



Original Research Article

Moving your body, soul, and heart to share and harvest food: Food systems education for youth and Indigenous food sovereignty in Garden Hill First Nation, Manitoba.

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Abstract

Colonialism, and its partner, racism, greatly impact Indigenous food systems across Canada elevating the rates of diet-related diseases and food insecurity. Many Indigenous communities have responded to these challenges with their own community-based, culturally appropriate food solutions, including local food production. This participatory research explores the question of traditional food education for First Nations youth through photo-elicitation with five youths employed on a community farm and interviews with twelve Elders, community food educators and Knowledge Keepers. This research provides the building blocks for food education to support a community-based, Indigenous food system and sovereignty, informed by Garden Hill First Nation Elders, Knowledge Keepers, and youth. Interviews and participatory research established that food education for youth and Indigenous food sovereignty should be rooted in traditional and spiritual beliefs, land-based learning, and self-determination. Food-related policies and programs need to provide increased financial support for land-based education for youths while assessing the use of technology on culture and removing gender-related barriers to participation. Community desires for food education closely match the tenets of Indigenous food sovereignty. This research shows the importance of developing Indigenous food education programs that are community-based and applied.

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Introduction

Elder and Knowledge Keeper Dave Courchene Jr. (2018) asks the question, “How can a nation be sovereign if they cannot even feed their children?” This question raises another question regarding food education for youth. What does a nation have to teach youths about food to ensure their children and their children’s children are nourished? Food security and Indigenous food systems in First Nation communities need urgent attention. Through the lens of Indigenous food sovereignty, and the stories and photos of Elders, youths, community food educators, and Knowledge Keepers, this paper explores the food education required to revitalize Indigenous food systems in the fly-in First Nation community of Garden Hill First Nation in the Island Lake region of northeast Manitoba in Canada.

Indigenous food systems provide food in a way that both sustains ecological and cultural integrity for Indigenous peoples and lands (Settee & Shukla, 2020; Thompson, Pritty, & Thapa, 2020). Indigenous food systems are considered key to meet the Sustainable Development Goals as they contribute to global food security and eradication of poverty (Food and Agriculture Organization of the United Nations [FAO], 2009). Significantly, the world’s food supply originated from Indigenous food systems, including corn, potatoes, squash, and beans (Keoke & Porterfield, 2005; Food Secure Canada, n.d.; Settee & Shukla, 2020). Indigenous food systems have garnered international recognition for their role in sustainability and resilience to climate change (FAO, 2009; Tauli-Corpuz et al., 2018). In contrast, modern agriculture and aquaculture are blamed for causing 78 percent of the global ocean and freshwater eutrophication, 26 percent of greenhouse gases and 85 percent of the species threatened with extinction on the IUCN red list (Ritchie & Rosser, 2020).

Indigenous food systems worldwide need revitalization as indicated by the high food insecurity rates in Indigenous communities (Anderson et al., 2016). In Canada, roughly half (50.8 percent) of households within First Nation reserves experienced food insecurity (First Nations Information Governance Centre, 2018) compared to one in eight Canadian households (12.7 percent) (Tarasuk & Mitchell, 2020). Still, some northern and remote areas have even higher food insecurity rates at 75 percent of all households in northern Manitoba communities and 85 percent in Manitoba’s remote First Nation communities (Thompson et al., 2012). These elevated levels of food insecurity are exacerbated by poverty and inappropriate colonial policies, including food, education, and natural resources development, in and around First Nation communities (Thompson, Bonnycastle, & Hill, 2020).

Although Indigenous food sovereignty has been used to describe Indigenous peoples' food cultures and conditions in Canada, the processes, knowledge, and skills to rebuild connection and relationship between youth and traditional foods, thereby moving toward food sovereignty, is understudied (Robin & Cidro, 2020). This paper is unique in exploring what First Nations people in a northern and remote community consider essential for youth to learn about Indigenous food, food systems, and sovereignty. Assessing the views of what is needed for Indigenous food education through an Indigenous food sovereignty lens has the potential to expand the literature in this under-researched area and contribute to community-led education programming to help strengthen Indigenous food sovereignty. After introducing the key terms discussed in the paper, Indigenous food sovereignty, Indigenous food systems, self-determination, and Indigenous education, the community where this research takes place is profiled. Next, the methods are discussed briefly before exploring the findings under the tenets of Indigenous food sovereignty. Lastly, the implications of this research are discussed.

Indigenous food sovereignty

Indigenous food sovereignty is an organizing framework that is used worldwide to “nurture traditional harvesting, hunting and gathering” (Settee & Shukla, 2020, p. 4) in a way that “respect[s] the sovereign rights and powers of each distinct nation” (Morrison, 2011, p. 98). Indigenous nations, like all nations, need to control their food policies, programs, education, and systems to be sovereign: “all nations, including Indigenous nations, have the right to define strategies and policies and develop food systems and practices that reflect their own cultural values around producing, consuming and distributing food” (Coté, 2016, p. 8). Indigenous food sovereignty provides a movement to reclaim Indigenous voices, health, and community development to support self-determination and regenerate land and food systems (Morrison, 2020; Four Arrows Regional Health Authority [FARHA], 2020). Morrison (2011; 2020) distills Indigenous food sovereignty down to four main tenets, namely that: 1) food is sacred; 2) food systems require Indigenous participation; 3) legislation and policy reforms are needed; and 4) Indigenous self-determination is possible with Indigenous food sovereignty.

In its essence, Indigenous food sovereignty aims to uproot colonialism to address the underlying social and environmental injustices experienced by Indigenous peoples in relation to colonial land and water use, social policy, planning, and government structures (Morrison, 2020). Indigenous food sovereignty is critical of the Eurocentric view of food which positions food solely as a physical, inanimate object and the achievement of food security and nutritional health as a function of behaviour and individual responsibility (Dawson, 2020). In this light, Indigenous food sovereignty provides a critical and counter discourse that shows how Eurocentric social power and dominance reproduces social and political inequality and colonialism (Dawson, 2020).

Indigenous food sovereignty is an organizing structure and tool to protect Indigenous food systems in synergy with a community's own social, political, historical, environmental, and cultural context (Settee & Shukla, 2020). Indigenous food sovereignty is based on a cultural foundation of Indigenous knowledge, or expert knowledge of local animal, plant, and fish habitats to live sustainably on ancestral territory through hunting, fishing, trapping, gathering, gardening, and participation in ceremony (Ballard, 2012; Cidro et al., 2015). Indigenous knowledge is embedded in language and the earth, inclusive of land and water (Cajete, 2000). Awareness of place shapes the knowledge, skills, and lifestyles required for sustainable wild food acquisition (Ballard, 2012; Thompson, Thapa & Whiteway, 2019). As the definition of Indigenous food sovereignty is closely tied to community context, vision, and local knowledge, Indigenous food sovereignty is a fluid definition best defined and enacted on by each community (Settee & Shukla, 2020).

This paper will explore community-defined Indigenous food sovereignty. In addition, this paper will address a gap in research by exploring the educational approaches and practices for youth to realize Indigenous food sovereignty in their community (Settee & Shukla, 2020; Morrison, 2020; Levi, 2020). Constructing counternarratives based on Indigenous ways of knowing and learning about food promotes Indigenous food sovereignty by resisting colonial narratives and providing guidance to address Indigenous peoples' health disparities and food insecurity (Dawson, 2020).

Indigenous food systems

Embodying a longstanding relationship to the land, Indigenous food systems are central to “Indigenous people’s identity, culture and self-determination, and contribute to their mental, physical, spiritual and emotional health” (Settee & Shukla, 2020, p. 4). Each Indigenous community defines Indigenous food systems slightly different; however, this definition by the Indigenous Food Systems Network (n.d.) is a valuable starting point, explaining Indigenous food systems as:

Land, air, water, soil and culturally important plant, animal and fungi species that have sustained Indigenous peoples over thousands of years. All parts of Indigenous food systems are inseparable and ideally function in healthy, interdependent relationships [and are] best described in ecological rather than neoclassical economic terms. [Indigenous foods are] cultivated, taken care of, harvested, prepared, preserved, shared, or traded within the boundaries of our respective territories based on values of interdependency, respect, reciprocity, and ecological sensibility.

While much Indigenous food-related knowledge remains, a lot has been lost over time (Truth and Reconciliation Commission of Canada, 2015).

The Residential School and reserve system, and other assimilation policies, have contributed to the decline of traditional land, language, knowledge, and governance, impacting First Nations peoples' ability to participate in and retain Indigenous food systems and thus food sovereignty. Colonial policies confined Indigenous people to tiny reserves, brought plagues for which Indigenous people had no immunity and exterminated keystone species, such as the buffalo and beaver, which impacted food and clothing supply, the abundance of ecosystems, and created starvation and dependency on market-based foods (Daschuk, 2013; Burnett et al., 2016). Today, the availability and cost of procuring traditional foods, and the environmental impacts due to a changing climate, settlement, and resource development, continue to impact the vitality of Indigenous food systems (Haman et al., 2010).

Indigenous food systems are revitalized and maintained through active land-based participation, contributing to community and individual wellbeing and inter-generational knowledge transmission. For example, on Peguis First Nation in central Manitoba, a community garden project helps to “regain and rebuild Peguis First Nation’s heritage around the culture of agriculture [and] promote healthy living by working cooperatively, sharing resources, and increasing community economic development” (McCorrister, 2016, para.5). The participation of youth in gardening, wild food harvesting, hunting, trapping, and fishing is further essential to reinvigorate Indigenous food systems (Hoover, 2017; Kamal et al., 2015; Kuhnlein, 2013; Robin, 2019; Trinidad, 2009).

Self-determination

Self-determination focuses on the rights of Indigenous peoples to define and manage their own social, economic, and cultural systems in their traditional territories, including Indigenous knowledge, lands, and resources (Corntassel, 2012). In this management, Indigenous peoples seek sustainability and regeneration of the environment, rather than adopting exploitive and harmful land practices that reduce the abundance of resources provided by Creation (McGregor, 2016). The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) speaks to the entitlement of and protection for Indigenous peoples to define within existing States, their own “cultures”, “institutions of governance”, “special relationships to the land”, “traditional economic activities”, and “representation on all decision-making bodies on issues that concern them” (Musafiri, 2012, p.492). The right to self-determination of Indigenous peoples is also upheld in the UN’s International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights (Coulter, 2010).

Indigenous education

Indigenous peoples envision education for self-determination despite the state's colonial approach to indoctrinate Indigenous subjugation within the dominant society and education system (Fallon & Paquette, 2012; Olsen Harper & Thompson, 2017). Teaching the understanding of Indigenous peoples' historical and contemporary oppression within society is of primary importance in educating for self-determination (Alfred, 2009; Lee, 2009; Nakata, 2013). Three tenets are key in education and research for Indigenous self-determination, namely: 1) sovereignty; 2) sustainable and culturally appropriate livelihoods; and 3) cultural identity (Hibbard & Adkins, 2013).

In the past, culture had been the vehicle by which sustainable livelihoods, resilience, wellbeing, language, food acquisition, spirituality, and parenting knowledge and styles were endlessly regenerated. HeavyRunner & Morris (1997) noted that where culture is valued, cherished, and taught, youth acquire a natural resilience and a self-respecting view of their cultural identity. Additionally, instruction in local language dialects is a powerful means of reaching educational objectives (Gillies & Battiste, 2013; McCarty & Lee, 2014; Mmari et al., 2010).

Regarding Indigenous food systems, a one-year post-secondary Internship, *Kitigay*, was started by five Indigenous scholars at the University of Manitoba (UM), the Mino Bimaadiziwin partnership, and Brokenhead Ojibway Nation (BON). *Kitigay* is an Anishinaabe word meaning to plant, with the hope that this program will not only grow plants but also ideas of reconciliation, Indigenous food sovereignty, and food businesses. Fourteen Interns registered to start the Kitigay program in September 2021. Activities in the Internship and course offerings include: permaculture design; farming wild rice, vegetables, fruit and potentially grains; harvesting traditionally (hunting, fishing, and medicines); nutrient cycles; traditional food ceremonies; food safety and preparation; nutrition; food sovereignty/food security planning; and food business development/circular economy. Hands-on and experiential learning opportunities will be offered in the BON traditional territory and farm, while courses are offered in collaboration with six different UM faculties. Four of the courses have Indigenous professors and substantive Indigenous content. The permaculture design course currently exists and was successfully run in 2017 jointly with six Island Lake First Nation community members and eighteen graduate students. All Interns in the Kitigay program will earn an International Permaculture Design Certificate, course credits towards a University degree or diploma, and have a paid internship.

Kistiganwacheeng means Garden Hill in Anishinimowin

Garden Hill First Nation is called an Oji-Cree community by settlers and the government. Oji-Cree describes the Island Lake dialect spoken in Manitoba's Island Lake region and the people in this area (Statistics Canada, 2016). However, as this term is considered a derogatory term with *Oji* meaning fly or its offspring, the maggot, this term does not appear in this paper. Instead, for the Island Lake people, which includes community members in Garden Hill First Nation, *Anishiniwuk* is used in line with a recent press release from the Chiefs of the four First Nations in Island Lake: "We are not part Cree or part Ojibwe, we are *Anishiniwuk*, a distinct and sovereign nation with rights that deserve to be respected" (Winnipeg Free Press, 2018, para. 5). Further, this paper applies *Anishinimowin* for their language and *Anishinew* for the communities in Island Lake. Most people (76 percent) in Garden Hill identify *Anishinimowin* as their mother tongue and 63 percent say this is the primary language used at their home and workplace.

Garden Hill is one of four Anishinew First Nations in the Island Lake region within the vast swath of roadless communities on the east side of Lake Winnipeg near the Manitoba-Ontario border. The reserve is home to 2,591 people, residing in 507 houses and spans 85 square kilometers (Statistics Canada, 2016). The community population swelled by 46 percent in eleven years to 2,776 in 2015 from 1,898 in 2006, with a young median age of 20.2 years (Statistics Canada, 2016). A majority of these youth lack job opportunities with only an 18 percent employment rate in the community (Barkman, Monias & Thompson, 2018). With 43 percent of Garden Hill houses having more than one person per room, compared to 1.9 percent for Canada, most houses are overcrowded. Further, 54 percent of houses are considered unsuitable, compared to 4.9 percent for Canada (Statistics Canada, 2016). Instead of piped water, 27 percent of households in Garden Hill use cisterns and 21 percent use barrels for water access, posing increased health risks (Barkman, Monias & Thompson, 2018). The median income in Garden Hill is \$10,693, less than one-third of the average Canadian's income of \$34,204 (Statistics Canada, 2016).

Garden Hill and Island Lake are roadless and only accessible by winter road, plane, or canoe. The largest urban Centre in Manitoba, Winnipeg, is approximately 1500 km (930 miles) from Garden Hill, taking seventeen to twenty hours to drive by ice road, or by plane, approximately 600 km (380 miles), taking 1.5 hours and \$380 one-way. Plane travel is further complicated and expensive as Garden Hill lacks an airport. A boat is required to travel over open water, or a helicopter during ice freeze up and break up, from the airport in a neighboring community to Garden Hill. A road connection from an urban Centre to Garden Hill is not expected to start construction until 2050.

Subsistence harvesting provides a mixed economy in Garden Hill, augmented with money from government social programs. As well as having a culture of fishing, hunting, and trapping, a history of gardening is evident from the Anishinimowin name for this community, *Kistiganwacheeng*, which translates to "Garden Hill."

The land of Garden Hill has discontinuous permafrost, poor soils, and a short growing season with temperatures dipping to below -40 degrees Celsius in winter. Nevertheless, berries as well as some root and other vegetables grow here. Garden Hill is in an intact boreal forest in the Hayes watershed, which is the only free-flowing watershed in Manitoba, without dams or floodways fluctuating the water levels. Anishiniwuk continues to harvest actively and steward their traditional territory. According to map biographies with thirty-four harvesters, their traditional territory was much larger than the trapline area. Garden Hill people travel to bush camps at Beaver Hill Lake, Sakkink Lake, Goose Lake, Kookus Lake, York Lake, Coccus Lake, and many other areas to harvest moose, caribou, muskrat, beaver, rabbit, bear, duck, geese, grouse, swan, bird eggs, and fish, as well as plants, including medicines (Thompson, Pritty & Thapa, 2020).

Poor health and food insecurity are recent phenomena. Before 1970, Garden Hill was relatively food secure, relying on healthy, local foods (Thompson, Thapa & Whiteway, 2019). Changes in lifestyle and diet have had substantial consequences on the health of children and adults in Garden Hill and the other Island Lake communities. For example, children as young as eight in Island Lake have been diagnosed with type 2 diabetes (Young et al., 2000). Healthy and fresh market foods are largely inaccessible in Garden Hill due to food cost, lack of variety, poor quality, and poverty (Thompson, Pritty & Thapa, 2020). The selection of healthy foods is very limited in Garden Hill's commercial outlets, and the healthy food that is available is often too costly for most families to afford. Until 2018, the only full-scale grocery store in the area was located on an island across from Garden Hill, requiring a boat trip to get to the store. This boat trip added an extra expense to the already high food costs, until the store finally moved to the mainland (Thompson et al., 2012). In 2009, Thompson et al. (2012) documented household food insecurity rates at 88 percent in Garden Hill. Follow up research in 2015 has suggested that food insecurity rates continue to increase, particularly among those reporting mild or moderate food insecurity (Das, 2017).

Recently, gardening was reestablished in Garden Hill, including developing a 15-acre community farm in 2014 called Meechim Farm Inc. (Das, 2017). In Anishiniwuk, "*Meechim*" means food. Meechim Farm seasonally employs youth workers to grow potatoes, apples, tomatoes, beans, cabbages, and other vegetables and fruits and raise layer and broiler chickens. Meechim Farm Inc. was developed as a social enterprise to increase youth employment skills and improve community food security. Two of the authors of this paper played a significant role in its first year and worked with youth and Elders during its formation. Youth are trained in seeding, growing, and harvesting of crops, greenhouse techniques, farm equipment use and maintenance, animal husbandry, marketing and more.

Methods

Community-based participatory action research

This study worked closely with community members from Garden Hill and Island Lake to ensure research outcomes were culturally relevant and meaningful. A discussion of the preliminary research design occurred at an annual meeting of the Island Lake Tribal Council in December 2016. Written consent to work in the community was obtained from the Garden Hill Band Manager and the Executive Director of Kistiganwacheeng Employment and Training Centre. The Centre employs youth to work on Meechim Farm Inc. The University of Manitoba Human Research Ethics Board approved an ethical protocol, which required informed written consent for interviews and photovoice research with seventeen participants. This research followed the Ownership, Control, Access and Possession (OCAP) protocol in research with Indigenous communities by consulting with the community before and throughout the research, including developing research questions and providing the research back to the community in desirable formats.

Between June 2017 and March 2018, seventeen Garden Hill community members participated in either an interview, photo-elicitation, or both (Michnik, 2018). Twelve of the participants were Elders, Knowledge Keepers and community members with experience organizing and mentoring food projects and youth in the community. These community members included Aboriginal Diabetes Initiative workers, Meechim Farm Inc. staff, Kistiganwacheeng Employment and Training Centre staff, and Youth Coordinators. Five youths working at Meechim Farm participated in a photovoice project. Four of these youth also had additional interviews. Content analysis was undertaken with data management software, NVivo version 9.2, informed by the Indigenous Food Sovereignty framework of Morrison (2011). Verification of the themes occurred with key research participants (Michnik, 2018). Each of the authors also had extended stays and many visits to the community to validate research findings, with one of the authors having been born and raised in the region. One of the authors participated in a two-week long healing journey canoe trip with two Elders starting in Garden Hill to reach a traditional camp, Wapi-See, near Red Sucker Lake First Nation. This research produced educational farm signs in Anishinimowin using the research photos taken by youth. In addition, presentations at Indigenous-led conferences alongside community members and a story map embedded with videos and photos were ways the knowledge was used in the community (Keno et al., 2018; Michnik, 2018).

Findings and discussion

Four key themes related to the Indigenous Food Sovereignty framework (Morrison, 2011) were identified in the interviews: rekindling the fire; moving your body, soul, and heart; self-determination; and land-based education barriers. These themes emerged through interviews, the photo elicitation research and the community story map project.

Table 1: Relating Research Themes to Indigenous Food Sovereignty Framework

Indigenous Food Sovereignty (Morrison, 2011)	Themes from Garden Hill Interviews
Sacredness of food	Rekindling the fire
Participation in the food system	Moving your body, soul, and heart
Self-determination	Self-determination
Policy and legislation reform	Land-based education barriers

As discussed below, these four key themes provide a starting place for developing food education programming that supports both Indigenous food systems and Indigenous food sovereignty.

The sacredness of food: Rekindling the fire

As a gift from the Creator, land foods are considered sacred. These sentiments came from the interviews, as well as the welcoming sign that greets you in Garden Hill, stating: “All of our rights originate from our connection to the land. Our lives, our beliefs, and our presence as First Nations people are validated to the land, inhabited by our ancestors since time immemorial. Our land is sacred. It is the living body of our sanctity. The teachings and our customs are implicit and practiced through the integrity that protects and warrants our survival.”

The sacredness of land food to the culture and spirituality in Garden Hill was made clear by an Elder explaining that eating from the land is finding your place in Creation: “We had wild meats and everything from the land. What the Creator gave us to survive from. That’s how our great grandfathers survived. From the land, there was no store or anything...We have to use what was given to us to live on the land. What was created on the land.”

To be part of creation and live in harmony with the natural law and their own human nature, youth are encouraged to seek knowledge from the Creator. In teaching Indigenous food ways, a focus on spiritual and traditional beliefs is considered essential, according to Byron Beardy, Program Manager Kimeechiminan, Four Arrows Regional Health Authority (FARHA). This traditional aspect is required for youth to learn how to live and relate in the world from an Anishiniwuk perspective and to learn respect for all creation: “We [community members] are doing this [producing food] to sustain ourselves, but we can’t forget who’s doing that for us. We have to remember the Creator, our Mother Earth... That is the traditional piece that I am talking about that is food sovereignty.

Your identity of who you are and where you came from, what practices were done in relation to respect Mother Earth, to respect creation, to respect land, water, everything.”

Although most First Nation communities in Canada were affected by Canada’s 1867 cultural genocide policy to “take the Indian out of the child,” the remoteness of Island Lake delayed the imposition of Residential Schools. Most children born before 1940 in Island Lake never attended Residential Schools. They were raised on the land learning Indigenous knowledge systems (Thompson, Thapa & Whiteway, 2020). One community member learned from his parents how to be a medicine person and his traditional ways: “My dad didn’t let me go to Residential School, I was sad, because I didn’t go...Now I’m very happy. He taught me all this traditional stuff, hunting, fishing. I feel I am one of the lucky ones because I didn’t go.”

Many participants interviewed expressed concern that community members in Garden Hill no longer share traditional knowledge and beliefs. Oral transmission was disrupted in the 1950s and 1960s, when children in Garden Hill were taken away at a young age to residential schools, away from their kin, culture, and land, unable to learn their history. Missionaries and Residential School resulted in the community being strongly influenced by Christian teachings. Many community members continue to reject traditional knowledge. According to an Elder: “[Youth] today, I don’t know if they know anything [about traditional knowledge]. I think they are influenced by western culture. Their parents are teaching them what they learned from school, and that’s why we are losing our culture. The western community has so much influenced our generation that we tend to teach our kids that way instead of the traditional way.” Elders and Knowledge Keepers believe the foundation of food education should be their traditional knowledge and spiritual beliefs to reclaim the sacredness of food. For many Indigenous peoples, the process of growing and nurturing their own food is “connected to a larger understanding of the relationship between the environment, spirituality and people” (Cidro et al., 2015, p. 34). Still, integrating this core belief is challenging in the face of the dominant colonial culture. Alfred (2005) explains that 500 years of “socioeconomic and psychospiritual domination” of Indigenous life by white settlers have created a “colonial culture of fear” (p. 120). This fear continues to suppress Indigenous values and worldviews and divides Indigenous communities regarding what kind of life to live and what to teach younger generations. Further, when traditional knowledge is recognized within a colonial system, it is often broken down into disparate components and its spiritual foundations are largely ignored (Nadasdy, 2003; Smith, 1999).

Participation: Moving your body, soul, and heart to harvest and share food

Rekindling the fire to restore the sacredness of food requires active participation in land-based activities. Participating in traditional food activities on the land is necessary for youth to be well-rounded, capable human beings. Many community members want food education to revolve around land-based activities.

Waziyatawin (2012) explains that to heal the disconnect from the land brought on by colonial forces, Indigenous people must spend time on the land reconnecting to its sacredness. In this way, a feedback loop occurs where “the more [Indigenous peoples] learn to restore local food practices, the more likely we are to defend those practices, and the stronger our cultural ties to our homeland become” (Waziyatawin, 2012, p. 74). The very act of spending time in nature caring for, and learning from, plants and animals has the ability to create pro-environmental feelings, generosity, and care for Mother Earth, while preparing the next generation of food leaders by connecting them with their culture (Fulford & Thompson, 2013; Hoover, 2017; Krasny & Tidball, 2009).

Learning from the land provides cultural meaning to youth and counters the dominant society’s negative influences. A feeling of mastery and pride is developed from harvesting and sharing land food that enriches Indigenous youth; according to an Elder, “When you go out there and you provide food for yourself, and you prepare it, you have that pride. I actually did this! My own self. I took this food from the land, and I took care of it. And it sustained me, and I shared it with other people.” Another community member described the depth of meaning in harvesting from the land that engages people viscerally- mind, spirit and body: “You have to move your body, your soul, your heart. So that when you take something from the land and give it to the Elder, it has meaning.”

Learning on the land is part of culture, identity, and language formation of the Anishininewin. According to one Elder, Anishiniwuk are “bush people”, and on this land is where identity is formed in relation to culture: “We are bush people. We eat food from the bush. We have to be out there to learn, to actually learn what it is to be a bush person. You can’t really learn anything unless you actually live it. It’s like when you learn what something is called, how can you know it unless you actually see it. That’s how we learn things, by living it.”

A community member further explains that skills learned from the land are important for the survival of Anishininew culture and physical survival. Wilderness safety skills and knowledge are important to the mixed subsistence economy where community members rely on hunting, fishing, trapping, and gathering in remote areas to supplement their food purchases from the store: “Now, survival skills [hunting, fishing, and gardening] are different [than tradition]. They are part of tradition, but they are a form of survival. This is how they/we survived. We hunted, we gathered.”

Learning from the land is also important for the transmission and survival of language. As an Elder explains: “It is important [for youth to spend time on the land] because young people are losing their culture and their language. If they don’t go out for traditional food, they will lose their language.” Land and language are inextricably intertwined. According to Simpson (2004), Indigenous knowledge is contained within the language for land-based activities. She argues that Indigenous languages must be transmitted in the context in which they were created—on the land—to maintain their rigor and worldview.

Learning traditional language is fundamental in understanding culture, living a good life, and guiding food choices. Byron Beardy with Four Arrows Regional Health Authority explains how words in Anishinimowin, or the lack thereof, steer young people toward a healthy relationship with food and land:

With the introduction of the English language, you can tell what is sovereign and what is not in relation to food. For example...the five W's [for the white color] that were introduced to our people. That's what is killing us, the sugar, the salt, lard, milk and what's the fifth one, wheat. Flour. That's what was introduced to our people and that is what is killing us, the diabetes, the heart disease, you name it. We never had that. And do you know those five words don't have words in our language...Bannock is not in our language, it doesn't have its own meaning as you would berries, strawberries. The strawberry has its own word, Otehimin, which is the heart berry. It's in the language itself.

Participating in growing food at the community farm and in backyard gardens also revitalizes culture and food systems through sharing and reinforcing traditional teachings. In consultation with Elders, community members brought back the traditional knowledge of growing food with local inputs, for example, using fish fertilizer to enrich the soil (Okorosobo, 2017). A community member shares: "We are starting to learn [how to garden], bring back those old techniques that we lost, that we are now using. How to fertilize our ground without the chemicals that we normally depend on when we started the gardening. Now we are strictly doing it with fish as a fertilizer...We did consult with Elders and most of those people that gardened have died off, but some of the teachings...are passed on for teaching to the community."

Through working at Meechim Farm Inc. youth learn gardening skills like planting, hoeing, watering, managing soil fertility, and using tractors and marketing their produce. They are also connecting to the teachings of their grandparents, with one young worker expressing pride in how farming came naturally to him, after learning gardening from his grandfather: "He [the farm supervisor] would ask me, 'how did you learn to do this so fast?' My grandfather taught me how to plant; he planted potatoes, onions and carrots. There is a history of gardening in my family, and I am able to be a fast learner."

An Elder shared that to revive traditions, "it's only natural that you would seek advice, that's where the mentorship comes in." The importance of seeking out Elders with traditional teachings is paramount to Indigenous food sovereignty (Tobias & Richmond, 2014; Wilson, 2003). Teaching, through hands-on activities, like harvesting, planting, cooking, and sharing, is important for youth to gain intimate knowledge of food. Both wildlife and gardening education is needed, according to one Elder who stated: "You can grow your food and your vegetables and all that. But you also have to go out there [on the land] and get your meat to balance your diet."

In the 1970s and 1980s, Elders, from Garden Hill and other Island Lake communities, provided *Nopimink*, which translates from Anishinimowin to "on-the-land education".

Knowledgeable Elders provided many opportunities for families and youth to observe and engage in fishing, hunting, gathering medicines and building shelters to learn about their culture at Island Lake's regional Allen Wood School at Stevenson River and on their traplines. Nopimink is based on the central concept that traditional learning with Elders should be the foundation of academic learning. The importance of learning from Elders and the land is expressed in the Island Lake First Nation's Education Mission's statement:

Education is the preparation and adaption for meaningful life in a changing world. In Island Lake, education must be rooted in the traditions and culture of the Native people. This means it must teach respect and encompass our language and history, our land and all our resources, including Elders and nature. It must be holistic and realistic in that it relates not only to academic development but to our spiritual, emotional, psychological, and physical growth (Thompson, Whiteway & Harper., 2020, p 22).

By connecting with Elders and participating on the land, youth gain the skills they need to survive and become well-rounded, capable people knowledgeable of their culture, history, land, and language. A community member summarizes the need for hands-on, land-based training to rekindle the fire in youth: “[Youth] have memories [of being on the land] but they don't necessarily know how to get that hands-on training. And if we provide that type of training at Meechim Farm or in the school, I think that would rekindle that fire that burns. That is not out, but still there smoldering.”

Self-determination

A significant step towards self-determination was defining Indigenous food sovereignty for the Island Lake region. Through consultation with Elders, community-based food programming experiences, and participation in ceremony, FARHA developed guiding principles of Indigenous Food Sovereignty. These pillars of Indigenous food sovereignty include: 1) Spirit & Celebration; 2) Language; 3) Women; 4) Youth; 5) Elders; and 6) Land. These principles acknowledge the sacredness of food, and the key role of women, Elders, and youth in contributing to Indigenous food sovereignty. Protecting the land and language, for future generations, is considered essential for food sovereignty. Following these teachings helps guide communities on a path toward Indigenous food sovereignty (FARHA, 2016).

According to one community member, self-determination is also evident in the community vision to “get back to producing and harvesting their own food”, thereby increasing community control to provide healthy and culturally appropriate foods and livelihoods. Hunting, fishing, and gathering, as well as community gardening and poultry production, help to feed the community.

One young worker explains how Meechim Farm Inc. supplies a variety of fresh fruits and vegetables to Garden Hill: “[Fruit and vegetables] are crazy expensive. This [Meechim Farm] could help with the gardening, [providing vegetables and] fruits, for this community.” Meechim Farm Inc., as well as a number of community members at their home, are engaged in poultry production, which has become an important source of local meat, as well as an employer of youth (Das, 2017; Klatt & Thompson, 2017). Similarly, fishing is both a source of sustenance for most families and the largest employer, bringing \$250,000 of cash annually into the community. The fishing income pays for community members to fly out in the fall to their trapline to get moose and fish for the family (Thompson, Thapa & Whiteway, 2019; Thompson et al., 2014).

Gardening and harvesting could also support a traditional economy of trading and sharing to better meet community needs. According to one community food educator: “We could raise food, we could barter, we could exchange within the communities. We don’t have to rely so much on the money from social assistance that we get...The sovereignty part is about the First Nations being able to have their own foods, to meet their own needs.” A youth farm worker also stresses the importance of sharing food with community members to inspire others to grow food: “We always give them [tomatoes] away when they are ready. I always give them away, like to people, everything that we plant. So that way they can want to plant too.” Instead of selling food, trading and sharing food have cultural and social benefits rooted in the teaching of reciprocity (Cidro et al., 2015). Many Indigenous communities worldwide have turned to social models of community economic development, such as social enterprises, cooperatives, and development corporations, to ensure cultural and social values are placed equally to economic goals (Hernandez, 2013). For example, Meechim Farm Inc. is a social enterprise that has both social and financial goals.

Interviewees further suggested that community gardening and farming could be scaled up to a point where Garden Hill would be self-reliant. In their view, the Anishiniwuk should be able to eat without depending on the outsider-imposed market-based system, as money typically leaves the community through the corporate store. Through participating in a 100-hour international permaculture design workshop, three community members developed a plan and vision for scaling up food production in Garden Hill. The community members worked with two landscape architectural students to develop a plan to grow Meechim Farm Inc. over twenty years. This plan aims to achieve food production to meet community needs through education and social enterprise (Sivagurunathan & Lins, 2017). Education for Indigenous food sovereignty requires building the skills and traditional knowledge to harvest food from the land and garden, but also planning, business and social enterprise skills to feed the community.

Policy and program change to overcome barriers and build Indigenous food sovereignty

Policies and programs need to ensure that all youth and families can access their traditional territory's land and learn about stewarding their territory for traditional harvesting. All knowledge holders in this study agree that spending time on the land is important to help young people learn about traditional foods. However, youth training and educational opportunities on the land requires enhanced funding and policy support. One community member who works in youth programming describes with frustration how cost is a barrier to taking younger generations out on the land:

Especially the kids in high school and elementary [school] a lot of them don't have that luxury to get out to the trap line with family. For one thing, it's really expensive to fly out. Especially if you have a large family. You have to make multiple trips on the float plane, and they charge an arm and a leg. \$1400 my uncle had to pay, for four people, for one load. And that's just one way. And [community members] have to wait for their next income at the end of the month to come back. And that's expensive and people can't afford it. Especially if you want to take your grandchildren out on the land, show them where you grew up on the traditional hunting grounds. It's so hard.

This learning and healing from the land is needed and desired but unaffordable for most people in Garden Hill. A community Elder elaborates on how cost prevents people from hunting and fishing, although they still want to: "People are still interested in trapping, but because they have no money, they don't bother... Young people are interested in going too, but they have no one to take them because people can't afford to go. It all boils down to cost. The foods are still there. They are just too expensive."

A report by Puzyreva (2018) concluded "due to the strained financial conditions of people in Garden Hill First Nation who predominantly live on welfare, it is extremely hard to balance expenses for basic needs" (p. 12). Travelling to traplines for cultural reasons and food procurement is impossible for many families, organizations and schools. Further, Indigenous peoples' local subsistence activities often unfairly compete with subsidized market foods. According to Settee & Shukla (2020), the federal government's Nutrition North Canada program to reduce the high cost of food and support nutrition in isolated communities does not "adequately recognize the role of Indigenous food systems or country foods in reducing food insecurity" (p.5). As well, government policies and regulations for selling and serving wild meat create barriers for, and at times prevent, traditional food consumption (Ermine et al., 2020; Thompson et al., 2012).

Anti-colonial Indigenous programs, such as the two-week land-education program in Garden Hill, called the Healing Journey, teach survival skills and culture in a traditional way and are instrumental for food education for youth. This Healing Journey is hosted by two Elders but has no funding for youth to access the required canoes, food supplies, tents, or fishing materials. Nor is there any funding for the Elders to provide teachings or to subsidize their expenses.

Nevertheless, these two Elders generously spend their vacation time to lead youth on this journey each year. This trip provides an opportunity to teach youth how to survive on the land, but like other community-based programs, it needs funding support. Food-related policies and programs must support and remove barriers for Elders, families and youth to go out on the land, share knowledge, and consume traditional foods.

Many community members further expressed frustration with technology, like cell phones, distracting young people, and even adults, from getting out on the land. One community member explained that youth would rather virtually fish on their phones than experience fishing firsthand. However, appropriate technology, alongside land-based learning, has great potential for young peoples' traditional food education. A virtual story map of the Healing Journey with video, stories, photos, and maps depicts the learning for youth to experience, second-hand, their place-based history and culture through technology (Michnik, 2018). This story map responds to a community member stating that technology can be used effectively to educate youth about culture: "The thing with a lot of our youth today is that social media, that's how they get their teaching. We should go that route." Technology can be used to document Indigenous language, oral history, and traditional lands, promote cultural identity, and further the education of young Indigenous people, but it must be used in balance (Galla, 2016; Iseke & Moore, 2011; Kral, 2010). Globally, technological impacts include declining health and happiness of young people, with no slowing down in sight (Mainella et al., 2011; UNICEF, 2017). Resources and further research are required to understand and develop technologies appropriate for Indigenous food education programming.

The lack of opportunities for young women's participation in local food programming compared to young men's was an area of concern for community members. Systematic, colonial barriers exclude young women in traditional food practices in the community according to a community member: "There are some young men that know [traditional food skills] because they like to be out there...It's a man's world. The young women stay in the community."

Another community member stated that community hunting camps and farming predominately target male participants, with females seldom included, except in fishing programs: "[The Family Enhancement program] takes the young people out moose hunting where they are taught safety with a gun. At the same time, they are taught to recognize the signs, like I said scouting, scouting a moose or whatever...the girls [should be included], it's not just men or boys...All young people are involved with the fish, but not with the big game. [All young people] make the fish, then fry it then feed their kids. Then, I don't know about farming. I think it's mainly the boys that are doing that."

In follow up verification of the research analysis with key participants, they also echoed concerns that more could be done to engage young women in food programming in the community.

According to scholars Settee (2016) and Simpson (2017), many land-based Indigenous societies were both non-patriarchal and non-hierarchical. Colonization and racism have led to the confinement of “Indigenous women to heteropatriarchal marriage and the home,” contributing to both subjugation of Indigenous women and cultural genocide (Simpson, 2017, p. 111). Removing invisible barriers for women and girls to participate in land-based programs is essential to achieving Indigenous food sovereignty and food security of the larger community (FARHA, 2016; Lemke & Delormier, 2017).

Conclusion

Research with youth, Elders and Knowledge Keepers identified the key educational building blocks for Indigenous food sovereignty in Garden Hill First Nation. Any food education developed in Garden Hill must be rooted in traditional and spiritual beliefs, land-based learning, and self-determination. Food-related policies and programs need to address gender equity, technology and cost to ensure equal access to food education for youth. These findings closely relate to the tenets of Indigenous food sovereignty, but are based on the lived realities, aspirations, and local environment of Garden Hill community. This specific direction from Elders, Knowledge Keepers, and youths’ voices will provide a valuable guide to develop Indigenous food training courses for youth in Garden Hill First Nation.

The principles of Indigenous food sovereignty are summarized nicely by the community member who stated: “You have to move your body, your soul, your heart. So that when you take something from the land and give it to the Elder, it has a meaning.” This statement that youth need to “move your body, your soul and your heart” really speaks to the four components of Indigenous food sovereignty that go beyond the typical focus in western academics on young peoples’ intellectual minds. The heart represents self-determination, the spirit considers the sacredness of food, and the body is engaged in participation. This quote is completed by bringing in with land and Elders, stating “when you take something from the land and give it to the Elder, it has meaning.” To be holistic, food-related policies have to shift to incorporate land-based education with Elders and Knowledge Keepers. This research shows how involving youth, Elders and Knowledge Keepers in devising their education system for Indigenous Food Sovereignty provides a road map, or curriculum, distinctive to the culture and place.

Indigenous food sovereignty calls for examining what youth need to know to realize self-determination and food security at a community level. The culture and place-based infused principles of Indigenous food sovereignty for education arrived at by Garden Hill Elders, Knowledge Keepers and youths in this research were distinct, yet similar, to the universal definition and principles of Indigenous food sovereignty developed by Morrison (2011). Morrison (2011) explains that local principles ground the system in the local realities, stating: “the underlying principles of Indigenous food sovereignty are based on our responsibilities to uphold our distinct cultures and relationships to the land and food systems” (p. 97).

This research provides the principles of a food education plan representing the distinct aspects and aspirations of Garden Hill First Nation. However, this research process is also applicable to other First Nation communities on their path to Indigenous food sovereignty embodying local culture and place.

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