Exploring and revitalizing Indigenous food networks in Saskatchewan, Canada, as a way to improve food security

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Summary

The project discussed in this paper was designed to expand research and instigate revitalization of Indigenous food networks in Saskatchewan, Canada, by exploring the current state of local Indigenous food networks, creating a Facebook page, organizing volunteer opportunities and surveying workshop participants regarding their knowledge and interest in Indigenous foods. The survey included Likert scale questions and qualitative questions. Project activities and survey results are discussed using statistical and qualitative analysis of the themes. Results indicate that participants are very interested in learning more about, and having greater access to, traditional foods and suggest that supporting Indigenous food networks may be an appropriate response to food insecurity in communities. Elders and community members are vital players in Indigenous foods exploration and revitalization in Saskatchewan by passing on traditional education.

Key words: Indigenous, food, networks, survey, Elders

INTRODUCTION

As cited by the United Nations Human Rights Council, ‘the right to food is the right to have regular, permanent and unrestricted access . . . to . . . sufficient food corresponding to the cultural traditions of the people to which the consumer belongs, and which ensure a physical and mental, individual and collective, fulfilling and dignified life . . . ’ (United Nations, 2014a). As such, the United Nations’ Permanent Forum on Indigenous Issues recognizes the importance of traditional knowledge in agriculture and food security as a way to protect the traditional livelihoods of Indigenous peoples (United Nations, 2005). Unfortunately, Indigenous people are among the group of people most affected by hunger and malnutrition (United Nations, 2014b). The Right to Food of Indigenous people is a right based on their special bond with Mother Earth, lands and territories that supply traditional foods (Indigenous Peoples’ Consultation on the Right to Food, 2002). Historical phenomenon such as colonization, assimilation and increased urbanization have eroded this special bond, hence the need for revitalization. In this paper, Indigenous people or Aboriginals refers to First Nations, Inuit and Métis people in Canada. Indigenous foods or traditional foods refer to foods from the natural environment that is included in the cultural food use patterns of Indigenous people (Kuhnlein and Turner, 1996). Traditional (Indigenous) food systems ‘include the socio-cultural meanings, acquisition/processing techniques, use, composition and nutritional consequences for the people using the food’ (Kuhnlein and Receveur, 1996).
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Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (Food and Agriculture Organization of the United Nations, 2009).

In Canada, only about a quarter (26.4%) of First Nations adults often consumes large land-based animals and this proportion decreases to 18.6% for berries and wild vegetation (First Nations Information Governance Centre [FNIGC], 2012). This is low in comparison with what it was before European settlement. In fact, there has been a decrease in traditional foods consumption by Indigenous people and its related components such as access to the land and the sharing of traditional knowledge about food harvesting, storing and preparation (Turner and Turner, 2008; Desmarais and Wittman, 2014). Possible reasons that explain the decrease in the availability and/or use of traditional foods are the transition to new foods following European settlement (e.g., the potato replaced other root vegetables), overgrazing by cattle, displacement of native species by introduced species, urban development, pollution, residential schools and the need for people to work and gain money and not having the time to go on the land to harvest traditional foods (Turner and Turner, 2008). As the sharing of traditional knowledge from generation-to-generation is done orally, the younger generations are not able to learn the traditional names for these foods, the places where the foods were harvested, the tools used during harvesting and the ceremonies and stories surrounding these traditional foods (Turner and Turner, 2008). These factors contribute to the erosion of cultural practices relating to food harvesting, preparation and consumption (Turner and Turner, 2008) and may result in food insecurity.

Canadian Aboriginal households living off reserves are three times (21%) more food insecure than the non-Aboriginal population (7%) (Health Canada, 2012). In British Columbia, 34% of First Nations households report not having enough food (Chan et al., 2011) and this number increases to 38% in Manitoba (Chan et al. 2012). Household food insecurity is linked to health issues in the Aboriginal population. For example, Aboriginal adults living in food-insecure households are more likely to report poorer general health, poorer mental health and higher stress than Aboriginal adults living in food-secure households (Willows et al., 2011). Low income has been identified as an important factor contributing to household food insecurity in Aboriginals (Willows et al., 2008). This is relevant since Aboriginal people in Saskatchewan are, on average, in the low-income category. In effect, Aboriginal people account for 4.3% of the Canadian population and 15.6% of the Saskatchewan population (Statistics Canada, 2011). Around 30% of Aboriginal people in Saskatchewan are unemployed (Howe, 2004). Of those who are employed, the average income is around $13 000/year (Howe, 2004). The Canadian government considers low income to be when 64% of income is spent on food, shelter and clothing; averaged across community sizes, low income is $15 768/year after taxes (Statistics Canada, 2014), which is higher than the average income of $13 000/year. Indigenous food networks have the potential to address some of these urgent income-based impacts and to increase food security. For example, revitalization of traditional food gathering places and practices through activities such as gardening projects and aquaculture have considerable potential to improve food security of Māori in New Zealand (McKerchar et al., 2015). The food storage and gardening/food production are also local initiatives that promote food security in Canada’s Yukon Territory (Douglas et al., 2014). Re-learning the traditional way of harvesting wild rice provide an avenue for Elders and youth to celebrate their culture and forge a path to economic stability in a First Nations community in northwestern Ontario, Canada (Kuzivanova and McDonald, 2015).

The goal of this project is to begin exploring Indigenous food networks throughout the province of Saskatchewan, Canada, how they connect people interested in Indigenous foods, and improve food security through Indigenous food activities. We organized workshops on different aspects of traditional foods such as traditional hunting, traditional gathering, home remedies, medicine wheel teachings, field identification and ceremonies. Other activities included the creation of a Facebook page, volunteer recruitment and harvesting and sharing of vegetables. After participating in the workshops, individuals were asked to complete a survey based on their experiences with traditional foods. Collectively, the project activities and survey provide a basic understanding of Indigenous food networks in Saskatchewan, and suggest how they may be revitalized in the future.

METHODS

Indigenous food networks
To develop networks in Saskatchewan, a Facebook page was created to disseminate information about the workshops and gardening opportunities. People were encouraged to ‘like’ the page and spread information about this initiative. Pictures and comments were posted from the workshops and gardens to keep people informed and to generate interest. The project assistant attended community events to spread awareness of the project.
Community gardens
The First Nations University of Canada (FNUniv) invited volunteers and staff to maintain 24 raised garden beds (1 × 2 m). The beds were available, free of charge, to any community members interested in gardening.

Workshops
We developed a list of potential workshops and presenters who are well-known in the community for their traditional knowledge. Following protocol, we offered tobacco in the forms of cigarettes or tobacco ties to the eight presenters as a respectful way to ask for their guidance and support. Offering tobacco is a way of showing respect for the knowledge we were presented with. To make the tobacco ties, garden-grown tobacco leaves were dried and put inside of a cloth and tied with a cloth tie.

The workshops were organized for diverse dates, times and locations between June and September 2013 to accommodate both university and community participants (see Supplementary material, Figures 1 and 2). Traditional foods and drinks were provided at each workshop. Presenters received an honorarium according to the university guidelines. Each workshop was attended by 12–15 people from Regina and surrounding areas. The first workshop took place on 31 May. During the planting ceremony, Elder Mike Pinnay prayed for our seeds and seedlings and participants were invited to a feast. On 28 June, Keith Bird showed participants different animal hides and explained their varied uses. Participants sampled deer soup, bannock and tea. On 17 July, Elder Betty McKenna shared her knowledge of traditional and spiritual teachings about harvesting of foods on the prairies. She shared protocols for picking foods and how to prepare and store them. Participants sampled teas made of rose hips, nettle, mint, prairie seaweed and sage. On 24 July, Elder Lorraine Yuzicapi shared her Lakota/Dakota knowledge on traditional foods and home remedies found around Standing Buffalo First Nation. She had a display table and participants sampled tea and dry meat. On 9 August, participants were invited to a Medicine Walk with Elder Betty McKenna near Moose Jaw. Participants identified seasonal foods and plants for teas. They shared sacred foods during an honour ceremony to the creator, mother earth and the sister plants. On 16 August, Nellie Ironquill shared her knowledge of sacred medicinal plants. Participants learned how to prepare the sacred foods and medicines. They also learned how to make dried meat wasna, corn wasna, chokecherry patties, wojapi, wild turnips, wild onions, berries and cherries by using the Lakota, Nakoda and Dakota teachings. On 6 September, participants were invited to a harvesting ceremony with Elder Betty McKenna. Different colored foods were harvested in the garden during the four directions songs. The ceremony ended with a feast in the tipi. On 11 September, Elder Harry Francis shared his story on how he manages his life with diabetes and discussed healthy ways of eating and incorporating traditional foods in our diet. These workshops were located at the FNUniv, at the North Central Community Association in Regina and in Moose Jaw, Saskatchewan.

Survey
Following each workshop, participants were invited to fill out a survey and consent form to evaluate their knowledge of traditional food, including harvesting, preparation and preservation. Part 1 of the survey focused on participant characteristics: gender, age group (grade 12 and less, 19–30, 31–40, 41–55 and 55 years and older), and ethnicity (First Nations, Métis, Inuit, Canadian Citizen—non Aboriginal, Newcomer to Canada, and other). Part 2 of the survey presented questions on traditional food knowledge in a Likert Scale format ranging from ‘I Strongly Agree’ to ‘I Strongly Disagree’ and allowed for only one response per statement. Part 3 of the survey had opened-ended questions about traditional foods where participants were invited to elaborate. The survey took ~15 min to complete. The study was conducted with approval from the Research Ethics Board at the University of Regina.

RESULTS
Indigenous food networks
The Facebook page generated interest in the workshops and community gardens; 71 members joined the page over 5 months (June–October 2013). A presentation of the project was given at the 2013 Food Secure Canada Conference, and BC Food Systems Gathering, which helped to generate external support and contacts. In addition, we attended events such as the Pine House Northern Elders Gathering, the BC Food Systems Network, Working Group on Indigenous Food Sovereignty Meeting, the Mosaic First Nations Pavilion in Regina and the Edible Campus planning meetings in Regina. At these events, booths were set up, presentations were made and discussions took place with interested gardeners to generate participation in our Facebook page.

Community gardens
Four gardeners grew their own produce in five plots. Project staff and 4 volunteers maintained 17 beds and gave all the produce to university students. Baskets with produce were placed in the common area at the FNUniv and students were invited to take them to complement...
their diet. Produce was estimated at 13 lbs of tomatoes, 5 lbs of potatoes, 15 lbs of cucumbers, 5 lbs of zucchinis, 3 lbs of tomatillos, 7 lbs of onions, 10 pumpkins and 20 spaghetti squash plants. Seeds were collected for the next growing season seedlings. In the next years, the goal is to grow Indigenous food species such as prairie onion (Allium textile Nels. and Macbr.) and Indian bread-root [Pediomelum esculenta (Pursh) Rydb.]. These seedlings, however, were not available for this current project. Corn was also planted, but it was eaten by gophers. The native plants garden was planted, mulched and weeded to enable self-guided tours. Several tours were given to student and community groups.

The project team also grew Mohawk and Hopi tobacco. The Mohawk plants did not survive, but the Hopi tobacco leaves were collected and left to dry at room temperature in bundles. The leaves were crumbled and given to the university Elder’s helper, to be offered to Elders in tobacco ties and for pipe ceremonies. We also collected over a hundred tobacco capsules containing seeds, which will be used to grow seedlings during the next growing season.

We encountered some difficulties in the garden during the growing season. Gophers ate the seeds and seedlings of ∼50% of the originally planted seeds, and ate ∼50% of the mature produce. We had one compost bin to store garden waste, but more compost bins would have been needed to produce useable compost for the beds. Water availability was also a problem. Water for the shared gardens was acquired by linking a hose across 100 feet of parking lot and roads, filling a large water tank, use of a small pump and perforated hose system and use of watering cans. The pressure was inadequate for the use of a sprinkler device.

Workshops and survey
One hundred and nineteen participants answered the survey. The results presented below were compiled using a combination of both quantitative and qualitative methodologies.

Part 1: participants’ gender, age group and ethnicity
Table 1 indicates that the majority of the workshop participants were female (86.56%) and most participants were between 19 and 30 years old (35.29%). The rest of participants were mainly between the 31–40 and 41–55 years old age categories (23.53 and 24.38%, respectively). More than half of the participants were First Nations (59.66%).

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Number of participants</th>
<th>Percentage of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Nations</td>
<td>71</td>
<td>59.66</td>
</tr>
<tr>
<td>Métis</td>
<td>14</td>
<td>11.77</td>
</tr>
<tr>
<td>Inuit</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Canadian Citizen</td>
<td>24</td>
<td>20.17</td>
</tr>
<tr>
<td>Newcomer to Canada</td>
<td>1</td>
<td>0.84</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>2.52</td>
</tr>
<tr>
<td>Undeclared</td>
<td>6</td>
<td>5.04</td>
</tr>
</tbody>
</table>

*One person answered both First Nations and Canadian, but was recorded as First Nations only.

Part 2: traditional food knowledge
Table 2 examines participants’ traditional food knowledge. Less than 12% of the participants strongly agreed that they had information about traditional foods prior to the workshop. And 25.4% strongly disagreed with that statement. This illustrates that a quarter of the participants had no information about traditional foods before the workshop. More than half (57.1%) of the participants surveyed strongly agreed that the workshop provided them with new tools and knowledge that will be helpful in their life. The overwhelming majority of the participants agreed or strongly agreed (38.1 and 41.5%) that the workshop will change the way they think about Indigenous knowledge. More than 69% of the participants agreed (42.6%) and strongly agreed (27.0%) that they knew what traditional foods are but a fair number of participants (9.6%) strongly disagreed and did not know what traditional foods are.

Between 42.7 and 51.3% of the participants said they partially agreed that they knew where to harvest, how to harvest and how to prepare traditional foods. It is clear that most people are not sure about where and how to harvest traditional foods and how to prepare them. But 39.7% agreed that they knew where to get information about traditional foods while 12.07% strongly stated that they did not know where to get information about traditional foods. While only 11.9% of the participants surveyed strongly agreed that they had information about this topic before the workshop (Question 1),
>93% of the participants at least partially agreed that they had a better understanding of what exploring and revitalizing Indigenous food systems at the end of the workshop. An overwhelming majority of the participants were interested in being involved in future activities around Indigenous food systems [strongly agreed (58.6%) or agreed (19.8%)].

**Part 3: open-ended questions about traditional foods**

Table 3 summarizes the responses to each qualitative survey question. Answers were analysed using thematic analysis where major and additional (breadth) themes were identified by frequency. Participant phrasing has been retained. When asked about what exploring and revitalizing Indigenous food systems meant to them, participants highlighted the importance of traditional foods, their preparation and uses, their importance in the culture and how they can be used to treat ailments and promote health. As one participant shared, it means ‘relearning, bringing back traditional foods and knowledge, learning and understanding what ancestors ate and why’. Another participant stressed that ‘our food systems are very important to our well-being, and revitalizing food systems would help many health problems First Nations people are facing today’.

Participants learned about traditional foods, plants, medicines and their uses. According to participants, they ‘learned a lot about different traditional medicines and how they are used’, the ‘protocol about picking herbs and medicines’ and commented on ‘the benefits of what is growing right in our province and how to harvest them and remain respectful while doing so’. One participant also shared that ‘Elders are the ones that need to teach the youth this way of life’. Participants would like more hands-on teachings such as how and when to grow, harvest, pick, preserve, dry and prepare traditional foods. Participants expressed that they ‘would love to learn more about harvesting and preservation of medicine and food’, ‘when to harvest, what the plants look like in the nature’ and ‘would like to experience the process of ceremony, picking, harvesting and preparing to consume’.

Respondents had various recommendations on how to improve the workshops and there were no specific themes that stood out (data not shown). Examples of recommendations include having more Elders and guest speakers and more detailed information about traditional plants and how to use them. Sixty-four of the 119 participants answered the question. There were 23 respondents who did not provide suggestions, but commented positively on the workshops and/or their experience.

**DISCUSSION**

**Indigenous food networks**

While creation of a Facebook page, hosting of workshops and attendance at community events and conferences were useful for exploring Indigenous foods, sharing information and generating interest, it was inadequate for the task of building Indigenous food networks in Saskatchewan. A more comprehensive approach with dedicated resources and stronger partnerships is required to make these networks
a reality. Recommendations made by workshop participants—including getting the word out, increasing the number of workshops, Elder involvement and partnerships across Saskatchewan—may be useful for initiating the planning of more engaged Indigenous food networks in Saskatchewan.

Once planning and partnerships are in place, establishment and promotion of a webpage or site, with linkages to other Indigenous food websites, Food Secure Canada, Facebook, Twitter and YouTube may be ideal for expanding networks across Saskatchewan, especially among youth and more remote communities.

Community gardens

Overall, the native prairie and food gardens were a success in that the seedlings were successfully planted and maintained, tours were given and the food was grown, maintained, harvested and shared with students and staff at the university. Location, collection and documentation of Indigenous food plants, seeds and seedlings are needed to reintroduce Indigenous food species into community gardens and workshops and promote their use Saskatchewan wide. This is important as Indigenous food species in Saskatchewan are not readily available in local nurseries.

The limited number of volunteer gardeners was a problem. Only a handful of volunteers signed up for the garden plots, or contributed their labor to the food garden. This lack of assistance meant that the hired part-time gardeners had difficulty keeping the gardens watered, weeded and maintained and took coordinator time away from network-building activities. It is difficult to discern whether it was the location of the community gardens—far from local Indigenous residents—inadequate advertising, or both factors that resulted in a lack of volunteer participation. Low volunteer participation has also been noted in

Table 3: Summary of participants’ responses to the open-ended survey questions

<table>
<thead>
<tr>
<th>Major themes (most participants)</th>
<th>Additional themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. What does exploring and revitalizing Indigenous food systems mean to you? Please explain</td>
<td>5 participants: learning about their ancestor’s way of life, what they ate and their traditional ways of healing</td>
</tr>
<tr>
<td>Learning or gaining knowledge in regard to:</td>
<td>4 participants: teaching their children and passing on traditional knowledge and ways so that they are not lost</td>
</tr>
<tr>
<td>1. Traditional foods</td>
<td>3 participants: relearning and reintroducing traditional foods and traditional way of life</td>
</tr>
<tr>
<td>2. Preparation and uses of traditional foods</td>
<td>2 participants: to find or return to their roots connecting to the land</td>
</tr>
<tr>
<td>3. Culture and traditional ways</td>
<td></td>
</tr>
<tr>
<td>4. How to treat ailments through traditional foods and plants</td>
<td></td>
</tr>
<tr>
<td>(natural medicines and remedies)</td>
<td></td>
</tr>
<tr>
<td>5. Learning from Elders</td>
<td>Independence</td>
</tr>
<tr>
<td>6. Learning about Self</td>
<td></td>
</tr>
<tr>
<td>7. Health: foods, disease prevention, living with disease, living a clean life, healthy weights and balanced lifestyles</td>
<td>1 participant: freedom</td>
</tr>
<tr>
<td>B. What did you learn? Please explain</td>
<td></td>
</tr>
<tr>
<td>Learned something new or gained knowledge in regard to:</td>
<td>9 participants: learned a lot, so much or everything</td>
</tr>
<tr>
<td>1. Traditional foods and uses</td>
<td>6 participants: learned about protocols, ceremonies, and/or offerings of food or tobacco.</td>
</tr>
<tr>
<td>2. Traditional plants and uses</td>
<td>4 participants: learned how to identify plants, plant stages, and male and female parts of plants</td>
</tr>
<tr>
<td>3. Traditional medicine and uses</td>
<td>3 participants: learned about foods in Saskatchewan</td>
</tr>
<tr>
<td>4. Importance of a healthy lifestyle</td>
<td>learned about how to live with or prevent diseases such as cancer and diabetes</td>
</tr>
<tr>
<td>C. What else would you like to learn? Please explain</td>
<td></td>
</tr>
<tr>
<td>Themes</td>
<td></td>
</tr>
<tr>
<td>23 participants: how and when to grow, harvest, pick, preserve, dry and prepare, plants, meat and traditional foods</td>
<td></td>
</tr>
<tr>
<td>14 participants: usage and healing properties of plants and medicines</td>
<td></td>
</tr>
<tr>
<td>14 participants: more in general and keep learning more detailed information about what they had already learned</td>
<td></td>
</tr>
<tr>
<td>3 participants: learn more about ceremonies; how to hunt</td>
<td></td>
</tr>
</tbody>
</table>
another study with urban food-insecure families (Loopstra and Tarasuk, 2013). One reason explaining the non-participation in community gardens in this past study was lack of accessibility (e.g. participants did not know how or where to be involved and said that gardens were not located in their neighborhood). Proximity to a community garden, however, might not be that important in determining participation since there was no relationship between distance to community gardens and participation (Loopstra and Tarasuk, 2013). Another reason was a lack of fit between the community gardens and the family’s busy schedule, interests or needs (Loopstra and Tarasuk, 2013). As will be mentioned below, community participation and Elder involvement might consolidate volunteer participation.

In Indigenous culture, plants are not just used as foods but also have a role in medicines and ceremonies. This is why it was important for this project to grow tobacco and harvest the leaves and seeds. Cultural practices such as the offering of tobacco is a cultural indicator of Indigenous peoples’ livelihoods, cultures, health and well-being that emphasizes the relationship between traditional cultural practices and food systems (Woodley et al., 2009).

Workshops and survey
The workshops were the highlight of the project for the research team and participants alike. The number of participants per workshop (12–15 people) was ideal for enabling strong presenter–participant engagement through presentations, discussion, questions and handling of workshop materials. Most of our participants were women, which is not surprising considering that more First Nations women (31.4%) than First Nations men (25.4%) participated in berry picking or other food gathering activities in a study performed in First Nations communities across Canada (FNIGC, 2012). The majority of our workshop participants were between 19 and 30 years old, which places them in the age group at higher risk for less balanced and nutritious diets. In effect, it was reported that only 21.9% of the 18–29 age group always or almost always consumed a balanced, nutritious diet, but the percentage increased to 45.9% in the 60 and older age group (FNIGC, 2012). This change in nutritional status may be a demonstration of the effect of culture loss and impacts upon hunting, fishing and gathering practices over time. Traditional foods provide balanced and nutritious diets and are considered more nutritious than conventional diets (Chan et al., 2011; Elliott et al., 2012). A return to eating more traditional foods is recognized as an important step in health promotion among Aboriginal people (Mundel and Chapman, 2010).

In the current study, >69% of the participants agreed or strongly agreed that they knew what traditional foods are. Our survey did not specifically ask participants to identify traditional foods, but other studies have listed several traditional foods. For example, in a survey performed in nine randomly selected First Nations communities in Manitoba, it was reported that traditional foods consisted mainly of land mammals (eaten by 86% of participants), fish (83%), wild berries or nuts (68%), wild birds (56%), wild plants (27%), tree foods (2%) and mushrooms (2%) (Chan et al., 2012). In a survey examining, the diet of First Nations people across Canada, it has been found that only 27.9% of First Nations adults reported that someone in their household had ‘often’ shared traditional foods with them in the 12 months prior to the survey (FNIGC, 2012). This is low considering that 91% on-reserve British Columbia First Nations people would like more traditional food (Chan et al., 2011).

Workshop participants were interested in learning about where and how to harvest traditional foods. Education and networking can increase traditional food availability, but the lack of available knowledge on where and how to harvest traditional foods may be limiting the use of traditional foods. First Nations participating in a study on food security in northwestern Ontario stated that they have low-to-moderate knowledge about their local food system (Stroink and Nelson, 2009). The lack of equipment/transportation, lack of availability, lack of time, difficulty to access and government regulations are barriers preventing British Columbia First Nations households from using more traditional foods (Chan et al., 2011). In Manitoba, government regulations and other land restrictions such as hydro and forestry activities limit where Manitoba First Nations obtain their traditional foods (Chan et al., 2012). Aboriginal participants in Vancouver reported that in the absence of a family network, it is more difficult to obtain traditional foods when they live away from their community (Elliott et al., 2012). In cities such as Regina, it is difficult to have access to wild game such as moose, deer and ducks. A hunter has to bring the live animal to a facility that meets the Federal, Provincial or Regina Qu’Appelle Health Region meat inspection programme in order for the meat to be retailed (Qualman et al., 2013). If the animal is not alive, the hunter can have the meat processed but it would be for his consumption only (Qualman et al., 2013). Slaughter at either public or private facilities increases the cost of those meats and creates a financial barrier to accessing traditional foods by people living at lower socio-economic levels, and reduces the social benefits of traditional food harvesting, processing and sharing practices. One workshop presenter, Keith Bird, made the recommendation to develop a traditional hunting programme and traditional food processing facilities in the cities that meet food safe regulations and provide culturally appropriate environments for...
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processing, preparing and distributing traditional foods among Indigenous families. Food security is improved through local solutions such as facilities for processing wild games and freezers to store berries, vegetables and meat (Thompson et al., 2012).

The majority of participants were interested in being involved in future activities around Indigenous foods. This correlates with a study performed in Manitoba that reported that almost two-thirds of participants would like to have more traditional food (Chan et al., 2012). If we consider that traditional food use in Saskatchewan is similar to use in Manitoba, and that 27% of First Nations people in Manitoba reported that they sometimes worry that their traditional food will run out before they can get more (Chan et al., 2012), then the development of Indigenous food networks in Saskatchewan becomes instrumental in meeting Saskatchewan food needs. Being part of a network could alleviate this concern. In fact, the sharing of country food such as mammals, fish, plants and berries harvested from the local land has been ranked the number one variable that alleviates food security in Manitoba First Nations communities (Thompson et al., 2012).

Elders are an important part in traditional knowledge dissemination, especially to youth. Aboriginal youth living in cities often have few opportunities to learn from Elders and may lack the knowledge or skills to gather and prepare traditional foods (Elliott et al., 2012). There is fear that the younger generations are losing their connection to traditional culture (Douglas et al., 2014). Workshops with Elders alleviate this problem and provide opportunities for traditional teachings. An urban Aboriginal community kitchen garden project in Vancouver reported the vital contribution of Elders to gardening activities and cultural celebrations and feasts as a way to health promotion (Mundel and Chapman, 2010). The fact that Elders are the main source of information for Indigenous university students using natural health products also stresses their importance in traditional food teachings (Alkholy et al., 2013).

While this study was centered on Saskatchewan, its findings are relevant to Indigenous communities elsewhere. As noted by Carm (Carm, 2014), Indigenous knowledge is environment-specific, but can also be used to other regions because of its time-tested reliability, having been tested over centuries of use. Workshop participants in this study stated that they would like more activities around Indigenous foods, presumably to learn how to harvest, prepare and store them. It is safe to assume that this desire is shared by Indigenous people that have also experienced land dispossession, assimilationist policies and urbanization, sometimes outside of their traditional lands. The activities promoted in this study (e.g. Elder engagement, workshops and networks) could be applied by Indigenous people elsewhere in their Indigenous food revitalization efforts.

In order to be successful, Indigenous food revitalization efforts need to be rooted in local cultural knowledge, attitudes and belief systems (Smylie et al., 2014). Western-based knowledge puts an emphasis on the separation between research/knowledge and the application of this knowledge (Smylie et al., 2014). This approach is not effective in the Indigenous culture where knowledge is embedded within daily actions. Indigenous knowledge is not just the action of knowing, but to put this knowledge into action (Smylie et al., 2014). As such, workshops led by Elders and respected community members provide a valuable avenue for participants to learn about traditional foods and the ‘how-to’ in order to provide them and their family with nutritious culturally important foods. Activities selected and driven by the community have a better chance of success and sustainability (Carm, 2014). As noted previously, our community gardens suffered from a lack of volunteers. Gardening projects have the potential to not only provide food but also to pass on traditional knowledge, strengthening cultural values (McKerchar et al., 2015). We, thus, recommend that Indigenous food network revitalization in Saskatchewan incorporates the involvement of Elders and community members not only in workshops, which our project participants strongly appreciated, but also in gardening projects, where it was lacking.

CONCLUSIONS

This project highlights the importance of Elders and community members in Indigenous foods exploration and revitalization in Saskatchewan by passing on traditional education. Workshops and networks have the ability to connect people and contribute to the exchange of knowledge and availability of traditional foods. Elders play a pivotal role in these workshops and networks and participants appreciated learning from them and expressed a strong interest in learning more about how to harvest, store and prepare traditional foods. It is recommended that Elders and community members also be involved in gardening activities to promote participation. Potential activities that promote the well-being and equitable food support of Indigenous people include more workshops on Indigenous food and medicine protocols, identification, harvesting, processing and preparation of Indigenous foods and medicines, more knowledge translation and public outreach, and more partnership and networking activities.

SUPPLEMENTARY MATERIAL

Supplementary material is available at Health Promotion International online.
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