indigenous understandings of wellness. Connection to the land and all that this connection fosters in terms of social, physical, mental and spiritual well-being is an important component of wellness for Syilx Okanagan people. Yet public health nutrition approaches were designed within a context of broader colonial actions that created numerous disconnections amongst all facets of our well-being.

Dispossession of land and life sustaining sources intensifi ed as colonial land-use systems promoted direct economic production and accumulation of individual settler wealth (Belanger, 2014; Turner, 2005). Indigenous people were encouraged to adopt these settler values ‘to survive… and cultivate … a European way of living’ (Elder Mary Thomas in Turner, 2005, p.23) but later met challenges to an equitable attainment of livelihood. This has undermined Indigenous food systems resulting in a loss of biodiversity while promoting economics that support the ongoing conditions and result in insufficient food and poverty through ongoing dispossession of Indigenous lands. Further threats to Indigenous food systems are projected as climate change amplifies the existing risk to natural and man-made food systems which may be impacted by wildfire and flooding (IPCC [Core Writing Team, R.K. Pachauri and L.A. Meyer
(eds.), 2015). It is anticipated that the greatest burdens will be felt by disadvantaged people and communities including those dependent on salmon, as rising temperatures threaten salmon biodiversity placing Indigenous people in British Columbia among the most vulnerable to food insecurity (IPPC, 2015; Nesbitt & Moore, 2016). The pressures of climate change make it imperative that Indigenous knowledge is integrated into systems to better protect ecosystem health. Indigenous food sovereignty and food security are reliant on healthy ecosystems therefore integration of Indigenous knowledge will help to sustain Indigenous health and well-being.
Chapter 2: Background – Relationships with Salmon and Colonial Impacts

Syilx Okanagan relationship with salmon in a state of well-being

There has been a relationship between Syilx Okanagan people and salmon for as long as there has been both salmon and Syilx Okanagan people. Sockeye Salmon is a species of fish that has been a main food for Syilx Okanagan people for as long as there has been Syilx oral history and immeasurably longer than any settler knowledge of the area. Knowledge about this relationship is passed down through oral teachings of Syilx knowledge, such as Creation stories, that are told from generation to generation, and are sometimes now in written form. One such teaching is from a time before humans when Coyote broke the dam guarded by the Snipe sisters and released the salmon. This act ultimately fed the people as it brought salmon from the ocean in the south, up the Columbia River and into the Okanagan River and Okanagan Valley, British Columbia (Okanagan Nation Alliance, 2017; Mourning Dove, 1976).

Known as the world's most prolific historical salmon migration, the Columbia River system was a major food supply for Indigenous people as it hosted both large fish and game (International Columbia River Engineering Board, 1959; Lang & Carriker, 1999; The Confederated Tribes of the Colville Reservation, 2003). The salmon harvest was noted to be integrated with very organized social, trade and governing systems from a very early time. Early explorers and archeologists have described the abundance of salmon, the ease of harvesting and the presence of a trade economy and governance system of the Indigenous people along the Columbia River at Kettle Falls (Cline, et al., 1938; Hunn, 1999; Sam, 2008). This historical knowledge has been passed down and is known by Syilx Okanagan Nation leadership. Michael Marchand, who was a former tribal chairperson of the Confederated Tribes of the Colville
Reservation, notes that the Columbia was “the centre of Native trade and commerce, and a
touchstone for our cultures and traditions” (CBC News, 2018, May 29).

As many as 1000 families gathered at the historical Kettle Falls fishery signifying that it
was an important example of the advanced, social, economic and governing systems that were
established by Syilx people over a 10,000-year history and that many Syilx Okanagan Nation
families have ties to (Confederated Tribes of the Colville Reservation, 2003; Miller, 1990). The
edited autobiography of Mourning Dove describes details of these organized systems that
included the affirmation of a strong spiritual connection at a first salmon ceremony and
subsequent harvest under the direction of the Salmon Chief (Miller, 1999). As a noted staple
food, the salmon was eaten fresh and the women dried salmon on site for winter. It was also a
noted time for socializing and relationship building. Even as livelihood practices changed to
ranching and agriculture-based lifestyles, going to the river was still an important component of
life and the young people would still come down to the river to fish after the ranch work was
completed each day (Miller, 1999).

The teachings are that Coyote brought salmon home to the people in various locations
throughout the river system depending on their hospitality (Confederated Tribes of the Colville
Reservation, 2003). In his 2008 Master’s thesis, Syilx scholar Marlowe Sam, briefly described
fishing sites along the Okanagan River, methods of harvesting and the macro-nutrient
composition of salmon as well as other food species to the overall diets of Syilx Okanagan
people. His work particularly highlights the impacts of changes in the Columbia and Okanagan
river systems including the role the Okanagan river system had for providing salmon spawning
grounds (Sam, 2008). Understanding the importance of salmon to sustain well-being
historically, it is important to remember the salmon by continuing the intergenerational teaching
of Syilx history, knowledge and practice to sustain livelihood (Confederated Tribes of the Colville Reservation, 2003).

**Early colonial activities that stressed Syilx relationships with salmon**

The changes to the relationships Syilx Okanagan Nation had with salmon all took place within the context of broader colonial impacts to the Syilx Okanagan people, which took the form of a series of imposed decisions. The consequences of settler imposition of power and authority over Indigenous people and Indigenous lands were noted early in the settler colonial relationship. The strength and well-being of Syilx people upon arrival of the first Europeans in the early 1800s was recorded in the transcription of a 1910 Declaration to the Prime Minister Sir Wilfred Laurier that was made by Syilx Okanagan Chiefs along with other Interior Chiefs to reject BC Land Policies and demand fairness (Good Water, 2018; Okanagan Nation Alliance, 2018). As transcribed by Good Water (2018) the letter to the Prime Minister now commonly known as the Sir Wilfred Laurier Memorial, described how life had changed for the Interior tribes over the past 100 years of colonization. This important letter described relationships and impacts to food security and well-being.

The first European settlers were the French who found the people in each tribe to be “supreme in their own territory” (Good Water, 2018, p.102). The people were “happy, healthy, strong and numerous” (Good Water, 2018, p.103) as everyone had equal rights and access to everything they required such as “fire, water, food, clothing and all the necessaries of life [which] were obtained in abundance from the lands of each tribe” (Good Water, 2018, p.102). By the time the second group of Europeans (English), arrived in 1858, Syilx Okanagan peoples
were rearing livestock and using cultivation as well as continuing ongoing access of lands “from time immemorial to hunt, fish, graze and gather food supplies” (Good Water, 2018, p.104).

When the English settlers arrived, they were initially welcomed with friendliness and good faith by Syilx Okanagan people because their expressed intentions were to stay for only a short time and borrow the land with payment in return. The settlers made assurances that the Interior tribes would be free to access, travel, camp and harvest all food species. However, as the European settlers increased in number, they changed their policies towards the Syilx Okanagan Nation and Interior Tribes and began to impose restrictions, thus ignoring their promises (as transcribed by Good Water, 2018).

**Early legislative impacts**

Two significant legislative changes exerted European authority and drastically affected the well-being of Syilx Okanagan people by creating a breakdown of relationships for the Syilx Okanagan Nation. Syilx Okanagan Nation did not have input, nor did they consent to changes that were instituted through such legislation. The Oregon Treaty of 1846 was signed between the United States and the settler governments of Canada (Britain) and imposed a separation between Syilx Okanagan Nation communities north and south of the 49th parallel with the creation of the international border between Canada and the United States.

The second imposed legislative change, the 1876 Indian Act of the federal government of Canada was focused on assimilation. It was a policy to erase separate Indigenous nation’s identities and cultures by defining all of them as one cultural group, ‘Indian’. It gave the federal government control over most aspects of Indian life and was designed to destroy First Nations languages, cultures, customs and traditions (Okanagan Nation Alliance, 2018 p.160). One of the best-known implications of the Indian Act is the creation of reserves. Reserves created
separations between Syilx Okanagan Nation communities in Canada as each was assigned reserve lands that were not joined and that they could not leave. Reserves were assigned to Okanagan people without their consent and attempted to force them from their lands that they needed for survival (Okanagan Nation Alliance, 2018, p.160). The numerous limitations imposed by the Indian Act affected the ability to harvest foods, practice ceremony, be a part of the economy and stand up for Syilx Okanagan Nation rights (Joseph, 2018).

The Sir Wilfred Laurier Memorial letter documents Syilx Okanagan Nation and Interior tribes’ early resistance to the English claim of authority over Indians and Indian land (Indian Act). Even as early as 1910, the pressures of food insecurity were felt by the Syilx Okanagan Nation as the increased number of settlers was pushing the Interior tribes to the poorest lands that had no water for irrigation, limited pasture land, severe restrictions to lands for hunting, fishing and gathering, and depletion of salmon due to over-fishing by settlers. Syilx peoples and other Interior tribes were cast as trespassers in their own lands (Tait, 2008) and faced fines and imprisonment for such, as well as for breaking game laws in the same land that they were supposed to be free to access so that there would always be their food harvest (as transcribed by Good Water, 2018).

Residential schools, another well-known implication of the Indian Act, severed relationships for Syilx Okanagan Nation at the community and family level. Mandated attendance at residential schools, removed Syilx Okanagan Nation children from their rightful knowledge of the land and their way of being in terms of many things including Indigenous food sustenance. Instead of learning from their families, children were taught farming and ranching practices at school. To maintain knowledge of many aspects of Syilx Okanagan life, such as food sustenance, the land, water and ability to harvest and feast is needed. So, as well as posing
Inability to practice culture compounded other existing threats to well-being. One such threat to the Syilx Okanagan people was the destructive influx of unknown diseases that took their toll on the population. Exposure to communicable diseases such as small pox was noted to have significant impacts in the Columbia River area by the early 1800s (Hunn, 1999). This may have been a source of exposure to communicable disease that eventually made its way into Syilx communities north of the 49th parallel. For example, in the Salishan autobiography, Mourning Dove recounts how it seemed that nothing could stop the influence of communicable disease on Syilx Okanagan Nation communities north of the 49th parallel, as there was particularly high morbidity in some areas and a lack of medical aid (Miller, 1990). As well as the extreme physical stress experienced by Syilx people during communicable disease epidemics, a fear of the unknown may have also created a spiritual stress (Miller, 1990; Hunn, 1999). In my view this was an additive factor along with the illegality of cultural practice that drove Syilx spiritual belief underground to avoid further stresses or threats. This has prevented many nation members from knowing and participating in some cultural practices.

In the Sir Wilfred Laurier Memorial, the Chiefs spoke to the consequences of decisions that they didn’t agree to and raised the issue of “Conditions of living have been thrust on us which we did not expect, and which we consider in great measure unnecessary and injurious.” (Good Water, 2018). They were speaking about the state of food insecurity and increased disease and morbidity. The Chiefs were asking for an equal chance at making a living and extreme challenges to the ability of Syilx Okanagan people to provide for their own food security, creating reserves and confining Indigenous people to them, (Joseph, 2018) the Indian Act essentially made it illegal to be Syilx Okanagan, that is, to speak our languages, and practice our customs and traditions.
vowed to continue the struggle for better conditions, so long as justice was withheld and there was dissatisfaction and unrest among the Indian people. In doing so, the Chiefs said that they had united to ask for help from the Prime Minister and government in their fight for rights. Although Prime Minister Sir Wilfred Laurier was said to be sympathetic, he lost the election shortly after this presentation (Okanagan Nation Alliance, 2018) and colonial influences and unilateral decisions continued to impact food security and the well-being of Syilx Okanagan Nation members.

**Colonial impacts on land and water**

Numerous agreements and decisions with respect to water rights that affected the salmon and other species continued to be made through the 20th century without the involvement of Syilx Okanagan leadership (Sam, 2008). Settler decisions about land and water use that were imposed to serve settler economic interests in agriculture, salmon harvesting, mining and forestry resource extraction resulted in drastic reductions of Okanagan salmon species by the late 19th century (Armstrong J.C., 1998; Glavin, 1996; Sam, 2008). The expectation expressed by some of the Chiefs in the Memorial to Sir Wilfred Laurier, was that the Syilx Okanagan Nation and Interior Tribes would have a substantive role in terms of land, water and resource use and management. However, the colonization of what became British Columbia prior to the memorial, through both Indian Act provisions and provincial policy, was centered on exclusion of First Nations from water rights, through colonial doctrines that ignored Indigenous customary laws and that purposefully and inequitably identified individual [agricultural] land use as a privileged form of ownership in access to water (Matsui, 2009; Sam & Armstrong J.C., 2013). For Syilx Okanagan people, this later put increasing pressure on subsistence agriculture as access to water became more and more limited when settlers were granted first priority to water,
including that which ran through Indian reserves (Sam & Armstrong J.C., 2013). These provisions contributed to an erosion of social bonds and structures that are essential to self-sustainability and well-being at the individual and collective level (Alfred, 2009; Brown, et al., 2012).

The struggle for subsistence in relation to salmon and water began with the construction of numerous dams along the Columbia River through the 1900 – 1930s to manage water use for agriculture and the generation of hydroelectricity (Northwest Power and Conservation Council, 2019, Sam, 2008). These were later followed by additional dam construction and channelization of the Okanagan River that further infringed upon Syilx ways of life. Specifically, it revealed conflicting desires: the Syilx Okanagan people to live with the cycles of the season and access a broad land base for sustenance and survival; and the settlers, to manage or alter natural ecosystems to suit control over permanent agriculture.

The decisions to make changes to the Okanagan River excluded the Syilx Okanagan Nation member communities that were impacted and disregarded the need to maintain important spawning habitat for salmon (Joint Board of Engineers, 1946, Sam, 2008; Symonds, 2000). The controls for flooding that were completed in early 1950’s were to the extreme detriment of Syilx Okanagan people. Syilx Elders described the resulting drying of the valley bottomlands that had two significant impacts for Syilx Okanagan people that are still felt today (Sam & Caldwell, 2004). Firstly, there was a loss of numerous Indigenous food species including plant foods, animal foods and salmon species. Secondly, dry valley bottoms provided poor conditions for agriculture for Syilx Okanagan people engaged in livestock rearing (Sam & Caldwell, 2004).

The results outline the compounding consequences of imposed restrictions to land and way of life that ultimately negatively influenced food sustenance and well-being. Poor access to
water made it extremely difficult for Syilx people who were returning to their families after being trained in agriculture practices such as ranching and farming at residential school to make a living. Social conditions changed and negatively affected individual and family well-being. For example, many members who were returning to their families instead had to migrate elsewhere for employment (Sam & Caldwell, 2004).

Provision of health services and health research as a colonial impact on well-being

During the first half of the 20th century, Indigenous populations in British Columbia were said to have reached their lowest numbers because of communicable diseases that were brought by the settlers (Kelm, 1998). A subsequent fear of the threat of contagion by the settlers motivated continued colonization of Syilx ways of being through the lens of medical care that identified Indigenous health as a crisis (Kelm, 1998). Colonization was positioned as a humanitarian effort through the lens of medical care. It was supported by the federal provision of medical care for “Indians” through the Indian Act that provided doctors and hospitals for Indigenous people that settlers could also access (Kelm, 1998).

Although the recording of statistics explicitly highlighted the health needs of Indigenous populations, the focus was placed on identifying illness despite evidence of wellness with respect to some chronic conditions (Kelm, 1998). In this way, problematizing the health of Indigenous people created a moral basis for colonization by providing medical services for Indigenous people (Kelm, 1998) while ignoring the conditions that created food insecurity and contributed to illness. The provision of Western medical care was also an assertion of a moral superiority that pathologized Indigenous people and our customary practices that are integral to food sustenance, healing and well-being. The asserted superiority of Western medicine framed illness of Indigenous people as a result of inadequate assimilation while gathering for ceremonial practices.
was seen as dirty and creating pathology (Kelm, 1998). The medical need for cleanliness and the prevention of disease transmission from person to person triggered amendments to the Indian Act that increased medical services and justified racial segregation in work place, residence, hospitals and schools while at the same time the Act criminalized both ceremony and Indian medicine (Joseph, 2018; Kelm, 1998).

The Canadian health system was partly born from these colonial initiatives that forced starvation and disease for Syilx Okanagan Nation, and later led to joining the resistance that formed the 1979 Indian Health Policy (Government of Canada, 2014). However, jurisdictional issues continued to restrict access to quality and culturally relevant care for numerous reasons including exclusive reliance on Western science and concepts of well-being (Richmond & Cook, 2016). This inequity continued even when Indigenous individuals became trained health professionals and as nations began to control and deliver their own health services because they were trained by a singular view of Western medicine that is incongruent with First Nations culture, beliefs and practices (Read, 1995).

Reports such as the 1996 Royal Commission on Aboriginal Peoples (RCAP) (Canada, 1996) and the more recent Truth and Reconciliation Commission (TRC) of Canada (2008-2014) are providing evidence of the colonial impacts to Indigenous people in Canada. They also call for actions to amend the numerous inequities identified and increase self-sustaining capacities. In British Columbia a recent example is the 2013 commencement of a 10-year plan by the First Nations Health Authority (FNHA) to assume the role of providing services previously delivered by the federal government. Federal, provincial and First Nations have been brought together to resolve jurisdictional issues and create a health promotion and service delivery that is guided by
communities and nations and incorporates the strengths of Indigenous cultural knowledge to “create healthy, strong, more vibrant communities” (First Nations Health Council, 2011).

**Colonial impacts on Indigenous foods and health**

Colonialism has undermined Indigenous food systems and collective well-being ultimately creating current health problems (Daschuk, 2013; Kelm, 1998; Mosby & Galloway, 2017). Forced assimilation of Indigenous lands resulted in losses of ecological integrity of the land and biodiversity of Indigenous food species, loss of health benefits attributed to such food species and increased vulnerability to disease (Raschke & Cheema, 2007). It also meant a diminishment of important Indigenous economic, political, social, judicial and relationship structures (Raschke & Cheema, 2007). Inequities that impacted Syilx people were shaped by forced dispossession and assimilation of knowledge that created disconnections from the land, language and community (Alfred, 2009; Brown, McPherson, Peterson, Newman & Cramner, 2012). Colonial structural policies further constrained Syilx way of life and imposed Western world views, which were felt in relation to changes in the land and Indigenous foods, nation, community and family structures, and individual well-being.

In the early 1900s, Syilx leaders observed the impact of colonial government practices in creating insufficient food and poverty through colonial economic activity and government policies (Goodwater, 2018). Settler economic interests which were played out through the fur trade and commercial overharvesting of salmon, had a great impact on the land and river systems such as the Columbia and nearly decimated important food sources for the Syilx Okanagan Nation and other Indigenous peoples in BC (Armstrong J.C., 1998; Glavin, 1996; Newell, 1993; Sam, 2008; Turner, 2005). Numerous important Indigenous food sources were also put at risk in the Interior of British Columbia by the forced colonization of the land by settler crops and
Western agriculture practices that demanded high volumes of water, as well as the overgrazing of lands by cattle (Turner, 2005).

Indian reserves protected both agricultural and Indigenous based sustenance for Indigenous people yet limited their ability to develop an economy. Participation in and benefit of food-related economies such as agriculture and fishing were limited by a succession of Indian Act and Fisheries Department permitting processes that racially stereotyped and actively marginalized Indigenous individual and collective participation in settler-controlled food economies (Alfred, 2009; Belanger, 2014; Joseph, 2018; Newell, 1993). Food security was further affected by federal vagrancy laws instituted in 1892 that could prosecute Indians for camping freely on their more expansive ancestral lands to harvest foods for sustenance, because these activities were not employment (Tait, 2008) and did not support settler capitalist belief systems. As well, the imposition of colonial regulations of fishing and hunting has infringed on Syilx ability to provide adequate food supplies for extended family and community by imposing individual harvest limits (Province of British Columbia, 2019). Colonial policies ignored the application of traditional knowledge as sustainable management practices which has furthered Indigenous food insecurity by contributing to serious declines in Indigenous food sources as practices shifted towards production/ capitalist-based enterprises (Glavin, 1996; Newell, 1993).

Political, economic and environmental factors have impacted the availability of health promoting Syilx foods which has contributed to an assimilation to a Western diet that has contributed to ill health (Lynn, et al., 2013; Raschke & Cheema, 2007; Truth and Reconciliation Commission of Canada, 2015). This assimilation was facilitated by policing and punishing the use of Indigenous language and cultural practices that limited intergenerational knowledge
transmission amongst families (Loppie-Reading & Wein, 2009). This has meant an extinction of some specific Indigenous foods knowledge, which puts culture at further risk (Wall, 2004).

Syilx Okanagan Nation resistance to cumulative colonial impacts to well-being

Syilx people experienced a great feeling of elation when some Okanagan Nation Elders, for the first time, in their lifetime, welcomed a dear relative, Salmon, home to sx̱wín̓itkʷ (Okanagan Falls) in 2010 (Okanagan Tribal Council, 1984). This success has been attributed to the ability of the Syilx Okanagan Nation to bring together and apply Syilx and Western knowledge through collaboration engaging the involvement of scientific, political and financial partners on both sides of the Canada and United States border and by supporting cultural and social practices.

Okanagan sockeye salmon restoration initiative

The salmon restoration initiatives arose from a collective agreement of Syilx Okanagan leadership (elected leaders, elders, technical staff and knowledge keepers) made in the 1990s to move forward in bringing the salmon back to the Okanagan River. At that time, Okanagan sockeye (and other salmon species) were observed in limited numbers in the Okanagan River systems. As a transboundary species, the movement on salmon restoration strengthened relationships between the Okanagan Nation Alliance member communities on both sides of the 49th parallel, which was signified by the signing of the “Syilx Unity Declaration” (Syilx Unity Declaration, 2010) and supported important funding relationships that allowed the work to initially begin. ONA fisheries worked collaboratively with federal and provincial fisheries scientists to determine the feasibility of a reintroduction initiative. Once identified as feasible, the initiative included 1) habitat restoration to extend spawning locations and remove migration
barriers 2) brood stock (for breeding) for hatchery rearing and then subsequent fry release in to Skaha Lake, and 3) monitoring and evaluation of Sockeye Salmon and other resident fish within the lakes and rivers system (Okanagan Nation Alliance., (n.d.)).

The work was informed by Syilx knowledge through program design and planning as technical fisheries staff worked with a Traditional Ecological Knowledge group. The existing responsibilities for ongoing ceremonial reciprocal actions were continued and started to be supported by the Okanagan Nation Alliance at the Annual Salmon Feast at s̓wəƛ̓n̓itkʷ (Okanagan Falls). The Salmon Feast is a way to bring the people together and to preserve the traditions and culture of the Syilx Okanagan people and continues to build a sense of community and increase awareness about the fisheries initiatives (Okanagan Nation Alliance, 2013). Social, cultural and awareness efforts continued to evolve as opportunities arose to educate and build relationships with Syilx, settler populations and salmon. Examples include strengthening relationships with settler residents of the Okanagan who volunteer for habitat restoration initiatives. As well, ongoing relationships are being nurtured with children in public and Okanagan Nation schools who participate annually in Sockeye Salmon fry rearing in the classroom and the public ceremonial release at the annual Sockeye Fry Release Ceremony in Penticton.

The first key milestone, to enhance fish passage was achieved at McIntrye dam in 2009 during the 5th year of the initiative (Okanagan Nation Alliance, 2014) resulting in a Sockeye Salmon return in 2010, that although still significantly less than historic levels enabled the return of fishing to a historic fishing site at s̓wəƛ̓n̓itkʷ (Okanagan Falls). The increased salmon returns initiated a harvest for food, social and ceremonial distribution to member communities.
Communities distributed salmon to their early childhood programs, schools, and health programs as well as to members who wanted salmon.

The nation continued to build local technical capacity with the construction of the *kl cp̓əlk stim̓* (fish) hatchery that opened in the 10\(^{th}\) year of the initiative and saw a release of fry in the 11\(^{th}\) year. By this time, the Sockeye Salmon returning to the Columbia River were 85\% Okanogan River source, which is one of only two viable Sockeye stocks in this system (Okanagan Select a brand of Okanagan Nation Aquatic Enterprises (OAE) Ltd., 2016).

In the 12\(^{th}\) and final year of the funded initiative, the resilience of the initiative was tested in response to climate-related impacts. That year (2015) was reported as the hottest year on record and a thermal barrier to fish migration was naturally created in the Columbia River. Although the number of Sockeye Salmon that entered the Columbia was as strong as previous years, the number that were able to make it to the Okanagan River was less than a quarter of past years. The reliance on relationships that were strengthened in the initiative with the CCT, permitted member communities in Canada to still receive salmon harvested on the Columbia River in 2015/2016 (Okanagan Nation Alliance, 2016). This sustainability model based on relationship was a platform for the Okanagan Nation Alliance to build further capacity in terms of Indigenous food systems.

As a viable model for Syilx Okanagan food sustainability, the success of the Okanagan sockeye salmon restoration has gained international recognition at venues such as Slow Food. This is a global, grassroots organization, which aims to maintain diversity of local food cultures and traditions, and regain people’s interest in the food they eat, where it comes from and how our food choices effect the world around us (Slow Food, 2015). Okanagan sockeye salmon has been favoured over other Sockeye sources by executive restaurant chefs in British Columbia
In the development of a financial sustainability model, the initiative has participated in a responsible trade program with other Indigenous fisheries, which makes Okanagan sockeye available in select local retailers and restaurants during years that allow an economic fishery (Okanagan Nation Alliance, 2013). Additional steps have been taken to support Syilx Okanagan Nation food sustainability such as a cold storage and storefront food hub which are believed to contribute to the development of harvesting and distribution models that fit with Syilx sustainability principles such as a sustainable commercial salmon harvest (Okanagan Nation Alliance, 2017c).

**Early Syilx resistance**

The restoration of Okanagan sockeye salmon initiative was successful in part because of the momentum created in the early and ongoing fight for rights of the Syilx Okanagan Nation and the Allied Tribes of the Interior of BC. One of the first acts of resistance was a demand for equity and fairness of living conditions that was made in the 1910 Sir Wilfred Laurier Memorial letter (Okanagan Nation Alliance, 2018). This is in keeping with the continued assertion of Syilx Okanagan Nation’s jurisdiction and responsibility over the stewarding of their land, resources and quality of life of their citizens’ (Okanagan Nation Alliance, 2017a). Notably, restricted access to medical care (Kelm, 1998) actually maintained space for Indigenous medicine to continue to be practiced. On the other hand, changes in the health of populations (e.g., communicable diseases) made it so that Syilx and Interior Tribes saw the relevance of Western medicine for their communities (Kelm, 1998).

This motivated the fight for health as a human right, which was central to Syilx Okanagan Nation resistance with many actions taking place within the second half of the 20th century. It included presentations to a Joint Senate - House of Commons committee in the mid-
1940s along with Interior Tribes, to have the option of Western medicine accessible (e.g., Hospital births) as an Aboriginal right (Kelm, 1998). In 1969, the federal government attempted to abolish the Indian Act and all of the Crown’s inherent responsibilities to Indigenous people as a final assimilation into the Canadian society (Joseph, 2018). The Syilx Okanagan Nation was prominent in a resulting collective movement of Indigenous leaders throughout BC to oppose this action and in 1974 took over the Department of Indian Affairs Offices in their district (Okanagan Nation Alliance, 2018).

This soon led to the opening of band offices on reserves that were employing their own community members for various roles including a ‘Community Health Representative’. The 1979 Indian Health Policy began to define some of the responsibilities of the state to the health of Status Indians as defined by the Indian Act. Three pillars that are still areas of Syilx Okanagan concern framed this Indian Health policy: community development, advocacy of Indian interests to Canadian Society and the Canadian Health System (Government of Canada, 2014).

Amidst this context and the pluralism that maintained the retention of Indigenous medicines and modalities of well-being, opportunities to fill existing gaps in Western views of health and disease with Syilx views of well-being (e.g., spiritual and cultural domains) have emerged. Still, conflicting perspectives of Western and Syilx conceptions of well-being highlights both challenges and opportunities within our communities. On one hand, we are positioned to fight for equity of standard of care and living based on Western science. While on the other hand our resistance to assimilation, requires us to articulate our own modalities for health and healing.
Syilx advocacy for justice and respect for rights of their people and salmon represent a continuation of this resistance and our reclaiming of our unique views of health and healing. (CBC News, 2018, May 29; Crawley, 2019; Pacific Salmon Commission, 2018). In 2004, the Elders remembered the good feelings and happiness that was present when the people were able to fish prior to the building of dams (Sam & Caldwell, 2004). This memory fuels the Syilx Okanagan Nations persistence to return salmon to the river system that with the application of both Western and Syilx knowledge has been a successful and on-going act.
Chapter 3: Literature Review

While the context of colonial roots of health services that ultimately affected Syilx Okanagan Nation was provided in Chapter 2, this review examines academic literature to explore Indigenous concepts of wellness in relation to Indigenous foods and Indigenous foods restoration. It provides support for the argument that existing public health research and programming has had limited relevance for Indigenous people. Respectful positioning of Indigenous knowledge and Indigenous foods can provide rich insight to inform future public health programming to support Indigenous wellness.

A relational understanding of wellness and Indigenous foods

To understand Indigenous foods as well as their role in wellness requires a relational understanding that conveys the relationships between living beings that are considered both relative (family) and provider of sustenance. It also requires an understanding of the role of humans in relation to the greater ecosystem that is necessary to have well-being. This relationship can be viewed through discussion of wellness, meaning of Indigenous foods, and cultural keystone species.

Wellness

Wellness is described by Indigenous peoples as a positive process of life and a way of being that includes concepts of balance and wholeness (Buehler, 1992; Gaudet & Chilton, 2018; Panelli & Tipa, 2007; Read, 1995; Simpson, 2011; Weaver, 2002; Wolsko, Lardon, Hopkins, & Ruppert, 2006). Common to an array of Indigenous perspectives is the role that original instructions from the creator play by providing guidance on many things, including how to work towards wellness by living in balance (Weaver, 2002). Components of balance have been
described in fours such as mind, body, spirit, heart (Weaver, 2002) or mental, spiritual, family (nation), and physical (Panelli & Tipa, 2007). For the Syilx Okanagan, the Four Food Chiefs offer a model of balance within the life-force of the land’s living things (Armstrong, 2009). Here mental, spiritual, social and physical aspects of our being are balanced within a healthy system of interdependence that is the individual, family, community and the land (Armstrong, 2009). This is consistent with other Indigenous conceptualizations of wellness that also link wellness to interdependent physical/material, social, cultural and spiritual relationships and place emphasis beyond the individual to family/community as well as to land and water (Buehler, 1992; Gaudet & Chilton, 2018; Okanagan Nation Alliance, 2009; Panelli & Tipa, 2007; Read, 1995; Weaver, 2002; Wolsko, Lardon, et al., 2006).

An essential component of relationships that promote wellness is respect (Adelson, 1998; Gaudet & Chilton, 2018; Read, 1995; Weaver, 2002; Wolsko, et al., 2006). Values such as respect are required to achieve both healthy land and people (Panelli & Tipa, 2007). This also provides a link between wellness and cultural identity and understanding of land-based heritage throughout the course of life (Adelson, 1998; Panelli & Tipa, 2007; Weaver, 2002). Provided by the land, food is central to common values of wellness such as respect, cooperation and sharing (Adelson, 1998; Chowdhury, et al., 2000; Wolsko, et al., 2006). Some scholars hesitate to develop definitions of wellness recognizing that wellness is inseparable from issues of history, identity and resistance and thus what is conceived as wellness may vary over time and place to maintain relevance to an ongoing lived experience (Adelson, 1998).

Previous academic and health planning reports that have included topics of wellness for the Syilx have highlighted the concepts of balance of specific elements such as one’s mental, emotional, physical and spiritual self (Palmer, 2004) with elements of culture, language and a
connection to the land being very important (Okanagan Nation Alliance, 2009; Turner, 2005). All of these reports reflect a consensus that well-being must encompass the community (Liman, 2011; Okanagan Nation Alliance, 2009; Palmer, 2004). Environmental stability is also important to our well-being as the health of the land is inextricably linked to the health of the people (Liman, 2011). Salmon is identified as a key indicator of well-being for Indigenous people through the words of the late Billy Frank, Jr., former Chairman of the Northwest Indian Fisheries Commission “Salmon are the measuring stick of well-being in the Pacific Northwest” (Smithsonian National Museum of American History, 2013 as cited in Amberson, Biedenweg, James, & Christie, 2016).

**Meaning of Indigenous foods**

The meaning of traditional foods to wellness is mentioned but not widely discussed in public health nutrition literature. Although the most recent version of Canada’s Food Guide remains inclusive of cultural foods, they are valued modestly, as contributors to enjoyment and connection between individuals, within an existing frame of evidence based healthy eating (Government of Canada, 2019a). Dominant views of food in relation to our wellness continue to uphold the narrow scope of understanding of Western scientific tradition and the physical benefits that can contribute to health. While Indigenous views of food are often considered as medicine, current Western nutritional science practitioners interpret this through Western science concepts such as functional foods (Lipski, 2010) which tend to reduce foods to items that deliver specific nutrients or health benefits yet fails to consider relationships (Kirschenmann, 2008). When (traditional) foods are viewed from the Western scientific perspective of ‘nutritionism’ which is a reductive focus on the nutrient composition of food and health they are easily problematized by being dichotomized as either good or bad based on their nutrient composition.
A lack of understanding also contributes to the tendency of cultural eating patterns to be discussed as barriers to the prescriptive approach to healthy eating using Western science tools such as Canada’s Food Guide prior to 2019 (Beagan & Chapman, 2012; Government of Canada, 2019a).

Indigenous understandings of ‘nutritional value’ differ from the dominant paradigm within nutrition science as Indigenous foods are be measured by spiritual or behavioural rather than physical characteristics (Adelson, 1998; Chowdhury, Helman, Greenhalgh, 2000). The Four Food Chiefs story of “How Food Was Given” is literature that presents a nutritional priority of Syilx foods for Syilx people “Now they had to decide how the People-To-Be would live and what they would eat” (Okanagan Tribal Council, 1984). The Food Chiefs are presented in the *captikwil* in a construct of nutritional priority: *sk’maxist* (meat from animals and birds), *ntytyix* (salmon and other water species), *sp’iƛ’m* (roots and underground plant food sources), *siyaʔ* (berries and above ground plant food sources) (Okanagan Tribal Council, 1984). This *captikwil* also presents Syilx relationship with the Four Foods in equal quantities and may suggest that the quantity required from each group is proportionate. This presentation of the Four Foods is consistent with ethnobotanist Turners’ findings that plants comprised 50% of the total diet caloric contribution of southern Interior Indigenous peoples (1997). The meaning of this literature is identifiable by all Syilx who have learned and have a relational understanding of the story. As such, Western nutrition science applications have either broken or not considered the needed relationships with [Indigenous] foods, that are required in Indigenous perspectives and that food activists currently ponder. That is “What would happen, for example if we were to start thinking about food as less of a thing and more of a relationship?” (Pollan, 2007). When the relationships with food are broken, their potential to ensure well-being is reduced.
These relationships to food and the living systems and beings that are connected through them, are integral to Indigenous meaning of food that are common to Syilx peoples and other cultures such as Native Hawaiian and Punjabi immigrant populations in North America. These groups share cultural and psychosocial meanings of food that acknowledge time-honoured traditional knowledge and express positive qualities of well-being such as pride in culture, social and emotional connection to home/land and family and also a way to show caring and happiness to those you provide food for (Chapman, et al, 2011; Lasserter, 2011). Food provides an important means of interacting in numerous social and emotional contexts (Swift & Tischler, 2010). Discussing these different meanings of traditional foods shines a light on the positive aspects of cultural foods that are rooted in wellness.

Accepting that to be effective in promoting health, nutritional science needs to become more diverse and consider realms of wellness beyond the physical, dietetic practice is starting to include more emotional and mental well-being approaches such as intuitive eating and mindful eating philosophy and health at all sizes (Mathieu, 2009). The most recent version of Canada’s Food Guide (Government of Canada, 2019b) has moved away from the prescriptiveness that formerly problematized cultural eating and has become better situated within the contexts of individual relationships with food, yet it still falls short as a tool to promote and protect Indigenous food systems.

**Cultural continuity**

Cultural continuity has been reported as foundational to physical and mental health in thriving First Nations (Chandler & Lalonde, 1998; Oster, et al., 2014). It is the maintenance of Indigenous cultural knowledge transmission between generations of intact families and communities (Loppie-Reading & Wien, 2009). Indigenous food harvesting such as salmon
provides an important dimension of cultural continuity (McIvor, et al., 2009; Oster, et al., 2014). It fosters relationships between individuals, families and community because it brings the people together for the social, political, ceremonial, economic and harvesting actions required to establish the physical, social and governing structures to sustain salmon (Loppie Reading & Wein, 2009). Indigenous food harvesting as a dimension of cultural continuity is an important aspect of decolonizing diet and lifestyle practices, by regaining a perspective of collective responsibility as well-being (Martin, 2011). The effort to sustain salmon for Syilx Okanagan Nation members fosters cultural continuity and has important implications for well-being.

**Cultural keystone species**

A cultural keystone species is a plant or animal species that is culturally significant for Indigenous people. They have a prominent role in Indigenous value systems because they contribute greatly to wholistic well-being. They shape the cultural identity of a people and have fundamental roles as a staple or emergency food, in technology and material uses, as medicine and in spiritual practices (Garibaldi & Turner N., 2004). Cultural keystone species have significant influence on social systems and are often featured prominently in the narratives, teachings, language and vocabulary of a culture (Garibaldi & Turner N., 2004). Derived from the term ecological keystone species, a specific species of plant or animal having a particularly large influence on the ecosystem; cultural keystone species can also define the complex human-ecosystem relationship and the influences that human social interactions have with the ecosystem (Garibaldi & Turner N., 2004). They mark extensive and long-term human-species interactions that demonstrate a cultural continuity of landscape use by Indigenous peoples and associated management practices that have endured through time and across generations despite many decades of colonialism (Donatuto, et al., 2011; Garibaldi & Turner N., 2004). Subsequently,
such a designation provides understanding of the role that a species may have in well-being that sees a deeply meaningful, culturally oriented relationship between humans and all living things that may further future initiatives of species restoration and wellness (Donatuto, et al., 2011; Garibaldi & Turner N., 2004).

Numerous culturally prominent Indigenous foods have been identified as cultural keystone species for Indigenous people with links to the Northwest coast including shellfish, red laver, devils club, saskatoon berries, Wapato root and salmon (Donatuto, et al., 2011; Garibaldi & Turner, 2004). Prominent individual uses go beyond food staples and material uses to having vital roles in moral, cultural, healing and spiritual belief systems (Donatuto, et al., 2011; Wall, 2004). For example, for the Hopi, corn provides a vital connection to spirituality by establishing a reciprocal kinship relationship of responsibility and care that sustains Hopi culture as corn provides for the Hopi like a parent does, and the Hopi cultivation of corn is similar to the care provided for children (Wall, 2004). Cultural keystone species such as the corn valued by the Hopi, shellfish for the Swinomish, and seal for the Inuit provide a reciprocal link or an ecological and spiritual codependence that defines an Indigenous identity and state of well-being (Borré, 1991; Donatuto, et al., 2011; Wall, 2004). Similarly, individual identity can be tied to actions that sustain collective relationships with cultural keystone species (Borré, 1991).

Cultural keystone species invite a more comprehensive view of well-being that considers more explicitly the connection and relationship among all living things by integrating Indigenous knowledge into understandings of ecosystem and human well-being, cultural knowledge and environmental knowledge can be woven together to strengthen protection for the natural world (Garabaldi & Turner, 2004; Helfield & Naiman, 2006). Salmon is a key example of a keystone species recognized as both ecologically and culturally significant. Indigenous knowledge has
started to be integrated into Western science traditions in research, natural resource assessment authorities and legislations. Initiatives such as the “COSEWIC Aboriginal Traditional Knowledge Subcommittee” show great potential to improve the quality of federal government decisions by bringing Indigenous knowledge that is not included in scientific literature in to the process (Durie, 2004; Government of Canada, 2018a; Harrison, Rybråten, & Aas, 2018). Indigenous knowledge has both the authority to influence needed ecological restoration and is the means by which we come to a better understanding of wellness.

**Syilx Foods**

Historical records demonstrate Syilx relationships with Indigenous foods through time, and ethnographic studies describe many of the ways that those relationships have and continue to be nurtured as an integral part of life. Numerous ethnographers have recorded and organized various traits such as food harvesting methods and protocols, social organization patterns, beliefs and ceremonies related to Indigenous foods of the Syilx (Bonneau, 2013). Ethnographies and descriptive ecologies have also been completed for food plant species (Bandringa, 1999). Recent environmental studies of fish species that are known Indigenous food sources of the Syilx were completed to better understand the food systems of these resident food fish as well as contaminant concerns (Benson, February 2012; Benson, September, 2012; Wright, 2006). Other studies related to traditional foods and health have been intended to develop community principles of forest management that integrate Indigenous knowledge of the respective ecosystems and have focused primarily on plant foods (Liman, 2011; MacPherson, 2009).

None of these studies has been specifically focused on well-being. Singular components of well-being have been addressed or identified such as connection to identity, ecosystem related
health issues, physical properties of Indigenous foods and harvesting, as well as intergenerational traditional food knowledge transmission, and links between land and human/community cultural health and self-determination (Benson, 2012; Bonneau, 2013; Liman, 2011; MacPherson, 2009; Wright, 2006). Although many aspects of wellness have been identified a full description of wellness that includes a balance of the aspects of our being (social, physical, mental, spiritual) could not be found in a singular study.

**Local traditional foods management**

Indigenous communities have engaged in a variety of management techniques that are employed by individuals to preserve traditional foods in their local environments. Within the southern interior of British Columbia and along the Columbia River through Oregon state, Indigenous groups employed local management techniques of controlled burning, transplanting and human translocation to enhance access to Indigenous plant foods (Armstrong C.G., Dixon, & Turner, 2018; Bandinga, 1999; French, 1999; Turner N.J., Boelscher-Ignace, & Ignace, 2000; Turner, 2005). In some cases, these management practices were noted to be role-specific skills obtained through traditional ecological teachings of harvest that cared for the land (Armstrong C.J., et al., 2018; Bandinga, 1999).

Gavin (1996) and Newell (1993) have both described the success of traditional fisheries management techniques that sustained a viable and prosperous fishery for thousands of years. There is also a noted historical example of innovative human translocation as an emergent response to a disastrous rockslide that blocked an already restricted passage of Fraser River sockeye salmon (Turner N.J., 2005). In this case, Indigenous harvesting tools allowed for a live catch that preserved the life of the salmon as they were transported by basket to a flume way so
that they could continue upriver (Turner N.J., 2005). This is just one example of a community local management practice that ensured sustenance from the land.

**Restoration of Indigenous foods**

There are several examples of ecological restoration that have been initiated and led by Indigenous nations. These initiatives have integrated Indigenous knowledge of Elders and knowledge keepers to strengthen both physical and cultural environments. Two examples in the literature demonstrate how restoration returns aspects of well-being beyond physical food sources or ecology. The return of sturgeon after an enormous collapse in the early 1900s has returned a source of sustenance for generations of Anishinaabeg at Rainy River First Nation (LaDuke, 2005). By the early 1990s the Rainy River First Nations started the first native run fish hatchery to restore one of the last populations of sturgeon in the region (LaDuke, 2005). The Anishnaabeg of Rainy River consider sturgeon a longstanding relative of theirs and link the recovery of sturgeon to an important strengthening of their community (LaDuke, 2005). The Elders know that strengthening the sturgeon population will strengthen the people because the fishery has always been an important part of the traditional economy (LaDuke, 2005).

The efforts of the Yakima Tribal members to restore wetlands within their territory in the 1970s is another example of Indigenous-led ecosystem restoration initiative that revived an important cultural belief that if you take care of the plants and animals, they will take care of you. In this case, successful restoration of a wetland ecosystem brought back the Wapato potato, an important food source that had not been seen for some time, an unanticipated benefit (Washines & Peltier, 2010). Through this restoration, land that was developed for agricultural use was returned to a more natural wetland ecology. The restoration approach combined
Western scientific methods along with the knowledge of tribal Elders. An integral component of the restoration included the strong connection of the Yakima people to the land and the practice of traditional spiritual ceremonies (Washines & Peltier, 2010). These Indigenous-led restoration efforts ultimately speak to the relationship between ecological stewardship and the ability to establish systems of support, sustenance and well-being.

**Reintroduction of Indigenous foods**

Although re-establishing previously fragmented relationships with Indigenous foods and reintroducing them to contemporary life have been noted to have challenges (Robidoux, Haman, & Sethna, 2009), there are examples of Indigenous food reintroductions that have mobilized and united both individuals and communities. The Nuxalk Food and Nutrition program that took place in British Columbia in the 1980s was one of the first Indigenous food revitalization programs. It mobilized the people of this coastal Nation to participate in activities to revitalize their own Indigenous foods such as the Indigenous foods garden and the teaching of harvesting practices (Kuhnlein, Erasmus, Spigelski, & Burlingame, 2013). To garner federal financial support for the initiative, many BC Chiefs were lobbied to support the initiative which likely spurred an ongoing interest in protection and revival of Indigenous foods for other Indigenous groups in BC (Leech, S.M, Whittaker, C., and the Doig River First Nation, 2016). Since then many significant contributions have been made by academics petitioning for the need to restore Indigenous foods systems such as the many who completed work through the Center for Indigenous Peoples’ Nutrition and Environment (CINE) at McGill University. These contributions have supported advocacy for cultural renewal & ecosystem restoration that can strengthen the future of sustainable food systems (Kuhnlein, 2014).
Other Indigenous food reintroduction and revitalization efforts discussed in the literature identify the opportunity and need for individuals to become more connected and have opportunities to learn traditional food knowledge (Bagelman, 2018; Gendron, Hancherow, & Norton, 2017; Mundel & Chapman, 2010). An urban Aboriginal Indigenous foods garden program has been reviewed as a decolonizing approach to health promotion that offered an unprecedented opportunity for connection to land and an Aboriginal identity (Mundel & Chapman, 2010). Only one study that I found in a public health journal discussed reclamation of Indigenous understanding of responsibility in terms of food security (Delormier, Horn-Miller, McComber, & Marquis, 2017). Examples of local Indigenous food management, restoration and reintroduction demonstrate the vital links to well-being that are present between individuals, families, communities and the land and all living things as an ecosystem. However, examples found in the literature have not explicitly explored effects on a wholistic view of wellness.

Examining public health nutrition in Indigenous Populations

Singular world views

In many ways, public health nutrition programming in Indigenous communities has been a part of the ongoing colonization of Indigenous people in Canada through the application of a singular Western scientific world view. Early health statistics on Indigenous peoples in BC emphasized health problems and overlooked strengths (e.g., low rates of chronic disease) (Kelm, 1998). Nutrition scholars, Beagan and Chapman (2012) have identified the problematic nature of nutrition knowledge being interpreted as something that is both culturally neutral and objective. This is exemplified in the Canada’s Food Guide, which has wide-reaching consequences because of its influence in most nutrition assessment and programming. These
approaches are both oppressive and detrimental to Indigenous well-being. Furthermore, the Canada Food Guide may be detrimental to Syilx well-being because it is a dietary model that is situated within an agricultural food production economy that jeopardizes land available for Indigenous food harvesting and water resources needed for fish habitat. Although more evidence regarding environmentally sustainable diets is needed to further inform dietary guidance (Government of Canada, 2019b), this model fails to consider Indigenous values of food (Adelson, 1998) as well as the requirement for access to sustainable healthy ecosystems and Indigenous land-based knowledge, to access Indigenous foods. These gaps in understanding ultimately threaten cultural safety in nutrition service delivery for Indigenous peoples (Matthews, 2017). This narrow view of health that excludes social, cultural and spiritual aspects of well-being contributes to subsequent colonization of our thinking and perpetuation of inequities. It also fails to nurture relationships to land that facilitate our well-being, not just in terms of harvesting, but in terms of sustainability of the planet (Willett, 2019).

**Promoting the health of individuals**

Western theories of health promotion and population health such as social ecological theory (SET) and social determinants of health (SDOH) aim to account for the broader environments and conditions that impact individual wellness; however, they fail to include many aspects of wellness that are important from an Indigenous perspective (Ansari, Dixon, & Browning, 2013; Fisher, et al., 2005; Whittmore, D’Eramo Melkus, & Grey, 2004). Indigenous perspectives view well-being collectively within the context of societal, political, environmental, eco-systemic and historical factors of colonial land dispossession and assimilation policies (Delormier, et al., 2017; Willows, Hanley & Delormier, 2012). The SDOH of the Public Health Agency of Canada (PHAC) seek to emphasize conditions that promote health equity for both
individuals and populations (Government of Canada, 2018b). Indigenous populations have criticized this widely accepted health promotion theory because it fails to recognize aspects of spirituality and underemphasizes the role of the natural environment in health (Mundel & Chapman, 2010). Caring and reciprocity for the natural environment is a global responsibility that the Ottawa Charter states must be included in any health promotion strategy because a stable ecosystem is a fundamental prerequisite to health (World Health Organization, 1986).

Indigenous adaptations of the SDOH have aimed to illustrate the numerous health inequities that exist for Indigenous peoples as a result of colonization. These adaptations include *First Nations Holistic Policy and Planning Model* (Assembly of First Nations, 2013) and the “Integrated Life Course and Social Determinants Model of Aboriginal Health” (Loppie Reading & Wien, 2009).

These models differ from the PHAC model in that they reflect Indigenous ideologies and embrace wholistic concepts of health throughout the lifespan. They are expanded to include the complexities of political, historical, cultural, environmental and economic forces that shape health including unique factors such as colonialism, racism, self-determination, environmental stewardship, food security and cultural continuity (Canadian Council on Social Determinants of Health, 2015). These adapted models still fail to include spiritual health determinants and principles of spiritual balance and interconnectedness to land that are advocated by Indigenous grassroots community development organizations (Four Worlds Centre for Development Learning, 2018).

**Decolonizing: Aligning to apply Indigenous knowledge**

Food activists and Indigenous knowledge keepers or leaders see Indigenous food sovereignty as important for the collective and as comprised of political, social, cultural, spiritual and ecological issues (Delormier, et.al, 2017; Morrison, 2011; Perry, 2013; Tait Neufeld,
Richmond, & Southwest Ontario Aboriginal Health Access Centre, 2017). Food security as a determinant of health is a specific example that illustrates the importance of how understanding broader collective contexts is necessary to promote the wellness of an individual. The Western trained community health professional tends to view food security and food sovereignty with perspectives rooted in industrial agriculture, which emphasize increasing physical access to food for individuals including social policies that reduce inequity and eradicate poverty and by means of increased food production and productivity to meet future demand of nations (Gordillo & Mendez Jeronimo, 2013). The food sovereignty movement arose as a grassroots movement and calls on states to restore the many layers of imbalance in power distribution throughout the food system. It is generally focused on small-scale agriculture that takes ecological needs in to account recognizing that food is more than a commodity (Gordillo & Mendez Jeronimo, 2013). While an Indigenous perspective requires us to also consider the role of food to our wholistic wellness beyond the physical need to eradicate hunger and power imbalances (Vernon, 2015). Indigenous food sovereignty includes an expanded understanding of the food system that includes entire ecosystems of “land, soil, water and air that sustain culturally important, plants, fungi and animal species” (Food Secure Canada, 2011) and moves beyond economic descriptions to include sacred, participatory, place based relationships required to sustain livelihood (Morrison, 2008). Given these descriptions, my use of the term food security relates to enough, good, affordable food while food sovereignty relates to control and/or recognized authority of food sources. As such, the return of salmon to Syilx Okanagan people may increase access and thus improve food security for some individuals or households, but it has further potential to enhance individual wholistic wellness that contributes to community or collective structures to build (Indigenous) food sovereignty that continues to support individual wellness.
Scholars recognize that issues of Indigenous food security and food sovereignty are complex and require Indigenous self-determination along with revitalization of Indigenous knowledge systems, cultural practices and languages (Borelli, et al., 2014; Kuhnlein, Erasmus, & Spigelski, 2013). There is also an international movement that sees reclaiming food security/sovereignty as a contribution to sustainable self-determination (Corntassel, 2008). Additionally, the collective rights to food and collective responsibilities to land that are required through the United Nations Declaration of the Rights of Indigenous People (UNDRIP) now articulates a minimum standard that is required in public health nutrition approaches for Indigenous peoples (Lemke, & Delormier, 2017). This facilitates a space where Indigenous food sovereignty movements are strengthened by applying Indigenous knowledge to improve Indigenous food systems. Thus, the efforts of everyone including knowledge keepers, health providers, researchers and policy makers can be brought into alignment for a more comprehensive approach to food security and food sovereignty.

Decolonizing spaces by bringing Western medical and Indigenous perspectives into alignment could potentially create a common ground of understanding that contributes to needed actions. For instance, a focused physical health position of sufficient income and food access in public health nutrition (Dietitians of Canada, 2016) can find its place within broader Indigenous positions that are centered in social, cultural, spiritual and political influences that seek to achieve balance in the environment (Morrison, 2011). Ultimately, such a vision of Indigenous food sovereignty involves sustaining ourselves by creating and being in balance with the environment, which is the Indigenous food system (Food Secure Canada, 2011).
Decolonizing: Integration of knowledges for human-land well-being

While many of the standard scientific constructs in public health and research are still predominant and injurious to Indigenous well-being these activities are becoming more open to Indigenous knowledge and world views. Research by Indigenous academics, positions Indigenous foods as strength and highlights important contextual considerations for study design and the communication of study results that may bring forth further issues, concerns and problems with respect to accessing Indigenous foods (deGonzague, 1997; Willows & Delormier, 2005). Gradual shifts in epistemological views are also observed in Western nutrition science as inquiry moves beyond quantifiable questions to recognize the value of qualitative inquiries to investigate co-constructed meanings and understandings, and, to contribute to decision making and health policy (Swift & Tischler, 2010).

While the nutrition health literature as a whole suggests that Indigenous foods have an important connection to cultural and spiritual well-being, it is the environmental and natural resource science literature that is actively exploring the links to environment and cultural or spiritual well-being. Specifically, the environmental science literature explores the links between Indigenous food species, cultural knowledge and spiritual well-being. Studies with the Quinault Indian Nation in Washington State have extended this inquiry to well-being, by integrating Indigenous food, cultural knowledge and wholistic well-being to develop indicators of well-being (Amberson et.al., 2016). This demonstrates the possibility of relevant application of Indigenous knowledge in disciplines such as natural resource management and public health nutrition that have traditionally been a narrow Western science focus.
Relational processes & diversity of knowledges

A respectful and relevant process that explores Indigenous wellness requires an understanding of relationships and systems. As a key food source for the Syilx, salmon is also relationally significant as it is interconnected with our social, emotional, intellectual and spiritual well-being. Therefore, to construct and contextualize Indigenous understandings of food and wellness requires the ability to relationally account for various languages of logic, scientific data and the multiple functions that food has in our well-being (Swift & Tischler, 2010). A relational research process creates new knowledge by integrating diverse perspectives and is appropriate when the question of interest involves people interacting with each other and the environment (McNamee, 2014). Relational research readily considers community-based interests by being inclusive of local, historical and cultural co-constructions (McNamee, 2014).

Research that is relational, has five common elements that serve to increase the diversity of possible knowledge: 1) it generates knowledge by bringing knowledges together, 2) it is integrative of diverse languages or forms of research because they are conducted within a relational environment of conditions, 3) it is communal or collective in nature, 4) it brings life or power to knowledge, and 5) it describes what could be, or actions that are now required (Archibald, 2009, McNamee, 2014, Wilson S., 2008).

The archetype of Coyote is a significant teacher/trickster to the Syilx (The Okanagan Rights Committee & The Okanagan Indian Education Resource Society, 1993) and has “existed in [Indigenous] stories since ‘time immemorial’” (Archibald, p.5, 2009). Coyote also plays a role as researcher in the Indigenous methodology of ‘storywork’ developed by Archibald (2009) as well as in the dissertations of Syilx scholars, Cohen (2010) and Armstrong (2009). His involvement in the research process and the co-construction of knowledge often involves putting
himself in situations where the outcome is unknown and that often result in situations of death or
near death and Coyote being broken into many different pieces. Thus, the lessons learned are
often the hard way but yield good and powerful things that benefit others (Archibald, 2009).
Archibald discusses the importance of communal and land connections to Coyote (Archibald,
2009). This influences how the knowledge is created and how the knowledge is then shared.

Coyote’s connection to the community and the land is essential to the development of
relevant knowledge because it ensures that it is grounded in the knowledge of the land and is
inclusive of the surrounding context. There is also the fact that Coyote cannot put himself back
together when he is broken apart, therefore knowledge is necessarily co-created because we
don’t know what it is until another animal comes to put him back together creating a new form of
life. The new knowledge that is created by Coyote and his counterpart is given power in terms
of the ‘new life’ created for Coyote and the application of the knowledge as a lesson or direction
for the future (Archibald, 2009).

Coyote has unique research skills that allow him to make sense of interrelationships
between things. How Coyote sees the world in Terry Tafoya’s writing of ‘Coyotes Eyes’ is
another component of Archibald’s storywork method (2009). In this story, Coyote learns how to
send his eyes flying out from his head to see the perspectives of other animals. In the discussion
of this story it is noted that in order to achieve balance and wholeness, Coyote is required to
switch between the eyes of all of the animals of legend, not just one or two (Tafoya, 1982 in
Archibald, 2009). The eyes of the different animals can be viewed as different languages that
when combined bring greater meaning to what Coyote sees.

The communal nature of knowledge in Indigenous research is also brought forward in
current storytelling/sharing. Testimonio is a current Indigenous story telling technique of
personal story sharing that is a form of bearing witness to multiple other accounts that are representative of a greater body of people who have jointly or collectively experienced the event (Caxaj, 2015). When multiple representative perspectives are integrated, the strength of the knowledge increases. The power in the knowledge comes from the inter-related connections through which it is derived. Indigenous scholars identify that multiple attachments and relationships including relational aspects of the people, land and cosmology, developed through experience and understanding of context, also give power to the knowledge that is created (Archibald, 2009; Caxaj, 2015). The power rests in the honouring of the cyclical responsibility of oral traditions that allows for a continual passage of knowledge that is embodied knowledge of the heart and spirit (Archibald, 2009). As embodied knowledge that is gained through sharing, the resultant directions or actions are derived by the recipients.

**Literature Summary**

Historical impacts of colonialism on health have been documented within the health literature but few studies have examined the current day realities of Indigenous foods and fewer still have been specific to a Syilx Okanagan context (Kelm, 1998; King, Smith, & Gracey, 2009; Mosby & Galloway, 2016; Stephenson, Elliott, Foster, Harris, 1995; Smylie, 2008). The exploration of the cultural meanings of food from an Indigenous perspective is not readily found in health research. This suggests that Western trained health disciplines fail to see the value of such an inquiry, and/or, that they lack the required understanding to apply this type of knowledge. The absence of such a focus presents barriers to developing knowledge that can provide guidance to clinical, population and public health practitioners and other service providers on the priorities of food sustenance for Indigenous populations. Ideas of cultural
meaning of food are more prominent within the work of Indigenous scholars of education and social sciences as well as researchers of environmental science who complete their work in collaboration with Indigenous peoples (Amberson et.al., 2016; Donatuto, Satterfield, & Gregory, 2011; Simpson L., 2014; Vernon, 2015; Wall & Masayesva, 2004). These contributions still lack a more wholistic framework of wellness. The integration of Indigenous perspective is an important future area to consider as Indigenous people in Canada are gaining the direction of their own health and social services. Seeking to fill gaps with Indigenous practices that promote well-being such as Indigenous foods restoration and harvesting is an important outcome that this thesis topic may fulfill.

Indigenous foods restoration efforts that are not agriculture-based have been described in environmental science and natural resource literature as well as in the writings of Indigenous food sovereigntists but have yet to be applied and integrated into health literature (Kuhnlein et.al., 2013; LaDuke, 2005; Washines & Peltier, 2010). This further highlights the complexity of Indigenous food and nutrition issues, which requires an integration of multiple fields of scholarship such as health, nutrition, environmental science and Indigenous knowledge that is viewed through a social well-being lens in its entirety.

The role that many cultural keystone species play as Indigenous foods provides a unique opportunity for integration of knowledges and gives strength to arguments of environmental protection and restoration, that cannot be achieved from an environmental perspective alone. Through the study of Indigenous foods, environmental disciplines are beginning to explore the important links of ecological well-being to human well-being (Amberson, et al., 2016; Earle, 2013; Fiedeldy-Van Kijk, et al., 2017).
Conversations that broaden the views of Indigenous food systems and well-being in a way that benefits both non-Indigenous and Indigenous people will need to expand beyond conceptions of Western health science to equitably include Indigenous knowledges. To create an equitable space now means elevating Indigenous knowledges as a priority over existing colonial forms of knowledge. A relational research approach will create the space necessary for varying perspectives to provide a unique integration of understanding about Indigenous food systems and our wholistic view of wellness (Hyatt & Godbout, 2000). From this relational approach an integrated and wholistic understanding of well-being (including food security and food sovereignty) that is relevant to Indigenous and ecological values can be articulated.
Chapter 4: Methodology

Research Aim & Question

The aim of this research is to understand how the return of salmon has influenced the Syilx Okanagan Nation community and impacted their well-being. This study will focus on two questions: The first question is, how do Syilx Okanagan Nation members understand the influence of Sockeye Salmon reintroduction on their wellness? The second question is, how can an Indigenous centered relational research process promote a diversity of knowledge in regard to the role of traditional foods within an Indigenous context? Through this inquiry, I aim to contribute to the restoration and integration of Indigenous understandings of wellness that can strengthen both public health and community wellness knowledge and initiatives.

Indigenous-Centred Approaches to Environment, Culture and Health

Conceptual underpinnings for knowledge development in the field of environment, culture and health

Research that is centered within an Indigenous world view can contribute to a more diverse development of knowledge(s) and an ethical approach that is important when exploring the relationship of environment and culture to the health of Indigenous people. This ability to harness diversity comes from the relational nature of Indigenous worldviews, including Syilx, which assume that there are relationships between humans and all living things that exist in the natural world (Armstrong J.C., 2007; Kovach, 2009). In its relational nature, Syilx world view supports the Syilx conception that individual wellness is in relation to family, community/nation and the land/water and all living things (Okanagan Nation Alliance, 2009). The implications of this world view to knowledge development and Indigenous well-being, particularly grounded in the study of environment, culture and health, is an assumption that we humans are a part of
ecology. Logically then, our well-being is inextricably linked to the well-being of the land, water and all living things (Armstrong, 2009). This approach departs from imposed non-indigenous world views that are often human centered and removed from place.

An Indigenous (Syilx) world view is best positioned to examine research questions relating to Syilx peoples and their foods. Such an examination must consider the influences of colonial oppression that has disrupted and disordered the well-being of both Syilx Okanagan people and salmon (Alfred, 2009; Battiste, 2000; MacDonald & Steenbeek, 2015). Local Indigenous perspectives can be valued in application with public health strategies, but have been largely absent (Smylie, et al., 2009; Washines & Peltier, 2010; Willows, 2005). Consequently, I was motivated to develop a research approach that integrates Syilx and Western knowledges. Integration and the diversity of knowledge created in this approach is valued in Syilx scholarly thought and can be used to promote well-being, as long as each is held within an equitable position (Armstrong J.C., 2007; Cohen, 2010).

**Indigenous-centred relational research process**

Kovach argues that Indigenous methodologies are congruent with relational qualitative approaches because the orientation of both equally values process and content (2009). Following process implies that time has been taken to explore an issue which requires a regular and ongoing engagement with the topic and the people affected by it. Process ultimately facilitates agreement as relationships, relevant research topics, protocols for conducting research etc. are developed. Another value of process is that “it provides common ground for Indigenous and non-Indigenous researchers to understand each other.” (Kovach, 2009, p.25). This research study is centered within a Syilx world view that is relational, and a Syilx based methodology that is both relational and highly process oriented. The qualitative methods that are employed to guide the analysis are
of an interpretive tradition which Kovach argues to be necessarily relational (2009, p.32).

Indicators of a relational process are also important to meeting an ethical standard required of Indigenous research. The links between relational and ethical processes will be discussed in this chapter, particularly when discussing concepts of reflexivity, personal preparation and the inclusion of story and narrative.

**Relevance, Respect, Reciprocity and Responsibility in Indigenous-centered Research**

Centering research within an Indigenous world view is not only an expression of self-determination (Schnarch, 2004; Smith L.T., 1999) but a way to bring an ethical approach that can transform how research is done for and by Indigenous communities. Kirkness & Barnhard (2001) developed Four R’s of Higher Learning: Respect, Relevance, Reciprocity and Responsibility (4 R’s) to discuss how the landscape of higher education could be transformed. The principles of the 4 R’s are also being applied to the research landscape. The principle of respect is the driver as the need to respect the cultural integrity of Indigenous scholars and communities through institutional legitimation of Indigenous knowledge has been fought for almost 30 years (Kirkness & Barnhardt, 2001). Further, the integrity of Indigenous research is increased if it can be centered within tribal knowledges (Kovach, 2009). Schnarch’s paper which was later endorsed by the then National Aboriginal Health Organization (2004 and 2005) focused on self-determination in research through issues of Ownership, Control, Access and Possession to bring attention to the many ethical violations being made in Indigenous research. It also provided strategies to increase relevance and benefits for Indigenous communities. Benefits can be viewed as reciprocity, which represents the co-creation of knowledge that is useful to create “a new language and way” that is needed to build on the strengths, positives and accomplishments in Aboriginal communities (Michell, 2009, p.71). The relational world views
of Indigenous epistemologies are deeply connected to place (Kovach, 2009, p.34) which allows for a transferability amongst Indigenous peoples who share a profound relationship to place. As there is often enough similarity between Indigenous cultures in North America (Little Bear, 2000) Syilx knowledge that is co-created can still have meaning for others. Responsibility is exercised in an ethical approach to the research that increases Indigenous control starting with the worldview that it is framed within, as this influences the resulting knowledge and the change that the knowledge might bring (Wilson S, 2008). This is important, because it is the Indigenous community and the researcher who ethically take on the responsibility of responding to and facilitating the change. The ethic of reciprocity invites others to participate respectfully.

A Relational Research Methodology (Philosophy and Theory)

**Integration of diverse knowledges**

I developed a relational methodology imbedded within a Syilx epistemology in which diverse traditions were nested within differing levels of complexity such that each comprise a part of a larger wholistic perspective (Capra, 2000) to address the research question (see Figure 1). First, I will discuss each aspect of this methodology (Syilx knowledge, En’owkinwixw methodology, postcolonial lens and interpretive phenomenology). Then I will discuss how these influences have been integrated or ‘spun’ together to achieve methodological congruency to carry out this research.
Syilx knowledge

Syilx knowledge is gained primarily through the teachings embedded in oral story (captikwl) and reading the signs in nature. It is primarily transferred through inter-generational experiences of daily living such as harvesting foods from the land or water (Cohen, 2010). Like other Indigenous knowledges, knowing can also come through dreams, visions and intuition (Kovach, 2009). Therefore, this study has been structured through a Syilx epistemology that values human life and function as equal to, and inseparable from, all living things including the land and water, although each has their own separate and unique identity (Armstrong, 2009). In Syilx epistemology, creation stories are a form of oral history as they contain essential and specific environmental knowledge and that knowledge, is truth verified by us [Syilx] (Armstrong, 2009).

En’owkinwixw methodology

The En’owkinwixw methodology originates through Syilx epistemology to integrate multiple and sometimes oppositional perspectives to develop knowledge. Offering views
through multiple lenses, it can be utilized to provide a comprehensive response to any qualitative question (Armstrong, 2009). This study employs a contemporary application of the En’owkinwixw process described by Armstrong (2009, p.178-187). In the En’owkinwixw process the Four Food Chiefs meet to engage in a topic. The multiplicity of voices of society and life-stage are all met through the representation by the Chiefs of the four groups: 1) the traditions/Elder voice is concerned about sustainability and long term impacts, 2) the relations/Mother voice is grounded in the interconnectedness of community and represents the need to care for our relationships, 3) the applications/Father voice utilizes their ability to analyze, plan and construct the things that need to be actualized, and 4) the innovations/Youth voice provides the creative energy to make room for new things, understanding that change is healthy and invigorating (Armstrong, 2009).

**Postcolonial lens**

A postcolonial lens lies within the family of critical theory. Critical theory guides scholars to challenge a hegemonic and hierarchical knowledge base and to seek to emancipate the voices of Indigenous knowledge systems. Postcolonial criticism “bears witness to the unequal and universal forces of cultural representation” (Rukundwa & van Aarde, 2007). The philosophy of postcolonial criticism exerts pro-active attention to the present realities of inequity, which, implicitly or explicitly, are the consequences of a colonial past. This Western response to colonization of Indigenous peoples facilitates the reclamation of Indigenous sovereignty and it creates a negotiating space for both the colonized and the coloniser to engage meaningfully and equitably in the process of decolonization (Rukundwa & van Aarde, 2007). This dialogue can be transformative for both parties.
Interpretive phenomenology (IP)

Phenomenology is an inductive research method that seeks to understand the meaning of a phenomenon as it exists among those who have lived the experience. It seeks to study the essences and the descriptions of experiential meaning including the search for what it means to be human (Struthers & Peden-McAlpine, 2005). Phenomenological meanings are culturally constructed through narrative communication therefore the way that Indigenous people perceive the world from past to present and future is captured by interpretive phenomenology (IP) in a “holistic and culturally acceptable manner” (Struthers & Peden-McAlpine, p. 1264, 2005). Through oral tradition and the analysis of the narratives obtained through phenomenological inquiry, implicit cultural meanings of Indigenous experiences can be obtained that may inform changes necessary for wholistic health promotion (Struthers & Peden-McAlphine, 2005).

Research Question

The research question articulates the larger intent of the study. Formulated from a topic of interest, the research question represents the initial point of integration of each influence within the methodology. Studies of culturally important foods to Syilx people are best explored through Syilx epistemology. A collective response of Syilx Okanagan Nation members is achieved by applying an Enowkinwixw methodology. Exploring reintroduction of salmon invites the decolonizing intentions of a postcolonial lens. Finally, exploring influence and meaning provides the phenomenological perspective that can influence future change.

Spinning it Together

Central to a congruent integration of these diverse traditions and philosophies are three central ideas: 1) that positioning of voice is required to bring attention to unequal power
relations, 2) that experience, and subsequent meaning is contextual, and 3) that knowledge is co-created or constructed through social and academic dialogue.

1) **Positioning of voice** – The multiplicity of societal voices that are brought together in En’owkinwixw ensures that even the quietest voices are still included in the research. A postcolonial lens brings attention to past and present inequities of power that have placed Western knowledge systems and biomedical frameworks that influence policy decisions in an unquestioned state (Browne, et al., 2005). A postcolonial lens offers “a way to reclaim and reposition Indigenous voices, knowledges and analysis” (Browne, et al., 2005, p.23). Interpretive phenomenology is a way to address the human need to be understood which applies to situations where “someone else seems to know what is best for you when you clearly have voiced the meaning something holds for you” (Munhall, 2013, p.148). This philosophical blending of postcolonial criticism and interpretive phenomenology within En’owkinwixw provides a unique expression and representation of voice and provides the guidance required to see “transformative strategies” (Battiste, 2000, p.xxi) and more inclusive approaches to research within the academies that respects methodologies formerly considered ‘the [Indigenous] margins’ (Smith G.H. in Kovach, 2009).

2) **Experience is contextual** – Enowkinwixw is based within Syilx knowledge that recognizes the inseparability of humans to all living things within the context of space, place and time. Critical social scientists believe it is necessary to understand the lived experience of real people in context (Seiler, 2006). Interpretive phenomenology similarly orients researchers to understand experience in context as it is framed through the orientation that humans are inseparable from their experiences within locations in space
and time (Bryckyzinski & Benner, 2010; McGrath, 2008). Through the tenets of IP, it is noted that “history determines our experience of truth” (McGrath, 2008). This view is pertinent to the experiences of Syilx peoples with salmon because examining the colonial past is bound to reveal a critically unique truth for these populations.

3) **Knowledge is co-created** – The theoretical positions of both postcolonial and interpretive phenomenology share similar ideas in terms of the interpretive elements of creating knowledge (Caxaj, 2015; Seiler, 2006). Woven together within the space of En’owkinwixw methodology, an intersubjective space is created through the social interaction of thoughts and ideas that are constructed, as the invisible is made visible (Armstrong, 2009).

Thus, En’owkinwixw methodology applied in this study can support the integration of postcolonial criticism and IP within Syilx knowledge and solicits diverse views and situates ways to balance opposing dynamics by clarifications, to develop rich collaborative understandings that draw from spiritual, cultural, physical and cognitive dimensions of wellness (Armstrong, 2009; Cohen, 2010). This approach is exceedingly relevant and ethical and supports the calls for greater self-determining roles in research that affects Indigenous people (Schnarch, 2004).

**Methods**

**A Reflexive Approach to Quality and Ethics**

In interpretive social science, the standards for quality are also the standards for ethics (Tobin & Begley, 2004) and move far beyond the standard procedural ethics that are to be expected in any research project. An ethical approach to Indigenous research involves consideration of the 4
R’s which provide credibility (Respect, and Relevance), contribution (Relevance, and Responsibility) and further consideration of relational ethics (Reciprocity) (Kirkness & Barnhardt, 2001). In Indigenous research, it is also the local principles of ethics and morals that guide the research and judge which information is relevant and how that knowledge is gained (Wilson S., 2008). This study’s integration of diverse theoretical approaches and perspectives in a contemporary application of En’owkinwixw methodology sheds light on the research question for the benefit of all (individual, family, community, land and all living things (Armstrong J.C. and Cardinal, 1991, p.70,102). I will discuss how my relationships, as researcher with the topic, with family, community and with the land/living things positioned an ethical research approach that brought quality to a respectful and relevant creation of knowledge. Furthermore, I will use reflexivity to demonstrate how my relationships and my role furthers the relevance and transferability of the knowledge creation (Kovach, 2009; Zitomer & Goodwin, 2014).

**Relationship as researcher with the topic**

Who does the research is an important aspect of quality for both Indigenous and Western interpretive views (Kovach, 2009; Zitomer & Goodwin, 2014). Kovach (2009) brings up the requirement to situate the self in the research in order for it to have credibility by the Indigenous community. In the introductory chapter, I briefly described my relationships to the people and the work. In the following sections, I describe how my relationships to family, community and land/life have situated my place in this research. Here I can elaborate that my observation of injustice and inequity in the well-being of Syilx Okanagan people as well as my place of privilege within Western academies and health disciplines, has also shaped my views and allows me to complete this work. These relationships bring credibility to the results as I have gathered both a professional and personal suitability and understanding of local knowledge such as
familiarity with local speech, and local foods and nutritional health issues to maintain the “power and integrity of the stories” (Archibald, 2008, p.25). I am in a process of decolonizing and changing views about the role of our foods and our health.

**Relationship with Family**

My relationships with family provide further credibility and contribution to the research. As I grew up, I was socialized and learned to speak and write through a colonized Okanagan Syilx lens as well as a settler lens. I grew up with an awareness of the colonial impacts on Indigenous peoples in Canada such as reserve systems, racism and inequity. In my adulthood, I am becoming more aware of my own intergenerational colonial experiences, which are shared by Syilx Okanagan people such as the contribution of residential schools to the loss of language and cultural knowledge. For me a career in food was a natural choice given the focus that my upbringing had with canning foods in the summer time, like salmon that we then sourced from the Fraser River, so that we could enjoy it throughout the year.

**Relationship with community**

My relationship with Syilx Okanagan communities was nurtured over an extended period of service in public health nutrition as well as intercommunity familial relationships. These relationships were imperative to the development of a relational ethic to conduct the research that honoured the 4 R’s as a whole. A lengthy and purposeful community engagement contributed to the credibility as well as the contributions of the research. I engaged with Okanagan leadership early (greater than 1 year prior to initiating this thesis) and over a lengthy period (3-4 times per year over 4 years) which involved more than 30 meetings and phone call conversations with knowledge users: ONA staff, community health managers and staff, Traditional Ecological Knowledge holders and band councils. The discussions that resulted from a purposeful
engagement and relationship with knowledge users, helped to further articulate the focus and respectful design of this thesis significantly. Community engagement also included a community of peers that were comprised of Syilx academics, Syilx service providers, academic supervisors and non-Syilx academics who also helped to shape decisions through casual and more intentional discussions.

Project updates and presentations provided to the ONA and Syilx Okanagan Nation citizens at an ONA health gathering (October 23, 2018, Penticton, BC) in which I discussed my research focus and research procedures, are an additional element of the ongoing relationship with community. This is an important element of research ethic within communities that understands that the relationship does not end with the writing but requires follow up and sharing of knowledge along with the discussion of future potential actions arising from the research.

The lengthy engagement and relationship building with communities also facilitated support of the CIHR funded grant project discussed in the preface and contributed to the development of a community research agreement between participants in that project. Working with the communities/nation on a topic of relevance, honouring Syilx world view and codeveloping an agreement recognizes jurisdiction and rights of the Syilx Okanagan Nation and supports self-determination in research. I may have gained trust by making many efforts to maintain positive relationships with the broader community (nation) that ultimately helped to form a ‘group consent’ (Indigenous Peoples Health Research Centre, 2004) that facilitated the individual recruitment and consent to participate.

**Relationship with Land/Life**

Reflecting on my relationship with the land and all living things including salmon species has been integral to my personal preparation for research and honouring relational ethics. This
includes reflecting on life experiences such as food harvesting with family, and how the relationships that are developed in these experiences have shaped a sense of self that is rooted in the land and water, and how this has shaped what I have chosen to study (Wilson (Stan), 2001). I also consider how participation in ceremony and salmon related experiences prior to and throughout the duration of the research has both stimulated and facilitated my own respectful engagement with salmon and the energy of all living things. At the same time, choosing not to participate in social events and ceremony such as the annual Salmon Feast to have the experience of what it felt like to have something ‘lacking’ deepened my understanding of the importance to my life. I can then imagine what the absence of salmon or ceremony could have felt like for someone like my grandmother. This helps me to appreciate how great a day it was for our nation members, especially the Elders, who witnessed the salmon at sx̱əxʷn̓itkʷ (Okanagan Falls).

Every day that I am engaged in this process of research my thoughts are with the salmon, the water and the people (Wilson S., 2008) and this is how the research as a whole and how interviews themselves have been acts of ceremony for me. It is also part of the decolonization of research process that builds knowledge and knowing through experience (Schnarch, 2004).

**Interview guide design**

I developed the interview guide (Appendix A) with the mentorship of my supervisors. The design of the interview guide was informed by my theoretical lenses (Smith L.T., 1999) (see also ‘Data Collection’ heading that follows) since I sought to understand the context of a lived experience (IP) that has been impacted by the burden of colonial history (PC) and thus changed over time. The design of the Interview guide was further shaped by theory to ask specific questions that guided the discussion towards revealing narratives related to the research questions and to facilitate the process of En’owkinwixw methodology. This respects Syilx
epistemology and orality shared through stories or dialogue, that are in relation to place and person, as a valid, intellectually challenging form of knowledge that is affirmed through law and in its integrity, credibility and ethic, does not need to be standardized (Archibald, p.31(15), 2008; Delgamuukw v British Columbia [1997] 3 S.C.R. 1010; Kovach, 2009). The Interview guide was also shaped by theory from the literature such as ‘strength based’ in asking about wellness, as well as food sovereignty in terms of asking about providing vs. purchasing salmon.

**Recruitment & sampling**

I recruited a purposive sample that was guided by the Enowkinwixw methodology and was locally informed to ensure appropriate Syilx Okanagan Nation citizen representation. A list of approximately 40 nation members was generated by Okanagan Nation Alliance staff as well as Traditional Ecological Knowledge holders to identify potential participants with varied experience with salmon in accordance with the methodology. This provided an abundant pool to select from. The inclusion of one nation member as an interview participant with very limited experience with the Okanagan sockeye ensured that the voice of those typically not represented was also a part of the study. To ensure that a non-coercive arms-length recruitment process was used, the Okanagan Nation Alliance facilitated third party recruitment. They agreed to share a letter of invitation to participate in interviews that I would conduct for the study, through email, social media and specific in-person invitations or introductions.

Eight Syilx Okanagan Nation members were interviewed, and a balanced methodological representation was achieved. Two participants under the age of 29 represented the innovations perspective, four adults between the ages of 30 – 60 represented the relations and applications perspectives and two participants represented the traditions perspective. Men and women were equally represented and there was one participant over 60 years of age. A focus on Syilx
Okanagan nation peoples’ perspectives provided the homogeneity necessary for a phenomenological approach and the diversity of Syilx who participated provided a breadth of experience to capture the historical context of a critical view (Munhall, 2013; Smith J.A. et al 2008). Achieving a homogenous sample also meets the first stage of the En’owkinwixw process that places all voices as equals to establish a collective understanding of the experience.

Four individuals approached me as the graduate researcher directly or a research team member, indicating their interest in participating in an interview. The first four interviews were completed within five months of the ONA agreeing to share the letter of invitation. After this time, to complete all eight interviews that were proposed for the study design, I also approached potential participants through email or phone call after an informal introduction of myself and the research topic at an ONA related gathering. As an additional consideration to prevent undue influence or coercion, I did not directly approach anyone who knew me beyond this research role in a way that would inhibit their own ability to refuse to participate. Participants received an honorarium of $25 (to offset any incurred expenses such as travel to interview etc.) at the initial interview and if applicable, at the follow up validation of interview.

The participant sample included individuals from six of the seven Okanagan Nation member communities in Canada. At the time of the interviews, three participants resided away from their home community and two of these resided off-reserve. Rather than choosing convenience, data collection involved travel (45 - 120 minutes) for half of the interviews, to three other communities outside of the researcher’s home community. Time spent with the data was significant given the range of interview time from 60-100 minutes (75 minutes average).
Data collection

Most data collection was completed from April – August 2018 through eight individual conversational, semi-structured interviews. Interview summaries were prepared for each interview; after the transcriptions were completed these were shared with all participants. I was able to complete a second, follow-up interview with four of the participants to review the interview summaries during April – October 2018. Review of quotations that are included in the findings was completed shortly after a draft of the findings was prepared, with one participant who had not had a second interview. A more thorough description of the interview processes is detailed below.

Interview Processes (Methodology/Methods)

Interview preparation and consent process

Conducting interviews with participants who are very aware of colonialism factored into how consent and interviews were completed. I strove to develop an ethical space with participants by attending to both location and interview processes through the following considerations: (a) interviews were scheduled so that they fit both the interviewer and the participant’s schedules; (b) individuals were given the option to choose an interview location that was to their liking in terms of privacy, comfort and convenience. One participant accepted the offer to receive interview questions by email ahead of time so that they could prepare and know what to expect.

Prior to starting the interviews attention was paid to developing rapport and/or instilling an element of respect and ceremony by sharing food and beverage while visiting. This helped to put participants at ease while initiating the consent process. It also helped to situate myself as a Syilx Okanagan Nation member who was interested in the question. Although it was likely
known, I did not declare my nutrition professional status or community role prior to starting the interview so as not to bring attention to the bias or power relation that could have been present. The process to solicit consent began by reviewing the Letter of Information and Consent form (Appendix B) which participants opted to read themselves, and then, answering any questions that participants had. Withdrawal of consent and a process to discuss complaints or rights as a participant was also clearly stated in the letter. Participants were also verbally reminded that they could refrain from answering any questions. All participants chose to be in the study and opted to provide written consent for the first interview even though a verbal consent process was offered. The study was designed to seek additional information such as preferred identification in the study and alternate data storage in nation/community repositories. These were to be reviewed after the second interview.

**Data management**

All records, transcripts and research results were stored on the researchers’ password protected laptop computer. Back up files were saved to a password protected, encrypted online storage system on the university’s local servers. Written records such as signed consent forms and interview notes have been kept in a locked file cabinet. Each interview was assigned a random code in order to anonymize all data collected. Participants were verbally reminded during the consent process that this graduate research was being completed as part of a larger project for the nation and that graduate supervisors and some research team members may also have access to the interview data.

**Interviews**

Once a positive and comfortable interview space was established, the formal portion of the interview began. As the researcher, I participated in the co-creation of knowledge with
participants by asking questions to elicit stories that might not otherwise be told. Interview questions explored meaning of wellness from a Syilx social structure nested system as outlined in the Interview Guide included in Appendix ‘A’. These questions helped shape conversations in such a way that developed postcolonial understandings and informants’ focused life history with respect to salmon. Questions were worded to capture how events of the past affect the current situation, situation to place, and connection of salmon restoration to wellness including meaning of salmon as a food source for nation members today. In keeping with an interpretive phenomenological method, the interviews were both reflective and interactive to build rapport as required, for example, by sharing my own lack of understanding of the Four Foods story as it relates to salmon (Holstein & Gubrium, 2011). Through the interview questions the research engages with the second formal stage of En’owkinwixw which aims to hear all voices. This stage of En’owkinwixw is consistent with the IP concept of ‘listening with the third ear’ to ‘listen, listen, listen’ in a way that is focused on only the dialogue of the participant or individual speaking (Munhall, 2013). The space for this was created in several ways. First, tending to my own whole space by ensuring that I was rested and physically well, that I was in a positive emotional state and that I was able to maintain mental focus prior to the interview. Second, I initiated most interviews with the sharing of food and beverage, as a subtle act of ceremony or protocol that is typical for Syilx Okanagan people.

Interview conversations were carried out with the use of everyday-language. I respected the oral tradition by allowing the natural flow of participant story sharing to take place and waited until particular stories were finished to re-orient to where we were in terms of the interview questions. Thus, through dialogue with participants about their experience with Okanagan sockeye salmon (Brykczyński & Benner, 2010) and the use of the En’owkinwixw
process, each interview was woven into a form of oral history. The third formal stage of En’owkinwixw seeks to clarify a common vision by essentially asking what there would be without the problem (Armstrong, 2009). This was accomplished early in the interview process by asking participants about the meaning of wellness to them, which helped to create the common vision of wellness from their own world view and lived, collective experience. Then by asking participants what it means to have salmon as a food source, the elements of strategy that come from this stage of En’owkinwixw began to emerge. Throughout, the interview questions were intended to integrate situated contexts and life-worlds of each participant to understand a (post)colonial context of history, time and place.

The interpretive phenomenological method requires two steps for data analysis. The first step is often referred to as ‘participant sense making’ (Munhall, 2013) and is completed within the interview through design of questions that ask about meaning. Credibility in the interview and analysis processes was established with purposeful attention to maintaining participant voice. As needed, I used prompts and re-posed questions to encourage participant self-interpretation of the meaning of their experiences to wellness and to ensure clear understanding of participant responses. This initiates the inter-subjective space where participant and researcher make meaning in the interview (Munhall, 2013) and provides the opportunity to probe for clarity of meanings of participant statements that were of note to the researcher.

Post-Interview & Transcription

To incorporate reflexivity of the interview process, I kept a separate interview notebook to record field notes and collect post interview journal entries. There was also an instance where thoughts were audio recorded on a cell phone. Post interview journaling and a review of field notes written during the interview were completed within 24 hours of the interview. This
allowed for reflection on key themes that were expressed throughout the interview, as well as points of questioning and a general sense of feelings that arose such as physical responses (tingles) to hearing specific things shared in the interview. Examples included distinguishing the meaning that participants derived for themselves, for example, from sources of information such as dreams and conversations with mediums who are able to relay messages from the spirit world. Although these forms of information are well accepted within Indigenous ontologies they are not universally viewed as forms of knowledge. The focus in terms of analysis of data was directed to the meaning that the participants derived from these information sources.

Participants were offered the opportunity to review the written summary/transcript of the interview that was prepared as an initial stage of the analysis process. This process helped to foster ethical representation because it increased participants’ awareness and ability to provide feedback about what messages or ideas I had interpreted from the interviews. A follow-up interview to review the summary provided an opportunity for participants to clarify or identify elements of the summary that were inaccurate or did not resonate with them, which if required, resulted in the co-development of revisions. The researcher did not actively pursue review with all participants due to difficulty contacting and coordinating schedules as well as the length of summaries to be reviewed. Further readings on the redundancy of member checking and its incongruence with the philosophy of IP research supported this decision (McConnell-Henry, Chapman, & Francis, 2011).

Analysis

Analysis completes the final stage of En’owkinxixw to bring all relevant and related components together in understanding the topic (Armstrong, 2009). The analysis of the data followed an interpretive phenomenological (IP) analysis. Some researchers will argue that there
is no step-wise process for IP analysis while others describe a step-wise approach that they contend is not prescriptive (Brykczyński & Benner, 2010; Peat, Rodriguez, & Smith, 2019; Smith J.A. & Osborn, 2008). Smith and Osborn (2008) described the method of IP analysis that I most closely followed. The terms of agreement in both perspectives is that the participant’s story of experiences is elicited through the interview, and the analysis considers the temporal progression of situations, with the identification of paradigmatic cases and/or thematic analysis as the format of analysis (Brykczyński & Benner, 2010; Peat, Rodriguez, & Smith, 2019; Smith J.A. & Osborn, 2008). Within the IP method, analysis is completed in two stages: participant interpretation and research interpretation. The participant interpretation is achieved primarily through the interview (see above), while the second stage of the phenomenological interpretation is completed during the researcher analysis. My approach to analysis began with an early and deep immersion with the data through an initial transcription of audio-recorded interviews and a second audio review for a correction of each transcript. Participant summaries were then prepared for each interview with specific attention to commonalities or clusters of meaning. Each summary was prepared by asking questions of the text that prompted me to consider interpretations of the experience as well as an understanding of wellness for Syilx people and others (Munhall, 2013). Through these steps from transcription to summary, I maintained a sustained engagement with the data, which provided for increased credibility in terms of accuracy of participant accounts.

Although Munhall (2013) cautions that the individual narratives or participant summaries bring forth interpretations that are unique to the individual, the principles of En’owkinwixw methodology enable individual experiences and meanings to be understood as representative of the whole. To capture this whole, common experience and meanings of wellness were collated.
and summarized. By applying a postcolonial lens to the data, I made note of both implicit and explicit mentions of colonization by the participant (such as the Indian Act) as well as references to issues of equity and health, such as affordability of food that further illuminated collective experiences of wellness. These notes helped to capture an essence of meaning that accounts for past and current events that hinder experiences contributing to wellness or that currently overcome inequities.

Through the post interview journaling process and by reading and re-reading the transcripts, the first step of analysis, ‘looking for themes’ was completed as I noted/annotated points of interest in the text by summarizing, paraphrasing and commenting on use of language. In a second full review of the transcripts for this step, I focused on responses to the questions that explored meaning of wellness, connection of salmon restoration to wellness and meaning of salmon as a food source to document emerging theme titles as concise phrases that capture the ‘essential quality’ of the data segments. Diverging slightly from the method of Smith & Osborn (2008), rather than moving next to the step of ‘connecting themes’ within the first transcript, I moved on to the subsequent transcripts and completed the ‘looking for themes’ stage for each. Once that was completed, I then began the process of ‘connecting themes’. To do this, emergent themes were listed initially in the order of appearance in the transcription and then re-written to organize in a more analytical or theoretical ordering as ‘clusters of emergent themes’ that are connected, are grouped together. Tables were produced with emergent themes ordered coherently, although the findings were not presented as a table of results. As the tables produced included data from all interviews, the ordering of emergent themes also paid consideration to the theoretical convergence and divergence of themes (Munhall, 2013; Pringle, et al., 2011; Smith J.A. & Osborn, 2008). This leads to the final steps of interpretation, which involves the
construction of a final table of ‘superordinate themes’ that were prioritized by considerations of richness of the passages that highlight themes and the illumination of other aspects of the account rather than by prevalence within the data (Smith J.A. & Osborn, 2008). Through this process, emerging themes were discussed with one of my supervisors and consideration of visual models to depict relationships between themes along with metaphors to express them. Regular peer debriefing on a bi-monthly basis provided accountability between the methodology and the interpretation of participant accounts.

Consistent with Smith & Osborn’s method, superordinate themes were reduced in number. Once the analysis to this stage was reviewed with my committee, I once again reviewed transcripts in light of the superordinate themes and instances to complete the analysis. The final visual models and metaphors that were selected were based on best fit to superordinate themes and determined through what is often an ‘inevitably personal process’ of interpretation in qualitative analysis (Smith J.A. & Osborn, 2008).

To close the circle on analysis and be able to draw more conclusions from the findings, I re-tell a summarized version and provide an analysis of a Syilx story that is resonant with my findings. I also believe that it is the type of story that is told and retold intergenerationally. Armstrong describes this type of story as a way to connect the past to the present and future (2009). The story of the “Salmon Cycle” is originally from a time before humans and the drawing of conclusions to the study findings represents the perspective of the living ecosystem that includes the land, the water and all living things. Ultimately, we learn from nature, so it is imperative that we consider this perspective; the interpretation I developed from the data contributed to a Syilx social perspective of food and wellness. This story cannot be duplicated by
other health professionals and offers a co-construction to re-story perspectives of food and wellness that are true to current lived realities (Caxaj, 2015).
Chapter 5: Findings Overview & Un-wellness without Salmon

Study Question and Findings Overview

My main research question is: “How do Syilx / Okanagan Nation members understand the influence of Sockeye Salmon reintroduction on their wellness?” To fully explore this question, I needed to understand how community members understood wellness. So, my sub-question was: How do participants themselves view wellness? This inquiry revealed 2 things: 1) for participants, wellness was not fully present in the absence of salmon and 2) participants’ understandings of wellness reflected a uniquely Syilx perspective. The overall study findings are presented in two chapters. How participants currently understand wellness as well as how participants identified a lack of wellness with an absence of salmon are presented in Chapter 5. Then in Chapter 6, findings focus on how returning salmon has returned wellness to the Syilx/Okanagan Nation.

In this chapter, Chapter 5, I will begin with an introduction to the Four Food Chiefs as pseudonyms for the participants. Next, I will elaborate on the findings that explain how participants currently understand wellness in the section titled What is Wellness? Lastly, I will discuss how participants described an absence of salmon and a lack of wellness in the section titled Empty Nets and Baskets: State of un-wellness in the absence of salmon.

Introducing the Four Food Chief Pseudonyms

Participant quotes are shared to support the findings and generation of ideas. To identify speakers, pseudonyms used reflect the Four Food Chiefs Model that guided the recruitment of participants and include: sk’maxist (traditions) which represents perspectives that look to the future sustainability and long-term impacts because they are thinking of the children; siya?
(innovations) which represents perspectives that welcome change as healthy and like to make room for creativity and new ideas; sp’iƛ’m (relations) represents perspectives that consider the interrelatedness of community and the importance of taking care of relationships; and ntytyix (applications) perspectives analyze, plan and construct what is needed to be done.

Each perspective pseudonym represents two participants according to the recruitment selection. Although a dominant perspective guides some individuals, most accounts are a mixture of all perspectives, and it was therefore important not to scrutinize the perspective shared or assume gender in any particular quote in relation to the associated pseudonym. It was also important not to attribute meaning to one individual because in En’owkinwixw process, each account and quadrant of perspective illustrates potentially shared collective understandings that are brought together in a larger collective understanding in the analysis (Armstrong, 2009).

**What is Wellness?**

To capture a broader perspective of wellness, participants were asked to consider the meaning of wellness in relation to the individual, family and community. Participants conceptualized wellness for individuals as four quadrants of being: Spiritual (Spirit), Physical (Body), Mental (Mind) and Emotional. Still, some interview participants retained a broader conception of wellness that they expressed in short phrases or single terms such as “Balance”, “Our whole culture is wellness” (sp’iƛ’m), or “It’s where your heart is” (siya?). Wellness was also summarized as knowing your connection to Syilx laws and honouring them, “Wellness is knowing your connection to that story [How Food Was Given] and honouring the agreement” (ntytyix), or as a way of living, “A way of being …….. Trying to find a balance in life and all of the pressures of what we need to get through life” (sk’maxist).
From participant responses that are situated within the context of salmon wellness was understood as a process of finding balance. Wellness is integrally connected to how we sustain our lives with many things including food. The findings on wellness reveal that an important aspect of this entails knowing and applying Syilx oral history and the integrated telling of creation with stories such as ‘How Food Was Given’ which is sometimes referred to as the Four Food Chiefs (Okanagan Tribal Council, 1984). The story of ‘How Food Was Given’ represents a tripartite agreement between the creation, the Food Chiefs as representatives of the animal world and human beings and is based on giving back. This concept of a reciprocal agreement is common amongst Indigenous peoples and is shared in the epistemologies of both the Nishnaabeg peoples and the Cree Iskwe (Martens, 2018; Simpson, 2014).

**Empty Nets and Baskets: State of un-wellness in the absence of salmon**

When asked: “What does wellness mean to you?”, participants discussed both the presence of wellness, as well as a lack of wellness. The enormous magnitude of the loss of salmon to Syilx life and wellness is represented here by this Syilx mother and teacher:

Can you imagine having this one whole section gone [i.e. one of the Four Food Chiefs]? Like the Salmon Chief, that’s HUGE! ….. on even wellness or culture, of like your diet, your nutrition, your ceremonies, spiritually and just physically, like the work to do to get that” (sp’iƛ’im).

When considering how wellness is not present for all Syilx people, participants discussed an imbalance in our collective way of being. They also discussed colonial factors that created separations from our collective way of being. In the context of salmon, the lack of a regular presence of salmon contributed to a diminishment of understanding of Syilx social, cultural, spiritual and physical relationships with salmon that are required for a balanced way of life. Along with an impact on relationships was a weakening of social, governing and economic
structures that attended to all living things while imposed settler governing structures with limited focus on individuals and humans was adopted.

All participants affirmed that the many impacts of colonial dispossession of land, language and culture have affected Syilx well-being in relation to salmon. Confirming accounts in the literature (see background and literature review for example), numerous examples provided in the interviews discussed exclusion of Syilx peoples from important decisions that resulted in life-changing impacts to the river system and access to salmon. Dispossession from a way of life that follows the cycles of the salmon has resulted in many of our members not knowing about our salmon. All participants reported a need to learn Syilx history in terms of both cultural teachings and nsyilxcəәn language as well as a history of past events. Some participants identified a knowledge deficit that was seen as a drifting away from fundamental teachings provided in Syilx creation stories. These Syilx principles were sources of guidance for living on the land and water, right down to the application of skills that are required for daily living in traditional ways such as the making of tools and methods of harvesting salmon.

**Social Relationships**

Participants discussed how legal and policy disruptions to the lives of Syilx people contributed to a fraying of social, governing and economic structures by pushing them to the background (*ntytyix*), and creating divisions and social disruption within families, communities and nation that contributed to states of disharmony and crisis. Family structures were impacted as members had to leave their territory to earn income for their families when the normal practices of sustenance in relation to salmon and being at the river were no longer possible: “You know the work camp mentality and saying that in order to work you have to leave your home, you have to leave your family.”(*ntytyix*). *Ntytyix* noted that this was a significant factor in
the lives of Syilx and other Indigenous people in BC in the 1950s and 1960s when many left their home, to work in massive logging camps going on all over the Pacific Northwest. People also left their homes to work in salmon canneries along the Fraser and coastal areas (Glavin, 1996; Newell, 1993) as well as other industries such as agriculture.

Participants also discussed how Syilx governance systems were excluded from decisions that impacted the land, water and salmon. One example provided was construction of dams that obstructed salmon passage to the Okanagan River during the same timeframe that Syilx nation members were discriminated against when speaking the nsyilxcəәn language within residential school. Residential schools were viewed as a means of killing culture by “killing the Indian within the child” (TRC) and in the physical absence of salmon, the result is a significant loss of transmission of salmon knowledge in terms of harvesting practices and care and management of the ecosystem, leaving a limited number of individuals to hold the threads. For some of our people, the past trauma of not being permitted to speak nsyilxcəәn or needing permission to leave reserve lands to harvest foods requires building confidence to actively and knowledgeably participate in food harvesting for subsistence and economic means.

This challenging context to practice Syilx values fueled disharmony and crisis in terms of social and environmental interactions. With this, participants reported a need “to uplift ourselves and inspire ourselves to do something in health and wellness” (nttyix). This need exists in conditions of reported reluctance to access health care by some Syilx people (nttyix) based on discriminatory past experiences and lack of Syilx specific ways within health and social services. Recently, services that are centered in Syilx culture are seen as more effective when they take place on the land which brings healing to all four aspects of our being (Interior Health, 2015).
An imbalance of social values is also seen in relation to provincial land management policies that are applied by the provincial government within Syilx territory that impact Indigenous food security. These state government policies are often very wasteful, human centered and have created an imbalance in the natural world as noted by Sk’maxist. Ultimately this imbalance in social perspective creates challenges to living a more Syilx based way of life that can in turn, contribute to wellness.

A review of Indigenous perspectives of the causes of underlying health inequities of Indigenous people was completed by King, Smith and Gracey in 2009. They provide a summary of how existing Indigenous laws, language, religion, healing and remedy were amongst the many cultural practices that were legally disrupted by colonial states creating socioeconomic and political marginalization amidst institutional racism (King, Smith, Gracey, 2009). They liken this to the shredding of the social fabric of traditional societies by colonization.

**Cultural Relationships**

A diminished presence of salmon also effected relationships in terms of understanding salmon specific cultural knowledge. Overall, a lack of understanding of Syilx principles and our relationship with salmon contributes to a state of un-wellness. It was siyaʔ who commented on what seems to be a disconnect from Syilx identity such as the idea that: “we are not fish eaters because we are Interior” (siyaʔ) or that we are not really salmon people. This lack of knowledge and teaching may also be extended to a noted ambivalence to consuming traditional foods for individuals who have experienced an intergenerational loss of salmon. This is critical as prior research suggests that cultural expression, identity and well-being are all centrally linked to adopting a particular diet or certain foods (Donatuto, 2011).
Participants are also aware of challenges that we as Syilx face in terms of relearning and understanding our relationship with salmon. *Sp’ix̱m*, a mother reflected on the challenges of finding the teachings telling how three generations: elders, adults and children, had been affected, particularly their ability to teach their culture:

A lot of us have lost the culture and I don’t know, are kinda scared to know what is our culture? Because I’ve heard some elders are like ‘Well we are still learning like who we are. We don’t know all of our culture’, (laughter) you know.”

“A lot of our kids don’t know what traditional [foods] or even like people my age are like ‘I don’t eat deer meat’ and I’m like you know ‘Why? It’s so healthy.”

*Sp’ix̱m* also speaks about various forms of removal of Indian status that imposed separations from living on-reserve and severed cultural relationships: “Because of what Government did to First Nations our family hid in plain sight and were not raised with a cultural connection to the land.” Therefore, dispossession from land, water and Indigenous foods, has limited the transmission of cultural ways of being and Indigenous knowledge, which results in reduced physical applications of Indigenous knowledge.

The physical health disparities faced by Indigenous people are known results of an often brutal physical dispossession from land and water (Alfred, 2009; King & Gracey, 2009). Although losses to language and culture are often noted in the literature, less frequently are losses to language and Indigenous knowledge specifically linked to land dispossession and physical health. Participant interviews provided an important picture as to how Indigenous knowledge about salmon has been put in a disadvantaged position when lack of access to land and water prevents sharing cultural practices and experiences that are essentially connected to knowledge transfer. These experiences are integral to maintaining a cultural relationship that forms a wholistic sense of identity at both the individual and collective level. Yet participants still valued the intergenerational experiences with salmon and described Syilx cultural
knowledge as an important way to bond to the land and water. Such a connection has been described by others as “a key feature of indigeneity” (Durie et.al. In King, Smith, Gracey, 2009). If indigeneity is threatened, then human existence is also threatened as the health of the land and water will continue to deteriorate.

**Physical Relationships**

Physical relationships comprise those with the physical environment of land and water, and how these impact the physical health of individuals such as through opportunities to source enough healthy food and gain income. All participants expressed how the imposition of settler values threatened the environment and contributed to drastic changes in land and water that reduced the ecological diversity of salmon which had subsequent impacts on the environment and Syilx well-being. Such threats to salmon, have posed significant threat to Syilx livelihood by limiting food security, diet quality, health and economy.

*Sḵwx̱wú7mesh* described how the construction of dams and channelization that changed the course and flow of the Okanagan River in certain sections reduced the livelihood of the river: Numerous changes to the river reduced the number of salmon that were present and as a result the land has not been nourished by salmon. They observe that even the children are aware of the impacts of climate change, global warming and pollution. *Sp’ italian* has experience with the land and noted that ecosystem changes are making livelihoods physically difficult for all living things who “are hungry too”. While salmon populations were decreasing, human populations were growing leaving less natural ecosystem (*sḵwx̱wú7mesh*). Indigenous food and medicine species became disadvantaged resulting in increased food insecurity amongst Indigenous people and increased reliance on food systems that exclude Syilx foods (*sp’ italian*).
Food & Economic Security

The lack of access to salmon has contributed greatly to an impoverished food security. Participants noted several issues of salmon access such as access to waterfront or traditional harvesting sites, barriers to travel to other river systems, and degradation of past kinship ties that previously provided trade access. Historically salmon was an important way that families and communities provided for themselves. The absence of salmon created both food insecurity described by ntytyix as the loss of a “food security safety net” and economic disparity that subsequently contributed to health disparities. Now that salmon are returning, he also raised an issue of lack of safe harvesting sites and the inexperience of harvesters due to long term absence of salmon. These are issues that continue to create limitations to food access. This was further impacted by the loss of cultural food preservation practices and reliance on western technology. Sk’moxist, an elder spoke about the challenges of relying on western technology in the context of poverty and the impact on diet quality:

When we grew up, because we didn’t have the fridges, the big freezers and stuff like that, so you couldn’t keep meat stored that long … Yeah, so most of our food ended up being starches, like macaroni, rice and the cheap meats like bologna and hamburger, when we were kids.

They talked further about how limitations to food storage limited the quantity of salmon harvested because in the absence of traditional food preserving methods, you couldn’t put away as much salmon.

In the context of changing food systems for Indigenous people, Kuhnlein and colleagues write that traditional forms of food preservation have been neglected due to the availability of more convenient foods (Kuhnlein et.al., 2013). At the same time, the same authors report that there has been little uptake of modern food preserving methods such as canning by Indigenous people. This may be a result of modern technologies being unaffordable and unfamiliar (Acedo
& Kanlayanarat, 2015). This may also be true in the Syilx context where situations of inequity and poverty created by the state have also limited the ability of some nation members to utilize technology to preserve and store salmon which posed limits to respectful harvest and ultimately contributed to food insecurity (sk’maxist). A loss of knowledge and skills of traditional salmon preservation methods such as drying has accompanied the generational loss of salmon. As such, with the return of salmon, food insecurity may still be present if nation members have limited storage and preservation methods to sustain their families.

In the health literature, food security is primarily viewed through an income-based lens discussing poverty as a barrier that limits access to Indigenous foods (Subnath, 2017). By focusing primarily on income and harvester roles, academics have thus far maintained a very narrow focus on material outcomes and individual efforts for self and family. However, this focus largely excludes the collective benefits of Indigenous economy as a cultural practice.

The absence of salmon in general also had an impact on Syilx economic systems of trade. Several participants recall the importance of all species of salmon to Syilx economy including Kakni? [nsyilxcən word for kokanee which is a type of salmon]. Restoring a Syilx traditional trade practice with salmon may be a helpful way to address the economic struggles faced by some Syilx Okanagan Nation members and may be beneficial for food security. The Cree community of Norway House, Manitoba has commercial harvesting rights (as well as subsistence rights) and their commercial fishery has been identified as the key factor in a food security rate (>90% food secure households) that is equitable to non-Indigenous settler populations (Islam & Berkes, 2016). This is in contrast to existing provincial and federal government practices described by Ntytyix that exclude Syilx from benefits to economies on
almost every action related to Indigenous food security such as the selling of fish (and hunting) licenses, despite the fact that the ONA has done the work to restore the fishery.

**Diet Quality & Health**

Participants generally agreed that the diet quality of Syilx people was better historically when more Indigenous foods that have excellent nutritional value, such as salmon, were available. Some attributed this to the easy access to highly processed foods and the high cost or lack of desire to purchase store bought salmon. A lack of salmon, like many other Indigenous foods, has a profound effect on the physical un-wellness of Syilx as explained by *ntytyix*: “Our foods are medicines. And without them, we become unbalanced and we become ill, sick.” Participants describe types of illness that they are aware Syilx members have that are associated with what you eat, such as substance use disorder, obesity, and diabetes.

A lack of adequate food sources has perpetuated a lack of wellness for Syilx people. A transition from traditional to modern lifestyles for Indigenous people has resulted in numerous lifestyle diseases (Gracey & King, 2009). Forced to rely on introduced food species such as store-bought foods that are expensive, unnatural, contaminated, unfamiliar, and require a means of storage that is inaccessible such as freezers, has confined Syilx people to an unhealthy and insecure food system. As a result, participants reported the need to rely on inexpensive store-bought foods that lack balance in terms of nutrient composition. A focus on carbohydrates and poor-quality protein is a common nutrition transition observed with Indigenous food insecurity (Kuhnlein et.al., 2004, 2013).
**Spiritual Relationships**

Some participants identified disconnection in terms of spiritual relationships as a significant outcome of colonization. Participants reflected on the ways that the government physically separated Indigenous people from each other and the land and water. Spiritual relationships were stressed for Syilx people by colonial imposed divisions and separations that challenged the ability to fulfill Syilx teachings of reciprocity and sustainability and in some cases any form of spiritual belief impacting a wholistic sense of well-being. A specific example of how the spiritual relationship was stressed is clearly summarized by ntytyix who talks about how the churches attempted to change belief systems in Indigenous communities. The stated outcome in many cases resulted in a lack of spirituality or belief:

So, a lot of our people are in limbo [from a belief system] due to the atrocities of what the Roman Catholic, the Protestant, the Anglican and these other churches have brought to us and what they did to us through the residential school and other things like that and in that lack of belief you find a lot of people that are really unhealthy and unbalanced.

Combined with an absence of salmon ntytyix concludes that many people were left without belief in Syilx world view or religious beliefs. Sp’ič’m reported that a colonial impact of their upbringing was that food had never been celebrated. The removal from songs as a form of cultural knowledge created imbalance by “remov[ing] us from the ability to engage in a reciprocal energy exchange that restores us” (ntytyix). These changes in ceremonial practice contributed to what could be described as a ‘spiritual sleeping’ that is linked to not speaking the language and therefore not transferring the understanding of Syilx specific concepts. Sk’maxist talked about teachings from other Indigenous peoples that support their agreement that the spiritual beliefs of Indigenous people have been impacted,

Like we are told in the prophecies that when that time comes, then the native people are going to get the mountain prepared and when the mountain is prepared that the people will see the mountain. Because before, some of them wouldn’t be able to see it, and so
when the mountain is prepared, and we are ready, and the creator is ready the mountain will appear.

In this quote the mountain is a metaphor that portrays belief. It reflects a need to prepare, teach and foster the mountain by those who see it or have belief. It acknowledges that belief has been unexpressed or unseen for many people, for quite some time, but when things are prepared, more people will see the mountain and believe again.

Spirituality is an important dimension of our health and attending to it in our care forms a wholistic sense of being (Hoseini et.al., 2019). Spiritual disconnectedness is widely understood as an Indigenous specific factor that affects Indigenous health (King, Smith & Gracey, 2009). The devastating impacts of colonization to Indigenous culture and belief systems has been voiced by many (George et.al., 2018; Truth and Reconciliation Canada, 2015;). The impact is described by others as spiritual bankruptcy that led to poor coping skills (Martin-Hill, 2009).

Language and its role in maintaining Syilx world view was also important to participants and has been cited by academics as an especially important link to spirituality (King, Smith, Gracey, 2009). Syilx learning is essentially linked to participation and experience of cultural practices on the land and water. The removal of experiences related to salmon has contributed to a cumulative risk to language loss by reducing the need to speak words that are specific to salmon, harvesting, tools, descriptions of water and ecosystems. Language is important for wellness because it is a connector of culture, land knowledge and spirituality.

Sk’maxist describes how an absence of salmon has limited the exposure to not just a culturally specific food but from a spiritually nurturing fulfillment of that food being provided by Syilx people. Also, a lack of opportunity for Syilx experiences with salmon has limited the opportunity for Syilx ceremonial and lifestyle practices to be included in health and social services programming. Sp’ix’m is also a community worker and speaks about how that
connection to ceremony might be a missing link for wellness for any given individual and feels that it is important to include cultural and ceremonial experiences in to current models of health and social services. Cultural and spiritual considerations in care such as traditional ceremonies are important to Indigenous world view and are emerging in other health jurisdictions (Drost, 2019). Closely linked to emotional and mental well-being, approaches that aim to restore cultural practice, connection to community and Indigenous identity are key strategies that Indigenous practitioners employ in mental health focused practices (Gone, 2013; King, Smith & Gracey, 2009; Rowan, 2014). However, the integration of seasonal harvest and reciprocity practices of Indigenous foods has not been included in any health model reported in academic literature (Rowan et.al., 2014). Overall, an imbalance in the spiritual aspect of our being exists without Indigenous foods such as salmon because the interactions between salmon, water and people have been inhibited limiting an opportunity to nurture our spiritual belief system.
Chapter 6: Findings - Harvesting Wellness with Salmon

A variety of perspectives were shared that helped to understand what the return of Okanagan sockeye salmon means for Syilx wellness. Upon reflection of participants accounts, the idea that salmon creates a spiritual connectedness that is at the core of Syilx Wellness with Salmon (Fig. 2) developed. This connection is manifested by movement with the cycles of salmon that link a sense of belief, identity and reciprocity. Spiritual connectedness is maintained by a protective scaffolding of Syilx traits of wellness that attach to this core and link wellness through individual, family, community and the land. First findings will be presented to demonstrate how these three senses (belief, identity and reciprocity) support a core of spiritual connectedness to characterize the experience of wellness for Syilx. Following this, I will then discuss Syilx traits that support wellness.

Figure 2. Syilx Wellness with Salmon

The ability to enact or not enact these important senses and traits to create a spiritual connectedness largely determines the experience of wellness in relation to the return of the
Okanagan sockeye salmon. Lastly, I will provide a storied account in which my analysis and interpretation of the findings are carried forward through dialogue and reflection with Syilx Oral history of the salmon life cycle.

**Spiritual Connectedness and the Three Senses in Relation to the Salmon**

As an important subsistence food, salmon is a mechanism of spiritual connectedness and can provide a fundamental focal point within Syilx wellness (Lowe, 2002, Ullrich, 2019). Participants shared that experiences with the land and water were both emotional and awe inspiring to highlight the concept of spiritual connectedness.

The beauty of it. The wind blowing through the trees. The water. Learning that everything goes back to the water (*sp'iƛ'm)*.

I guess being a part of something. That spiritual, maybe the word is awareness that we realize through our ceremonies and in our prayers when we gather medicine or food, that we honour from a Syilx or Okanagan perspective. ..... So that spiritual significance allows for us to know that we are just a part of this place, like all of the plants, the birds, the animals, the fish (*sk'maxist)*.

These experiences shared by participants convey a sense of deep emotion, awe, strength and awareness that tells us something is significant. They describe an important connectedness that links spiritual well-being of Syilx people to land and place. Academics exploring Indigenous well-being and connectedness have identified the importance and cohesive nature of spiritual connectedness (Brooks, Michaelson, King, Inchley, & Pickett, 2018; Hoseini, Razaghi, Panah, & Nayeri, 2019; Mohatt, N.V. et.al., 2011; Ullrich, 2019). Living with salmon provides what Ullrich (2019) describes as a mechanism of spiritual connectedness because it maintains connection between our ancestors and future generations through the cultural practices of subsistence food harvesting, language, and ceremony that is linked to land and place. Links to
land and place have further been identified as supports to a spiritual connectedness and is a foundation to wholistic sense of wellness (McIvor et al., 2009; Van Uchelen et al., 1997).

The return of salmon to the Syilx has re-established opportunities to have a spiritual belief that is linked to actions with salmon rather than imposed belief systems. It has also restored a connection to identity as salmon people who have strength and resilience which restores a sense of individual and community agency to do more for self. Restoring a sustainable activity, salmon can provide for the people, the land and the water through reciprocity in action that maintain an internal spiritual relationship with the creation.

**Belief**

Participants’ accounts described how belief was an important strategy to foster a spiritual connectedness that contributed to wellness. Many participants felt that the return of Okanagan sockeye salmon was an inspiring story of belief. They attributed the salmon restoration initiative’s success to an ability to apply various sources of knowledge (Western science, Syilx cultural knowledge), but ultimately enabled through the power of belief: “It’s re-institutionalizing our rightful place in terms of what is now recognized as an international model of recovery for salmon” (sk’moxist). Participants related many ways that the land, water and salmon inspire us as Syilx people. Inspiration and belief facilitate the work that is required to continue in other areas of the territory: “We need to have salmon back there because the more salmon we have on our land, the healthier our land is going to be… So, we have to get it back and I believe we can” (ntytyix).

In this study participants articulated a sense of belief as the sacredness of our responsibilities, the power of language and cultural knowledge and a sense of purpose.
Participants with traditional knowledge perspectives often talked about the role of Syilx creation stories and the depth of knowledge that they convey including the importance of having a belief:

You know that agreement was made between those four foods. That the only thing that we have to do, is we have to pray. … And remember the prayer and remember the agreement (ntytyix).

A sense of belief is furthered through language that connects us to land and water and was expressed by sp’iʔ’m who related ceremony to communicating with salmon in a language that they could hear and understand. This perspective connects to an important factor brought up by a knowledge holder about knowing our salmon “Knowing our salmon and what we have put in to them” (sk’maxist). These understandings lead us to the notion of a greater purpose that was voiced by a youth “The work that we do is done for the people.” (siya?).

Prior literature indicates that belief is an essential component of spirituality which is significant in every Indigenous model of wellness and is described as a foundation to other important aspects of wellness (Panelli & Tipa, 2007; Van Uchelen, Davidson, Quressette, Brasfield, & Menerais, 1997). It is logical then that belief, through its ability to enact spiritual knowledge can create a “power to influence the success and wellbeing of humans.” (Turner N.J., Boelscher-Ignace, & Ignace, 2000, p. 1279). Foundational to this mechanism is an Indigenous spirituality that can celebrate the sacredness of food and foster a connectedness between belief and Indigenous foods (Amberson, Biedenweg, James, & Christie, 2016; McIvor, Napoleon, & Dickie, 2009; Oster, Grier, Lighting, Mayan, & Toth, 2014;).

Identity

A sense of Syilx identity is when you are acting in relation to and share a sameness with other humans and living beings of this place (Armstrong J. C., 2008) which forms a significant component of spiritual connectedness. Identity requires the wholistic actualization of all aspects
of a Syilx way of life including the application of Syilx values in modern contexts of living.

Acting in relation to all living things is integral to Syilx identity such that doing creates being. Participants identified presence, visibility, revitalizing language and relationship to salmon as important aspects of identity. Expressions of Syilx identity as oneness are captured in the following quotes:

We Are the Salmon People (siya?).

All of the places where the salmon ceremonies have taken place, down at OK Falls, this fall, when we paddle across the border and we talk about fish and we talk to our relatives down south. It creates that understanding that it is not just fish, it’s about who we are. And the connection to the water and the connection to the land. And the connection to the creation (ntytyix).

Our youth feel proud to say that they are Okanagan and that we brought salmon back (siya?).

These quotes demonstrate the desire of participants to identify with tribal territories and specific spiritual actions that strengthen connection, as well as a strong collective identity that is inextricably linked to salmon. A sense of identity is therefore an important part of being well as it encompasses many factors that restores and affirms what Kirmayer & Valaskakis (2009) term a sense of individual and collective agency; a factor that may help return a good life to Syilx.

For Syilx the wholistic nature of the salmon restoration initiative affirms a positive sense of identity for both individuals and peoples. Other Indigenous groups in the Pacific North West identify positively with salmon describing salmon as “the backbone of their diet and culture” and as “the heartbeat of our people” which are statements of identity of peoples, like Syilx, who see actions with salmon as integral to who they are (Amberson et.al., 2016). The foundations of identity that connect individuals to place, other living species which may be sources of food and a collective group have been linked to well-being for Indigenous peoples in North America and
globally (Amberson et al., 2016; Donatuto, Satterfield, & Gregory, 2011; Kuhnlein, 2014; Lardon et al., 2016; McIvor, Napoleon, & Dickie, 2009; Oster et al., 2014; Panelli & Tipa, 2007; Van Uchelen et al., 1997). So, identity was an integral factor in fostering a spiritual connectedness that promoted many feelings of individual and collective wellness.

**Reciprocity**

A Syilx way of being requires honouring the reciprocal relationships between humans and all living things including those such as salmon that provide physical nourishment. It is seen as necessary to sustain our self-reliance as human beings and is essential to our wellness. *ntytyix* reminds us that agreements were made with the Four Food Chiefs:

Yesterday you saw sówin, Sockeye, coming out of the water, being cleaned, put away to feed us at our ceremony, to feed our children, to feed our community. Tomorrow you might hear of somebody going hunting and that animal is going to give himself and it’s going to be that agreement that sk’małíst made” (*ntytyix*).

Learning and understanding Syilx knowledge and honouring this agreement are examples expressed by participants of important teachings that need to be understood by everyone. *Sk’małíst* wants a greater threshold of the collective to understand: “That you got to take responsibility to Mother Earth and start looking after her again and start taking that role seriously again” (*sk’małíst*). This is seen as an imperative by all ages, for example, *siyáʔ* thinks “we need to reintroduce that chief [salmon] again” and *sp’iƛ’*m sees salmon’s return as “huge because one of our chiefs [salmon] has returned . . . we need to get to know him again”.

Participants spoke about getting to know our Chief Salmon again which in relation to food sustenance includes understanding and practicing Syilx laws that are conveyed in the story of How Food Was Given (Okanagan Tribal Council, 1984). The reciprocal responsibility that is put forward in this story maintains a balance that is described by many Indigenous nations as
“traditional protocol” and is what has sustained cultures since the beginning of time (McIvor et al., 2009). Syilx protocols also require actions to be taken after the prayer and ceremony and the reintroduction of Sockeye Salmon initiative was no exception: “It took more than prayers to get these salmon here. It took a lot of hard work” (ntytyix).

The hard work is a form of reciprocity that is multiply beneficial as harvester gives to the land and water by respectfully harvesting what the land and water gives to the harvester, allowing them to feed the family and community. When the harvest has been plentiful the reciprocal relationships with others can be enacted as trade or sharing. Reciprocity and the ability to give back are important to our well-being and are reliant on being able to harvest. This factor is critically reflected by ntytyix a harvester from a family who provides for others in the community: “We have salmon now and I don't have to look anywhere else anymore. That's important. I say that loud and clear!” (ntytyix). The return of salmon is restoring the ability to return to a prosperous way of life that extends the reach of generosity that protects us from hardship and helps us to sustain our self-reliance. This is reflected when ntytyix discusses conditions of poverty: “We don’t have poverty if we share.” and remembers what life was like when they always had salmon and it was also shared and traded.

The return of Sockeye Salmon is affirming our understanding of our wellness by creating an active opportunity for Syilx people to understand the importance of what ntytyix describes as their own part in this interconnected reciprocal relationship that must be regularly maintained. The reciprocal relationship and giving back to the land can also include the intangible exchange of energy that takes place when the people go to the land or water. Ntytyix tells about a time that he took a group of Syilx youth up on the land and shares how he felt when the youth were singing there. He imagines that the land and the youth must have felt it too.
It was BEAUTIFUL. It was so wonderful. I just think the land really felt good. If I was the land, I was there, and I was a part of it and I felt really powerful and inspired and I think the youth felt really good too” (ntytyix).

Unlike the trade of goods at a barter fair or the giving of gifts at a give-away, this is a relationship where the exchange of gifts can’t really be seen or measured.

A number of studies have identified the significance of respectful and reciprocal relationships between Indigenous people and their environments to spiritual, cultural, social and physical well-being (Lardon, Wolsko, Trickett, Henry, & Hopkins, 2016; Panelli & Tipa, 2007; Vaughan & Ayers, 2016). Reciprocity provides the opportunity for an internal spiritual relationship within oneself that takes place when one participates in an act of reciprocity, as well as one that affirms identity to the collective (Gehl & Ross, 2013). Participants’ accounts reveal that actions and commitments with the aim of reciprocity spur spiritual connectedness that promotes well-being.

**Traits of Wellness**

In this study, five traits that support wellness were identified to describe the unique strengths of the Syilx. These five traits characterize the qualities that contribute to wellness for Syilx people and include: Relationships, Connectedness, Responsibility, Participation & Sharing, and Purpose (represented in Figure 2 below). These traits provide a scaffolding of support to spiritual connectedness and build a continuing balance of Syilx wellness as we live it with the cycles of salmon. As the Syilx concept of wellness extends beyond the individual, to family, community and land/water, the expression of traits sometimes varies depending on the context. A discussion of each trait follows.
Relationships (trait)

Relationships were expressed and activated in a myriad of ways to foster various actions, and ultimately, a greater sense of wellness. Relationships that could be expressed included external inter-government relationships, bringing family and community together, as well bringing people to the land and water.

Nurturing and maintaining external relationships with other nations and other governments often take place at the community or nation level and are required to achieve wellness in a broad sense (well-being). Participants talked about how nurturing relationships with Syilx Okanagan nation members in the United States as well as various levels of government supported the success of the Sockeye Salmon restoration. Sk’maxist reflected about salmon’s global presence and the potential with increased numbers of salmon to acknowledge ‘unrecognized relationships’ between all peoples within the whole salmon system that we share that connection to our salmon with.

Parallel to these relationships described by participants, prior literature has documented that when relationships with other communities, nations and governments are active, the opportunity to achieve beneficial outcomes that determine wellness are much better than when these relationships are undeveloped or silenced. For example, external relationships with the state and industry promote wellness by supporting the life-sustaining desires of the Indigenous people of Kaua’i’s North Shore in Hawaii to continue to practice Indigenous fish harvesting methods and to manage their fishery (Vaughan & Ayers, 2016). For this group, the Indigenous fishing method is highly human labour intensive and is supported by the local agriculture industry that redirects employees at specific times to help pull in nets (Vaughan & Ayers, 2016). An active relationship also facilitated successful co-development of fishing regulations for this
same Indigenous group with the State of Hawai‘i to achieve local-level management of their fisheries (Vaughan & Ayers, 2016).

Among Syilx study participants, external relationships with other nations were sometimes maintained at a family level as well. One participant recalls the historical innovation of his family to maintain relationships that provided salmon despite the absence of salmon in the Okanagan.

I'm gonna talk about my family [emphasis added by participant]. I'm grateful [emphasis added by participant] for my dad and my uncles that had to be innovative and work out those relationships with the Cheam people. I was grateful for [my relative] for doing what [they] had to do when my dad wasn't there. It's been like 25 years and there was a gap in my life on salmon for a while. That's a timeline right. That's just in my history. I'm not even an Elder” (ntytyix).

Activating relationships amongst extended family groups and inter-nation familial groups has helped to fill gaps in salmon access while it was absent in the Okanagan River. Both sk’maxist and ntytyix spoke about the importance of salmon to trade historically referencing the historic fishery at Kettle Falls that was significant for a trade economy as well as fostering relationships amongst the people. Salmon’s return now extends the potential for inter-tribal economic and trade relationships and other external relationships that further the potential to restore Syilx wellness and re-establish economies. In the current context, participants spoke about how salmon’s return to the Okanagan River has facilitated ONA participation in the River Select program, a form of modern inter-tribal trade, and build a sustainable economic fishery that is based on Syilx values.

**Connectedness (trait)**

Connectedness is an integral trait of wellness from a Syilx perspective that supports spiritual connectedness by developing connections to the people, salmon, land and water, language, and ceremony. All voices of Syilx social structure, men, women, knowledge keepers
and youth, shared experiences with the land or water that activate what can be interpreted as a sense of connectedness. In this study, it is a Syilx woman/youth voice who expresses the importance of both these connections and the need for youth to have an opportunity to also find connectedness:

It's so important to me to maintain that connection to these places, because that's who we are as Syilx people that's part of my identity. I see a lot of that has been taken away from us and a lot of our youth aren't provided the like that space to umm I don't know, understand that connection but to go and find it, themselves. I feel that a lot of our youth need to be reconnected, especially to our eastern part of our territory and maybe outside of our reserves (siya?).

Connecting youth to Syilx land and water provides a continuance of our identity to future generations like it has been passed from generations before. It was a grandparent, sk’maxist, who spoke about salmon providing a connection from Syilx ancestors to future generations:

Salmon has always been a part of our ancestors. So, you know that links us. I think it links me back to our ancestors which links us back to the land, and back to creation in general. Yeah. I think it’s pretty powerful. Cause even just being at the river with that energy of the river and the energy of Mother Earth sitting there and watching the old timers do the fishing and the women doing the cutting and cleaning of the salmon, off to the sides of the river, and the kids running around and playing. Just makes that whole community connection. In that area you are connected to the earth and you’re connected to everything around you and feeling a lot of joy and happiness and a lot of good energy (sk’maxist).

Although these words give an explicit example of spiritual connectedness, they are also evidence that our way of life with salmon provides many different levels of connectedness. Our way of life with salmon begins early in life as was recalled by a mother who grew up in a family of food harvesters:

I’ve always had a close connection with the fish. I guess we have always been kind of harvesters even when I was a kid. It’s so funny like when I think of it. I was only in kindergarten I would be taking a gaff down and I would be fishing by myself. But I remember dragging a gaff hook down to the creek and I’d catch fish and I’d always go with my older cousins and we would always fish the creeks all of the time, whether with a gaff or a hook. We’d always do that, and we were all so young (sp’ì’ɬ’m).
Youth realize the importance of connection to Indigenous language. Speaking and understanding the *nysilxen* language is identified by several participants as an important action to support spiritual connectedness by increasing our understanding of Syilx knowledge and world view: “*Our* language, *really* is so, has *so* much land knowledge in it” (*siyaʔ*). As an elder, *Sk’məәxist* articulates how learning the language helps to create visual pictures to increase understanding of Syilx connection to land and spirituality:

> When you learn those root words and those words connect to other words and you get that visual picture in your head … and like whoa! …. Now I know how the language connects to the land. How the language connects to spirituality (*sk’məәxist*).

Learning from elders and knowledge keeper helps youth to realize that there is vast amount of knowledge about the land, embedded within the language. For one youth participant a connection the *nsyilxen* language has strengthened connections to the land: “Syilx knowledge, and the actual *depth* of our knowledge of the land and the water and our connection of who we are too. *That* has only made my personal understanding of the land more - stronger” (*siyaʔ*).

Although there are several mechanisms of spiritual connectedness, ceremony is notably one of the most easily recognized. Some nation members are just starting to learn about Syilx cultural practices such as ceremony. One such member described how ceremony helps to complete or solidify the connection:

> Seeing people giving back offerings and going to some of the water ceremonies and different ceremonies that I have been able to attend, it just, it was kinda like, it just fit. It was just like a missing piece that I didn’t know was missing (*sp’ik’m*).

The types of ceremonies that this nation member is speaking about in this quote are becoming a more accessible wellness practice as a result of the salmon reintroduction initiative. The return of salmon in the Okanagan River System has re-established bonds between the people, salmon, land, water, ceremony and protocol that can activate a sense of connectedness and belonging.
This form of well-being and belonging is described as Indigenous connectedness in the academic literature (Latimer, 2013; Mohatt et al., Fok, Burket, Henry, & Allen, 2011).

Several examples of connectedness to land and place were identified by participants as well as the importance of creating opportunities for the youth to develop a connection. A connection to land and place is evident in most Indigenous conceptions of well-being (Ullrich, 2019). Wilson (2003) has explored the links between place (land) and health for Anishnabek people and has identified how the land represents a complex intersection of culture, identity and health. Her findings indicate that connections to land are felt as spiritual connectedness that is present in the minds of individuals (Wilson K., 2003) and speaks to experiences that have meaning. The connections between ecosystem, land, place, spirituality and health have been well documented (Delormier, 2017; Griffin-Pierce, 1997; Kuhnlein, 2014; (Turner N.J., Boelscher-Ignace, & Ignace, 2000, Turner N.J., 2005) but few discuss the state of ‘being connected’. ‘Being connected’ may be similar to “spiritual significance” which is how sk’mexist described connection to land and place and is likely closely linked to the mind presence that Wilson speaks about. Although participants have had direct experience with salmon, they currently identify a gap in connectedness amongst nation members because there is still limited opportunity and knowledge to have positive experiences with our salmon.

**Responsibility (trait)**

Responsibility is a trait that is expressed by Syilx to achieve wellness as a reciprocal action to the salmon that continue to fulfill their responsibility to Syilx, by returning and providing sustenance. The trait of responsibility is activated by knowing our Salmon Chief and re-instituting and practicing the laws that salmon and other creation set forth for us. This is what directs us towards self-reliance and in our current reality, allows Syilx to know our salmon and
know that they are safe. The following quotes express the view of responsibility as a required component of our wellness from both a youth and a traditional knowledge perspective,

Salmon nourishes us, it's one of our four food chiefs that laid down its life for us and in doing that we have a responsibility to look after them and make sure that they are here for future generations (siyaʔ).

Honouring the agreement that was made on our behalf by those four foods and the kʷulencutn is described as ‘the whole business of being sqilxʷ’, that is our responsibility and is required to maintain balance. The responsibility is to have that belief (ntytyix).

These quotes reflect our understanding of responsibility as a law that is being transferred intergenerationally as we continue to live with salmon. This will facilitate further movement towards individual, family, and community/nation self-reliance. The re-instatement of traditional laws to improve the quality of life of other Indigenous peoples has also been suggested by other authors (St.Pierre & Long Solder, 1995 in Martin-Hill, 2009). As well, the responsibility to share and practice traditional teachings and methods of harvesting on the land and water and pass them on to future generations has ensured the preservation of culture and a continued survival and identity of Indigenous peoples and communities (Delormier, 2017; Martens, Cidro, Hart & McLachlan, 2016).

Responsibility also requires being active in the entire process. This was expressed from the Syilx knowledge holder understanding that you don’t pick a date on the calendar to do a cultural practice, that subsistence harvesting requires an ongoing interaction with the land and water:

I think that is a really important aspect of what we do. ... You have to be out there and monitor it and be a part of the process, before it is ready, while it is ready and after it is done. I was fortunate to have good teachers, my grandma and my aunties and my dad. … It instilled an appreciation for what I know now as a social institution, being out their together... I am coming to realize how much that matters...That knowledge passed down through those activities is part of transferring that responsibility to care for those things that provide us with what we need to live (sk’maxist).
As certain locations are frequently visited, changes to the area and other observations would indicate whether salmon or other food should be harvested in that particular location. Therefore, subsistence food harvesting is more than the physical activity but also a social institution of knowledge transfer that is a natural, wholistically observant process of experiential management and responsibility.

Every individual must learn and take responsibility. The attention to individual responsibility in terms of wellness that is modelled by Syilx people has provided important leadership and set a path in terms of our ability to assert our rights and responsibilities with respect to the return of salmon. sk’maxist and ntytyix felt it was important to remember and recognize the leadership that had the courage to heal and model wellness for others. Taking individual responsibility for one’s wellness creates confidence that can be applied to larger responsibilities. As a collective, leadership have modelled responsibility by responding to the direction of our elders to bring the salmon back. Although the impact of individual role modelling of responsibility and well-being on broader collective responsibility in terms of any aspect of wellness does not appear to have been studied, Indigenous community investment-ownership-activation has been identified as an important pathway for successful health programs (Smylie, et.al., 2016).

**Participation and sharing (trait)**

Participating and sharing is a trait of wellness that can be activated at all levels of Syilx society including family, community/nation and land/water. From participant interviews, it is clear, that participating, and sharing is imperative for our wellness as it contributes to our sustainability not just in terms of meeting physical needs, but also in preserving cultural knowledge and creating social connections. Participants shared numerous examples of the
commitment of Nation members to share cultural knowledge between elders, adults, youth and children. Ntytyix who is a known salmon harvester, speaks about his gratitude for the intergenerational transfer of knowledge and practice and how his role as a teacher is now awarding significant benefits by continuing this cultural practice:

First of all, I've got to be thankful. I gotta be thankful for my grampa, my gramma. I thank them for teaching my dad and my uncles how to do that, so that they can teach us. I've got to be thankful for my grampa, my parents, for giving us that access and teaching us and it's more than salmon. I think it’s fishing in general. It's a collaboration of trout, kikinee and salmon. This is the first time in my life, my son and my nephews filled my freezer up for me. I don't know if that hurts my ego or if that makes me feel proud, but I'm grateful for them to fill up my freezer. They did a really good job. They did everything right. I couldn't ask for anything better (ntytyix).

In this case, passing on harvesting knowledge and skills allowed for the continued provision of food by family when individuals faced barriers to harvesting themselves. It demonstrates that the inter-generational transfer of knowledge provides an ongoing perpetuation of benefits and sharing. Participants’ interviews have emphasized the essentiality of inter-generational transfer of Syilx knowledge between family members that sustains survival as well as the commitment of elders and the nation to provide such opportunities for youth who may not necessarily have it due to colonial impacts that eroded knowledge within family systems.

All participants spoke about working together as a family to harvest sustenance from the land and water and expressed a need to work together as a community. A specific reference to the experience of working with the Okanagan Nation Alliance Fisheries department captures participating together to achieve a collective goal: “There's lots of community members that work with me and so it's pretty nice to see different members from each band working well together” (siya?). Siya? describes working in fisheries management at ONA as a “family type atmosphere” where people are friendly, and the work environment is ‘upbeat’. The ONA
recreates a sense of family in many of their programs by inviting nation members to participate which provides opportunity to mend some of the disconnections to traditional knowledge created by colonialism.

The positive atmosphere of working together and learning was described by several participants as important times for making memories and creating connectedness within family while passing on knowledge and skills essential for our livelihood. Participants also spoke about how salmon can bring families and community together. Harvesting right at the Okanagan River was remembered by sk’maxist as a very enjoyable time because everyone worked together and there was a good energy that facilitated a connectedness that wasn’t always present in the community. Sk’maxist also noted how this type of environment of good energy facilitates belonging and is related to being in a natural setting:

Just in that area and you are connected to the earth and you’re connected to everything around you. And just feeling a lot of joy and happiness and a lot of good energy. [IT] feels like you fit and belong somewhere when you are in that kind of energy (sk’maxist).

Being connected to the water and the people of your community was important for several interview participants. These times at the river were especially remembered because it brought out people who would not normally socialize or get along and they worked together in a very positive atmosphere to harvest, process and dry the salmon.

In the context of community development, salmon strengthens communities by creating opportunities to participate and build relationships as we recall and affirm our traditional knowledge and how it can be applied in our current and future needs (Kaplan, 1997). At the most significant level, the organizing of people and the overseeing of a collective harvest that feeds all of the families as well as the ‘protective shield’ that is created when people are brought
together in ceremony (McIvor, et.al., 2009; Vaughan & Ayers, 2016) may be fundamental to Syilx wellness.

Participants described the commitment to participating and sharing as imperative for wellness as it ensures our sustainability. Passing on teachings of traditional knowledge and skills through experiences is also fundamental for the survival of the Haudenosaunee (Delormier, 2017). In fact, several authors have mentioned the benefits of elder/youth teaching and learning including language, especially with respect to food occupations and traditions (McIvor, et.al., 2009; Oster, et.al., 2014; Wright-St.Clair, 2004). Pacific Northwest elders regard the cultural traditions of salmon as significant and hope that they will continue to be carried out (Amberson, et.al, 2016). In fact, it is the participation in and sharing of this type of traditional [food] knowledge that was historically practiced, that authors agree needs to be restored as an intervention for health and wellness promotion (Martin-Hill, 2009). The ONA offers supports to nation members who want to become more involved with salmon and creates an opportunity for individuals to contribute to others thereby building strength and wellness within themselves (VanUchelen, 1997). Participating in salmon reintroduction creates a sense of community and togetherness that is important and contributes to a sense of identity that is a source of strength and wellness (Van Uchelen, 1997).

**Purpose (trait)**

The final trait of wellness that arose through participant interviews is that of having a sense of purpose. Purpose is strongly linked to having positive feelings, personal and spiritual growth, and contributing. Participants talked about how their experiences with salmon contributed to a sense of purpose. For example, a youth participant talks about how working with salmon is meaningful and enjoyable:
“Rather than just working in 9-5, you know kind of mindless job, I am doing what I love and it's benefiting my community and it's also bringing back a really good resource for food and for jobs” (siyaʔ).

While being purpose-full, working with salmon provided specific experiences for both personal and spiritual growth for participants who worked in fisheries. One example extends the teachings of patience that are learned by working with salmon fry that are extremely fragile if put in a stressed state to how one relates to other people “When you stress people they get hurt (siyaʔ). This same participant attributes working with salmon to clearing a life path, bringing meaning to life as well as teaching skills of professional conduct and communication with others (siyaʔ). Restoring salmon for the Syilx people is also restoring opportunity for wellness by creating meaningful, purposeful ways of providing for our own.

The returning salmon are also helping to restore natural roles within all social structures that carve out a deep sense of purpose for community members. This is specifically realized as individuals are now able to feed their family or to provide for others with meaningful employment, “Being able to support my matriarchs of the family. Being able to provide for them and support them, for the work that they do” siyaʔ. Providing salmon is also purposeful when it contributes to the continued work that is done by others with differing roles which might include ceremony. The return of salmon creates purpose by reinstating family and community harvester roles.

Returning Syilx roles with salmon and reactivating the purpose trait enhances wellness in many aspects of our being, by contributing to spiritual growth. In some cases, it builds on individual ability to heal from illness by contributing to the well-being of others. There are also other examples of how working with food in a traditional way has contributed to the well-being of the provider. Wright-St.Clair (2004) writes about how women of Chiang Mai society learn
the ancient ways of food preparation from their mothers and grandmothers for the food that is brought to the temple to feed the monks and their ancestors. This practice serves wellness for these women as from Wright’s perspective “Happiness comes from earning merit, doing the jobs themselves and knowing they contribute to a good and generous Thai society.” (2004). Salmon harvest supports wellness by feeding the people, all of whom have a varied role with salmon whether it is spiritual, governing, social or physical.

**Syilx Perspective of Wellness in the “Salmon Cycle”: A storied account**

The Syilx people have a vast oral history and story system that provide important teachings about the world. Syilx Okanagan story systems express cumulative knowledge and are considered to be an expression of our ancestors, which include all living things, talking to us (Cohen, 2011). One story that is of the form that can be told and retold at any time, helps us to understand salmon behavior and also how our interactions with salmon strengthen our wellness and is called “Salmon Cycle”. I will summarize this story as it was published by the Colville Confederated Tribes (1978), as per the telling of Christine Sam, of the San Poil member band of the Colville Confederated Tribes. My summary and analysis will focus on explicit portions of this story that are most relevant to this study. By analyzing what the story is saying related to a Syilx perspective for wellness I can connect these teachings that have been passed through the generations to a current day Syilx perspective of wellness which affirms that salmon has played a role to return wellness to Syilx people.

“Salmon Cycle” is a traditional teaching that tells about the journey of salmon up the Columbia River during the time before human beings were on this earth. On his journeys,
Salmon provided teachings to help us to understand salmon behavior and our interactions with Salmon that further describe several aspects of our wellness.

In this story Salmon was travelling up the Columbia River. When he arrived at Old Man Spiders’ camp Salmon was able to help him harvest salmon to eat. Old man spider was visibly lacking the strength to harvest because his arms and legs were very thin and the platforms that he had built at the riverside to fish from, were not very sturdy. He was hoping he could get some salmon, but he was not entirely confident that he would be able to do so. Here spider is elderly and weak, lacking the muscular strength required to build strong platforms and harvest. He is therefore unsupported and dependent on Salmon to help him survive. The recent experiences that have contributed to salmon’s absence in Okanagan River systems and the resultant disconnection of the people from Salmon, has left Syilx people in a similar state of un-wellness. Much like Old Man Spider before Salmon arrived, a reduced strength of wellness and instability of social and governing structures has coexisted with the absence of salmon.

Salmon took the dip net that Spider had made, down to the river. He strengthened the fishing platforms that Spider had built and then he dipped out a salmon and left it on the beach for spider. He let Spider know what he had done, and that Spider would now have plenty of salmon. In this action Salmon took responsibility to do what needed to be done. Salmon’s action taught spider that his dip net was a useful tool but that the fishing structures would need to be stable. Several authors have identified Indigenous tools and methods of harvesting as approaches that worked to sustainably harvest and manage salmon stocks in several different river systems (Newell, 1993; Glavin, 1996). The stable structures that Salmon put in place are like a scaffold that ensures that Spider’s people have safe access to the river from which to

2 The duality of gender is maintained from the original telling of the story and reflects the physiology of species regeneration although there have been a few reported examples of Chinook Salmon possessing gender diversity.
harvest salmon. This creates the platform which allows humans to enter the domain of salmon and is the same for all locations along the river. In this study, participants identify structural barriers for Syilx Peoples to have safe access to salmon such as access to water front, exclusion from government decision making, ability to direct the care of ecosystem management and lack of experience in terms of harvesting. These barriers limit Syilx Okanagan Nation member participation in a fishery and the subsequent ability to share with family, community and others. Salmon demonstrates that strong structures at the community/nation level will provide plenty of salmon. In this part of the story, salmon also teaches us that salmon and harvester are interdependent. Salmon gives strength to the people and therefore fulfills the agreement that was made by Syilx law in the story of the Four Foods Chiefs. When salmon harvests salmon, it speaks directly to Syilx identity as Salmon people and that we share many of the same traits as salmon.

Spider was grateful for the salmon to eat and thought that he must return the favor. He told salmon about the next camp down the river and the feat that he would have to accomplish to marry the Chief’s beautiful daughter. Having a heads up, salmon arrived prepared to meet the challenge and was able to complete the feat to marry the Chief’s daughter. To fulfill their end of the agreement, spider on behalf of his people gives back to salmon. Giving is an action that results in a reciprocal action to benefit the wellness of both parties. Spider’s gift to salmon illuminates the ongoing cycle of giving that takes place between salmon and Syilx people when traditional customs are practiced and when salmon is present. Spider likely saw the benefit to his people and all those connected to the river system, if salmon could bring his strength to them. He facilitated this by telling salmon what he would have to do to marry the Chief’s daughter. It is not explicitly stated in the story, but Salmon is also a Chief. A marriage of this stature would
ensure peace, safety and security of access to salmon through political kinship ties between villages. The marriage links everyone along the river as family and ensures the distribution and access rights to salmon as far as salmon travels along the whole river system. Salmon’s marriage to the Chief’s daughter affirms the political structures that provide strength to the continuance of access to salmon. An existing example of a political structure that supports the continuance of salmon is the Syilx Unity Declaration. This relationship with the Colville Confederated Tribes has helped to ensure access to salmon in Canada during years that water temperatures have prevent Okanagan sockeye salmon from entering the Okanagan River.

*Salmon’s story goes on as he and his new wife continued up the Columbia River. They were being chased by other suitors of the Chief’s daughter who were angry that they had lost. When Rattlesnake saw this, he attacked Salmon because he believed that Salmon had stolen the Chiefs’ daughter when he had actually, earned his right to the marriage. Salmon became sick from Rattlesnakes’ attack, but Salmon and his wife continued to travel by canoe up the river.*

Rattlesnake’s attack of Salmon represents the fear of colonial governments who knowingly and unknowingly inflict harm to Salmon with their lack of understanding of the Syilx specific ways. Even though Salmon is unwell from Rattlesnake’s attack, he continues to exert strength and continues to travel upriver against the resistance of the flowing water. Salmon pushes against and through settler structures that do not ensure safe access to salmon, which builds strength throughout the river system. For at least 30 years Syilx people have pushed through numerous layers of colonial induced resistance to finally see the physical return of salmon. However, due to the significant absence of salmon and some of the transitions that have taken place in Syilx livelihood, there is additional resistance to work through. Some nation members have stated that
they see resistance to relearning and participating in Syilx practices by our own people, which feels like a conflict between Western and traditional ways.

They eventually stopped at a beach so that the wife could find something to eat and salmon could rest. At this stop, two wolves took salmon’s wife back to their camp in the mountains. Salmon came back up the Columbia River the following spring. When he stopped to see Spider, he found out where his wife was. He travelled and travelled, and he found the camp in the mountains where his wife was captive. He was able to rescue his wife by killing the wolves and brought her back down to the river. Salmon demonstrated resilience by healing from the sickness of Rattlesnake and returning the following year. Once again, he benefited from the relationship that was formed with Spider. He was then able to use his strength and resiliency to find his wife, defeat the wolves and bring her back down to the river. Resilience and strength are traits to both salmon and Syilx people. Resilience describes a very long-standing interaction between salmon-Syilx that has been affirmed by archaeological evidence in the Pacific Northwest indicating a 7500-year history of resilience in the ecological-human systems of salmon (Campbell & Butler, 2010). In Indigenous groups, acts of resilience and resistance are integral to the promotion of community health (Caxaj, Berman, Ray, Restoule, & Varcoe, 2014).

This part of the story also tells us that Salmon had influence beyond the river as Spider constructed a larger and larger web of interconnection. His travels to the mountain to look for his wife indicate his strength extends the river system to include the land and the mountains because the wolf people there also wanted salmon (Cline, et.al., 1938). In some ways this parallels the keystone contributions of salmon to the ecosystem. It also speaks to the physical structures and human involvement of moving the salmon family to the mountains because the
wolf brothers represented the spirit power of Syilx men which is revealed in additional stories that link to the “Salmon Cycle”.

Salmon then told his wife that he had to leave her again but that he would come back in the spring. He told his wife that she would cry for him and when the ‘people to be’ come and hear her calling for him, they will know that salmon is going to return. Salmon moves in cycles that are related to the seasons. The final portion of this story speaks to the spiritual structures that salmon put in place for the people to follow to ensure his return. Syilx people have continued to call the salmon in ceremony even when salmon were not present in great numbers. The cry of the people at the river is more like the characteristic call of a bird that sings. When the people are at the river, they always feel good. If any tears are shed, it is in response to the enormity of the prayer that is offered to the water and is further indication that the people believe that salmon will return. Bringing back the salmon is our meaning and purpose. With the support of the ONA Fisheries reintroduction programs, salmon continue to return to the Okanagan in far greater numbers than they did 50 to 60 years ago.

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3 Syilx stories are often intertwined with other related stories. The story of Syilx men using a wolf ‘power’ is an example of a related story. Discussion with Traditional Knowledge holders also reveals an additional story from the Lower Columbia region that tells about the people in the mountains where the wolves lived who also wanted salmon.
Chapter 7: Conclusion

Wellness & Un-wellness

My research questions explored Syilx Okanagan Nation members’ understanding of Sockeye Salmon reintroduction on their wellness as well as how a relational research process promotes diversity of knowledge in regard to traditional foods. A relational methodology informed by Syilx knowledge brought together diverse research traditions of En’owkinwixw, interpretive phenomenology and postcolonial criticism to create a decolonizing space to express Syilx understandings of wellness from a unique Syilx perspective. The findings of this thesis research are consistent in the literature review of past scholarly work with Syilx Okanagan Nation communities, which states that wellness is a state of balance that extends beyond the individual to the community and land. They also enlighten current understandings of how wellness of Syilx Okanagan people is inextricably linked to living with salmon, which enacts senses of belief, identity and reciprocity to form a state of spiritual connectedness through understanding and honouring Syilx Okanagan specific teachings. The absence of salmon for almost 75 years in the lives of Syilx Okanagan Nation members had a significant negative impact on the physical, social, cultural and spiritual aspects of Syilx peoples’ wellness. Dispossession and changes to environment have altered the local Indigenous food system that includes fish harvesting. The long-term absence of salmon created food insecurity, economic disparity, and contributed to societal breakdown, while hindering opportunities for Syilx to care for the land which impacted cultural knowledge transmission and the nurturance of our spiritual belief systems. Absence of salmon has contributed to a lack of wellness and to many health disparities. As reflected in participants’ accounts, restoring salmon creates tremendous opportunities to restore wellness and create health equity.
Spiritual Connectedness & Senses

Salmon was identified in the findings as a fundamental focal point within Syilx wellness providing an important source of physical and spiritual subsistence and a mechanism of spiritual connectedness. By restoring three senses, belief, identity and reciprocity, salmon provides for a continuing cycle of wellness. Restoring salmon for Syilx people has strengthened the enabling power of belief. A Syilx identity in relation to salmon that is visible and present with the language that is heard, is returning. The findings also reveal how the many actions and commitments of individuals and Syilx communities with salmon is restoring a Syilx protocol of reciprocity that fuels wellness through the establishment of spiritual connectedness. The findings establish the individual actions of salmon harvesting as a form of reciprocity (responsibility and ceremony) that contributes to spiritual connectedness when it has been steeped in the intergenerational transmission of Syilx knowledge.

Traits of Wellness and Spiritual Connectedness

Through engagement with a diverse group of Syilx leaders and community members, various meanings and the value of salmon to the nation was further explored. Accounts revealed that salmon brings social, cultural, economic, nutritive and spiritual wellness that is displayed through the expression of distinguishing Syilx traits of wellness. Five Syilx traits of wellness were identified: relationships, connectedness, responsibility, participating & sharing and purpose and incorporated in to a conceptual model of “Syilx Wellness with Salmon” to understand how each contributes to individual wellness by supporting spiritual connectedness and acting as catalysts to our collective well-being. The findings highlight that the returning of salmon has
created opportunities for the expression of Syilx traits of wellness and re-sensing of spiritual 
connectedness and collective responsibility. The traits identified work together to express an 
understanding of the continuous social, cultural, spiritual and physical actions with salmon that 
are an institution of knowledge transfer as a wholistic process of management. Increasing the 
expression of Syilx traits of wellness changes the state of Syilx existence from a period of un-
wellness, through stages of healing to a thriving state of prosperity and wellness.

**Relational Research Process**

My conclusion in response to the second research question in this study is that a relational 
research process creates a modality to understand an Indigenous perspective of topics that 
require wholistic and systems level examination such as food harvesting and wellness. Rather 
than managing the context to isolate a specific element of knowledge as is the standard scientific 
method, a relational approach invites the historical, social and cultural context in to participate in 
the development of the findings. Relational research processes that incorporate Indigenous 
methodology also invite the participation of intangibles such as spiritual well-being and cultural 
values into a conversation that can create tangible outcomes. Further to this, the application of 
storied traditions such as the re-telling and analysis of a Syilx creation story invites the 
perspective of those living things that are our oldest advisors. Story analysis gives voice to 
salmon, and others, so that they can participate in this conversation about Syilx well-being that 
creates an increased understanding of the role of salmon harvesting to spiritual connectedness 
and well-being.
Key Take Away

Syilx Okanagan nation members clearly understand the influence of sockeye salmon reintroduction on their wellness as has been identified in the findings. The findings identified ways that restoring Indigenous foods returns wellness and well-being. Exploring salmon as a specific example, the research findings revealed that salmon has activated a sense of connectedness, which forms a greater understanding that our wellness ultimately extends from the land and water, by actions such as food harvesting. The spiritual connectedness facilitated by salmon is a foundation to other strengths or traits that are catalysts and supports of wellness such as relationships, connectedness, responsibility, participating and sharing and purpose. Salmon facilitates relationships between people, the land and water for social, governing, economic and spiritual purposes. It provides an opportunity to be responsible through the annual cycle of life with salmon, which is an intricate part of food harvesting. Salmon contributes to the physical and cultural sustainability and survival of Syilx people including the restoration of family systems by participating and sharing place-based knowledge. Finally, salmon provides meaning and purpose-filled ways of sustaining livelihood with opportunities for personal and professional growth. Ultimately the return of salmon is restoring the balance of an ongoing cycle of reciprocity between humans and the natural environment.

Ensuring the return of Indigenous food sources, such as salmon, is a communal responsibility (Delormier, 2017). The oral teachings of many Indigenous peoples maintain that the responsibility of individuals, families and communities is to strive to live within a framework that recognizes and honours “a balanced reciprocity between human, natural and spiritual realms” (McIvor, 2009). This is regarded with highest significance, well beyond the expression of a right by many Indigenous peoples (Delormier, 2017, Vaughan, 2016).
Implications

Exploring wellness for Syilx Okanagan Nation members through the lens of salmon restoration with a relational approach that includes a broader context of history and culture we can better understand how colonial policies and practices have contributed to un-wellness by discriminating against Indigenous foods. It has also provided a model to understand how more wholistic dimensions of wellness such as spirituality are strengthened by a restoration of cultural food harvesting practices. This enhances an understanding of spiritual components that are recognized as important in Indigenous health yet are not applied in the health field (Morrison, 1990 in Wilson K., 2003). Salmon provides the opportunity for both the ritual practice of harvesting as well as the more intangible ceremonial exchanges between human and natural world, that are constituted by a series of Syilx traits of wellness that nurture spiritual connectedness.

Increasing our understanding of Syilx traits of wellness in the context of salmon provides a framework for the development of comprehensive strategies for food security, food sovereignty and collective well-being. The model of “Syilx Wellness with Salmon” expands wellness beyond physical measures of individual health to broader social and governing parameters for the community and ecosystem well-being. Therefore, contextualizing “Syilx Wellness with Salmon” has tremendous potential to inform several bodies of knowledge. Demonstrating that our well-being is directly derived from healthy ecosystems it can help to further public health theory and consider the inclusion of Indigenous-centered or land-based wellness in refining determinant of health frameworks. It may also be used to guide policy decisions around food guides created for Indigenous peoples. The restoration of Okanagan sockeye salmon has also
demonstrated that the actions of Syilx people that has been guided by Syilx knowledge have supported Western science approaches to ecosystem management and restoration. This suggests that future participation and inclusion of Indigenous place-based knowledge in the ongoing management and responsibility of forests, lands and waters, including restoration, that impact the Indigenous food (eco)system may also be successful. As well, the reciprocity that is integrated in to Syilx based traditional harvesting practices provide both ongoing individual wellness and ecosystem sustainability. Restoring Syilx based harvesting practices of Indigenous foods like salmon can be a mechanism to revitalize stable governing, physical and spiritual, structures that ensure safe access to well-being.

The model of “Syilx Wellness with Salmon” can help broaden understanding of Syilx traditional food harvesting as a continual experience of Syilx knowledge that is a best practice for the wholistic physical, mental, social/emotional and spiritual well-being of individuals, families and communities. Indigenous food harvesting and preserving could therefore be incorporated in to Indigenous community programs to promote well-being and also as a response to important health issues that may include physical (chronic disease prevention), mental (substance use disorder), social/emotional (family togetherness) and spiritual (disordered eating).

**Areas of Future Study**

The findings indicated that connection to salmon was developed early through intergenerational experiences but also that for many there was a disconnection with salmon that created challenges to current knowledge transmission. An area of future study might be on the impact of early introductions to food, language and culture within Syilx early childhood programming to the well-being of these growing children. Further engagement and discussion of
the relevance of the conceptual model (Syilx Wellness with Salmon) and the identified traits of wellness by Syilx Okanagan Nation members to other Syilx foods may affirm a more comprehensive model of Syilx wellness. Syilx Wellness models could help inform useful health promotion materials for wellness education in schools, cultural reconciliation for returning nation members, and cultural competency within broader systems of health and ecosystem management.

**Implications for Syilx Okanagan Nation**

Salmon will continue to provide opportunities for family, and community to strengthen traits of participation and sharing. However, the findings indicate that many nation members do not know how to harvest or do not have a harvester in their family which suggests that increased opportunities to learn traditional knowledge and gain the skills of subsistence salmon harvesting and preserving will increase the ability of Syilx Okanagan Nation families to participate. This will be supported by the creation of physical structures that maintain the human involvement in revitalizing, maintaining and moving salmon throughout the salmon system for the benefit of all living things.

The Salmon restoration also creates opportunity for Syilx food harvesting practices to take place in a commercial or recreational setting and provide purposeful ways for Syilx Okanagan Nation members to earn a livelihood. As well, the re-establishment of Indigenous governance structures in the form of kinship relations and strong family systems within the salmon system, will further the ability of Indigenous communities to participate and share.

The way that Salmon brings all ages of Syilx and settlers to the river will continue to provide a positive environment that facilitates good relationships. Further relationships could be
developed through Syilx Okanagan Nation member’s participation in settler-organized habitat restoration projects such as the Penticton Creek Restoration Committee and foster further Syilx well-being. It creates an environment for participation and sharing of Syilx knowledge that will further well-being by enacting senses to form connectedness. Sharing knowledge will become important as both settlers and individuals removed from Indian status and thus Syilx cultural connections with salmon come to seek an increased understanding of Syilx culture. This may ultimately inform our continued existence and common humanity living in the same geographical area as the current climate and environment crisis poses the need for everyone to become informed about what the land and water need to be cared for.

The establishment of legal governing structures that increase Syilx responsibility will contribute to increased wellness by increasing the place-based knowledge that is applied to decision making. The Sockeye Salmon restoration initiative is a successful model that can now be applied to other aspects of environmental remediation that is required to restore additional Syilx foods. This in turn will increase Syilx food sovereignty as sustainable access to Indigenous foods is improved. It will also support language revitalization as the restoration of food sovereignty increases the volume of language required to learn and understand Syilx knowledge in terms of Indigenous food harvesting.

Knowledge Transfer

In many ways an integrated knowledge transfer began when I was engaging with leadership and presenting on the project plans at ONA gatherings before the actual interviews began. Yet as part of the reciprocal relationship that is established in this research process it is important that I continue to transfer the knowledge gained. I anticipate knowledge transfer for
Syilx Okanagan Nation members as well as other Indigenous, academic and health professional audiences that is derived directly from the research process and interpretation of participant interviews. For Syilx Okanagan Nation members I anticipate forms of knowledge transfer that increases experiences and connection with salmon in terms of harvesting, preserving and language learning to continue the perpetuation of Syilx knowledge. Teachings derived from the interviews and the Syilx model of wellness can be incorporated into education materials for the ONA Wellness Committee.

For other Indigenous groups, academics and health professionals, written manuscripts and conference presentations will share some of the key methods and models derived from the research. For example, a methodology manuscript to a qualitative research journal will share a unique means to derive meaningful Indigenous perspective on topics that require a broad scope of understanding that cannot be achieved by Western research tools alone. Additionally, manuscripts published to public health and Indigenous policy journals can further knowledge gained through this research that supports Indigenous wellness concepts and further the development of determinant of health frameworks that are inclusive of ecosystem and land-based health. Further to that manuscripts may be submitted to policy journals that link ecosystem restoration to comprehensive strategies for food security and Indigenous food sovereignty.

**Strengths and Limitations of this thesis research**

The strength of this thesis is largely centered in the methodology that integrated both Western and Indigenous ways of knowing in a relational manner that honoured local Syilx ethics and protocol of research. Salmon is a topic grounded in both Western and Traditional Knowledge traditions. My lack of cultural-specific knowledge despite being raised amidst Syilx
values, allowed me to engage in the research in an open and informed manner. My extensive experience in public health nutrition and food security provided strength to my analysis in terms of applicability of the findings to public health nutrition and discussion of potential applications.

Limitations to findings as they arise in a graduate thesis, is that the analysis is my own and has not been tested for coherence or resonance with a broader group of Syilx Okanagan Nation members. However, significant efforts have been taken to work towards an analysis of my research findings that I find resonates with study participants and with my understanding of Syilx oral history. In addition, the conceptions of wellness that I have derived from the research are specific to salmon. Further study is required to explore to what extent the conceptual model developed is applicable for all Syilx food.
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Appendix A

Interview Guide

1) Considerations for location: home visit, First Nation community health centre or other mutually agreed upon location that is suitable and safe for conducting an interview (i.e. no loud noises to impede conversation, comfortable, sense of safety to share interview responses etc.)

2) Completion of required informed procedures such as signing of consent/commitment forms. Draft Information provided for signing consent/commitment. See Appendix B

3) Rapport building: Researcher shares brief personal story about learning the story of the Four Food Chiefs in her early 20s and not having a full understanding because she had not witnessed salmon harvesting.

4) Interview #1 Questions – After the Ice Breaker questions appropriate prompting and probing questions will be asked as needed to facilitate the development of rich material on as concrete a level as possible, for example, "What do you mean when you say ... ?" or "To help me understand better, please give me an example of what you said."

a. Demographic Data:

   I. Participants gender: male/female/two-spirit

   II. Participants Age group: youth (18-29 years); adult (30-59) and elder/older adult (60+) (First Nations Regional Health Surveys)

b. Ice Breaker Questions

   i. If someone were to offer to cook anything for you, what would you ask
them to make?

ii. Do the foods have any special meaning to you?

iii. Are these foods that you know how to prepare?

iv. Do you have a favorite traditional food and why is it your favorite? (ask if they don’t talk about traditional foods in the first ice breaker question)

c. What does wellness mean to you? (as an individual, family and a community)

d. Can you tell me about some of the cultural and spiritual ways that you personally take care of yourself? (How do these practices fit into your overall meaning of being healthy?)

e. Develop informants focused life history

i. How do you think the health of the Syilx(Okanagan) people today compares to when you were a child? (ask elders/adults only) Why?

ii. Has the amount of salmon that you eat changed over time?

   Probe: Has it changed since you were a child, or since the salmon started to return in greater numbers? Probe re: reasons for difference (suspect will illuminate social and political contexts related to availability of salmon in or rivers)

f. Develop informants’ situation to place

i. Can you tell me about a spot in our territory that is special to you?

ii. Why is it special to you?

g. Connection of salmon restoration to wellness

i. How have you been involved with our Okanagan Salmon? (fisheries employee, fry release and other ceremony, feasting, fishing, receiving &
distributing fish, processing fish, cooking fish …..)

ii. How long have you been involved with our Okanagan Salmon?

iii. Can you tell me about how your experiences with salmon link you to your family, the water/land and Syilx/Indigenous culture?

h. What does it mean to you to have Syilx (Okanagan) salmon as a food source today?

i. Is the meaning different for the children? If so, how?

ii. How does providing salmon as a food differ from purchasing salmon?

iii. How does providing Okanagan salmon differ from providing salmon from other river systems?

i. What do you think it means to the community/Okanagan Nation to have Okanagan salmon as a food source today?

j. What needs to be done to continue to restore our relationship to salmon/our salmon chief?

5) **Interview #2 Purpose:** To confirm correctness of ‘Participant Summary’ derived from the previous interview and to explore any new/emerging or latent meanings that were missed in the first interview.

a. Optional closing question: What would you like to see happen from this project?
Appendix B

Letter of Informed Consent

Project Name: Influence of Sockeye Salmon Reintroduction on the Wellbeing of Okanagan Nation Members

Who is conducting the study?
Graduate Student: [text removed]
Student Supervisor: [text removed].
Funding Sponsor: [text removed]

Why are we doing this study?
The Okanagan Nation continues to work to bring Sockeye salmon back to the Okanagan rivers and lakes. Salmon is an important food to the Okanagan people. The return of the salmon has a positive effect on nutrition and wellness. You are being invited to take part in this research because you have experience with Okanagan salmon. We want to learn more about your experience with salmon and how this helps you maintain wellness. This information will help to show that having salmon in our lives gives us more than food. The results may encourage other nations to restore their important food sources.

Intended Use of Research Information
We hope that the information gathered during this project will help to guide health and nutrition programming and policy for our nation. The student researcher will report the results of this study in a graduate thesis which will be publicly available on the internet and possibly in published journal articles and books. The results will also be written for band and nation level newsletters, emails and website and community presentations. Participants can choose to provide a mailing address on the consent form to have a summary of results sent to them.

What will happen if I agree to participate in this study?
You will be asked to participate in 3 interviews that will be voice recorded and transcribed. Interviews will take place somewhere you feel comfortable such as the community health centre. Interview 1 will take 90 minutes. Interview 2 will take place roughly 1 week from the first. I will provide you with a summary of the interview and a record of what has been said. You will be invited to review this information and share any feedback you have. Interview 3 will be done in a group of 8-10 people and will take approximately 2 hours. It will take place 2-8 weeks after your initial interview at a suitable community meeting place. If you do not want to participate in the group interview, I will ask your permission to share a summary of your interviews with the group.

How will your identity be protected?
You can trust that your identity will be treated in the manner that you agree to. Your identity will remain anonymous in all documents and completed reports unless you choose to disclose identity in some way and that doing so does not pose risk to collective privacy.


**Is there any chance of harm if I participate in this study?**

We do not think there is anything in this study that could harm you or be bad for you. You will be able to see the questions ahead of time and think about whether you will be okay answering them. You do not have to answer any questions if you do not want to. Please feel free to contact me or my supervisor if you require more information to answer any concerns.

**What are the benefits of participating in this study?**

Participating in this study will be one way that you can help others. What you say will contribute to knowledge that is shared with others to promote wellness. This knowledge may further support Nation advocacy for traditional foods. If you consent, the knowledge that you share may also provide an important record for future generations.

**How will what you tell me in an interview be kept safe?**

All records will be stored to the researchers’ password protected laptop computer. Back-up files will be saved to a password protected external hard drive. Audio records and transcriptions will be stored for a minimum of 5 years at the office of the student supervisor as well as the graduate student. If you wish, data will also be stored at the Okanagan Nation Alliance. Written notes will be kept in a locked cabinet by the graduate student for a minimum of 5 years. Copies of all audio records and written summaries will be provided to you if you wish.

We anticipate a low risk to sensitive information being shared in the group session. We encourage participants not to discuss the content of the focus group; however, we can’t control what participants do with the information discussed.

**Will you be paid for taking part in these interviews?**

To thank you for taking part in the interviews, you will be given a $25 gift card for each interview completed for a total of $75 for 3 sessions.

**Who can you contact if you have questions about the study?**

If you have any questions or concerns about what we are asking of you, please contact me [text removed].

**Who can you contact if you have complaints or concerns about the project?**

If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics toll free at 1-877-822-8598 or the UBC Okanagan Research Services Office at 250-807-8832. It is also possible to contact the Research Complaint Line by email (RSIL@ors.ubc.ca)
PARTICIPANT CONSENT AND SIGNATURE PAGE

Taking part in this study is entirely up to you. You have the right to refuse to participate in this study. If you decide to take part, you may choose to pull out of the study at any time without giving a reason and without any negative impact on you. If you withdraw from the study, your data can only be fully removed prior to the transcription of your first interview. Your data will only be shared and accessible according to the additional consents that you are asked to provide after the completion of the second interview. Your signature on this form or verbal consent, indicates that you understand the information provided about this project and that your ongoing consent to participate in this study will be revisited verbally and audio recorded at each session. You will receive a signed copy of this consent form for your records.

I understand that interviews and focus groups will be audio recorded and agree to participate in:
☐ Interviews only ☐ Interviews & focus group

Participant Name:__________________ Verbal Consent Signature_____________________
(Please print)

Researcher’s signature: __________________________________________________________

If you wish to receive a copy of the transcribed interview, please include an email or mailing address below.

___________________________________________________
Additional Consents to be offered after the end of the second interview

Alternate Identification

You will remain anonymous in any reporting of results and publications. If you wish to be identified so that future generations will know your contributions to this work, please indicate how you wish to be identified in reports and publications (e.g. Initials, Full Name, First Name, Alternate name). _____________________________.

Participant Signature  Date

Alternate Data Storage

I agree to have audio recordings of my interview kept at the Okanagan Nation Alliance repository so that it can be made available for:

_________ my descendants only
_________ for Okanagan Nation members.

Participant Signature  Date

Sharing of Participant Summary

I agree to have my personal Participant Summary shared in the group session, if I am not able to be present and share myself.

I agree to share my personal Participant Summary with the Okanagan Nation Alliance and be contacted by them for use in promotional and educational materials that promote wellness and fisheries initiatives:

Participant Signature  Date