

Perception of the Importance of Traditional Country Foods to the Physical, Mental, and Spiritual Health of Labrador Inuit

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ABSTRACT. Country foods play an integral role in Inuit life by providing nutrition and a spiritual connection to the land. However, they can harbour foodborne pathogens, such as zoonotic parasites or bacteria, which can cause disease in humans who consume contaminated meat that has been inadequately cooked. Given the heavy reliance of Inuit on subsistence living, it is important to have a clear understanding of the relative safety of these foods and the role that they play in a changing Inuit society. This community-based participatory research project involved Inuit residents of Nain, Nunatsiavut, Canada. Data on Inuit perceptions of the role, importance, and safety of country foods were collected during a series of interviews with focus groups and key informants. Despite the extremely positive views they expressed about country foods and the connections they provide to the land, community, and past, participants had major concerns about human expansion in the North, mining operations, chemical contamination, and the impact of these issues on animals and the food harvested from those animals. Also of concern was a perceived decrease in the importance of country food in their community in general, and specifically among children. These findings provide an understanding of Nunatsiavut residents' perceptions that is essential to planning effective, culturally appropriate dissemination of public health messages about the safe consumption of country foods.

Key words: aboriginal, country foods, foodborne disease, food safety, Inuit, Labrador, Nunatsiavut, perceptions, qualitative research, zoonoses

RÉSUMÉ. La nourriture de campagne revêt une grande importance dans la vie des Inuits car elle présente à la fois une source de nutrition de même qu'un attachement spirituel à la terre. Cependant, cette nourriture peut être assortie de pathogènes d'origine alimentaire prenant notamment la forme de parasites ou de bactéries zoonotiques qui peuvent entraîner des maladies chez l'être humain qui consomme de la viande contaminée dont la cuisson n'est pas adéquate. Étant donné la grande dépendance des Inuits par rapport à l'alimentation de subsistance, il est important de bien comprendre la salubrité relative de ces aliments et du rôle qu'ils jouent au sein de la société inuite en pleine évolution. Ce projet de recherche communautaire a fait appel à des habitants inuits de Nain, Nunatsiavut, au Canada. Des données relatives aux perceptions des Inuits sur le rôle, l'importance et la salubrité de la nourriture de campagne ont été recueillies dans le cadre d'une série d'entrevues réalisées auprès de groupes de discussion et d'intervenants-clés. Malgré les points de vue extrêmement positifs exprimés au sujet de la nourriture de campagne et de l'attachement qu'elle procure à la terre, à la collectivité et au passé, les participants ont exprimé de grandes préoccupations à propos de l'expansion humaine dans le Nord, de l'exploitation minière, de la contamination chimique et de l'incidence de ces enjeux sur les animaux et les sources de nourriture provenant de ces animaux. Par ailleurs, ils s'inquiétaient de la diminution perçue de l'importance de la nourriture de campagne au sein de leur communauté en général, plus précisément chez les enfants. Ces constatations permettent de comprendre les perceptions des habitants de Nunatsiavut, ce qui est essentiel à une planification efficace et à la dissémination culturellement appropriée des messages de santé publique au sujet de la consommation sécuritaire de la nourriture de campagne.

Mots clés : autochtone, nourriture de campagne, maladie d'origine alimentaire, salubrité alimentaire, Inuit, Labrador, Nunatsiavut, perceptions, recherche qualitative, zoonose

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INTRODUCTION

Traditional country foods are recognized as playing an important role in both physical and cultural nourishment in aboriginal communities worldwide (McGrath-Hanna et al., 2003). Canada's Inuit define these foods as those harvested from the land and sea, comprising primarily wild game, sea mammals, fish, and berries (McGrath-Hanna et al., 2003). Country foods play an integral role in Inuit life by providing a good source of nutrition and a spiritual connection to the land (McGrath-Hanna et al., 2003), although in recent years, easier access and convenience have increased the prominence of foods brought in from the south (Samson and Pretty, 2006). Past research has examined country foods in relation to nutritional benefits (Kuhnlein and Receveur, 2007; Johnson et al., 2009a), food security (Chan et al., 2006; Lambden et al., 2007), food safety (Food Safety Network, 2009), frequency of use (Wein and Freeman, 1992), psychological distress (McGrath-Hanna et al., 2003; Lucas et al., 2009), and social change among the Inuit (Hanrahan, 2008), but has not specifically evaluated the role and importance of country foods in Inuit society or how the Inuit view the safety of these foods.

This study was conducted in Nain, Nunatsiavut, the northernmost community in Labrador, Canada, and the administrative centre of the Nunatsiavut regional Inuit government. Nain has a population of 1035 people (2006 census data; Statistics Canada, 2010), most of whom are Inuit or Kablunângajuit, people of combined European and Inuit descent. English is spoken by more than 98% (1020/1035) of the population of Nain (Statistics Canada, 2009).

Labrador Inuit are the descendants of the Thule, who migrated from Alaska at the beginning of the 15th century, and they share many cultural practices and customs with other Inuit populations in Canada (Hanrahan, 2008). Since the 18th century, the Inuit have undergone rapid social change, most commonly associated with outside forces such as explorers, settlers, and missionaries, and the Labrador Inuit were no exception (Schaefer, 1977). In Labrador, Moravian missionaries arrived in the mid to late 1700s, bringing with them Christianity, trading opportunities, outside food sources, and foreign diseases that killed many elders, all of which led to the initial decline in Inuit culture and heritage (Hanrahan, 2008). Despite the influx of European settlers, the Labrador Inuit diet and lifestyle remained relatively unchanged until the 20th century because of the fierce independence of the Inuit (Mackey, 1988). As the influence of the missionaries grew, outposts were established along the coast at Nain, Hebron, Nutak, Makkovik, and other sites, but Inuit did not immediately settle there year-round: instead, they remained on the land to hunt caribou and returned to the settlements only for religious events (Hanrahan, 2008). The 20th century brought about great changes to Inuit life. In the 1950s, Inuit were relocated from the communities of Hebron and Okak and forced to resettle in larger communities along the coast. This sedentarization, or settling of Inuit into permanent

villages, caused overcrowding of both villages and homes (Hanrahan, 2008). Southern store-bought foods began to appear in the 1930s, and their influx increased greatly in the 1950s (Mackey, 1988). By the mid-1970s, the Inuit diet had changed substantially from its origins; with increasing reliance on imported southern foods, including nutrient-poor snack foods and carbonated drinks, came decreasing use of nutrient-rich traditional country foods (Mackey, 1988). Thus, many current concerns over the Inuit diet stem from societal changes stretching back to the 1700s.

The potential for zoonotic diseases associated with country foods has been a focus of research for the past two decades (Bratney and Bishop, 1992; Bratney and Ni, 1992; Proulx et al., 2002; Forbes et al., 2003; Measures et al., 2004; Rah et al., 2005). One area of concern is food-borne infections, such as those acquired from contaminated meat. Such infections are a particular concern in Inuit populations, where traditional food consumption includes eating raw and partially cooked meat (Margolis et al., 1979; MacLean et al., 1989; McDonald et al., 1990; Proulx et al., 2002; Food Safety Network, 2009). This practice increases the risk of infection from pathogens that would be killed by thorough cooking of the meat.

The present study is part of a larger International Polar Year study that examines the prevalence of three zoonotic parasites in country foods in the Canadian Inuit region of Nunatsiavut, Labrador (International Polar Year Study No. 186; Simard, 2009). Exploring the perceptions of country foods in this community was essential in order to disseminate the research results to the community in a culturally sensitive and appropriate manner and provide better context in which to make recommendations from this research. The present study therefore describes the Nunatsiavut Inuit perspective on the role, importance, and safety of country foods.

MATERIALS AND METHODS

Two focus groups and five key informant interviews were conducted with adult Inuit residents of Nain (age from early 20s to 65+ years) at a local meeting hall during the first two weeks of June 2009. All interviews were conducted in English because interviewees were comfortable with and fluent in English. A local northern partner (Charlene Lyall) joined the project to provide northern insights, lend local expertise, help make local contacts, and recruit participants for the focus groups and key informant interviews.

The key informant interviews were conducted individually with members of the Nain community believed to have particular insights on study themes (health, tradition, communication methods, and youth involvement). These informants included a local nurse, a Nain government official, a Nunatsiavut Government official, a schoolteacher, and a community elder. Participants were selected through consultation with the northern partner and local officials. Key informant interviews lasted, on average, 15 minutes.

After the key informant interviews, two focus groups were conducted: one with Inuit hunters (both men and women) and the other with community members who were not hunters. Recruitment of hunters in the community was informed by recommendations of local government officials. Ten participants were recruited for each focus group to help ensure that at least six individuals attended each group. Reminder phone calls were made to all potential participants the day before each focus group. Seven people took part in each focus group. Each session lasted about 90 minutes.

No financial compensation was provided to participants, although refreshments were offered to the focus groups. The study was approved by the University of Guelph Research Ethics Board and the Nunatsiavut Government Research Advisory Committee. All participants provided informed written consent.

The focus groups were moderated by the first author, audio-recorded, and later professionally transcribed to facilitate analyses. During the discussions, Charlene Lyall acted as an assistant, taking notes on the dialogue, body language, and group interactions of all participants. The purpose of the focus group was summarized briefly at the beginning of each session, and any questions regarding clarification of terms or the wording of a question were answered as they arose. No definition of country food was provided, as it is a universally understood term in the community, but we indicated that we were specifically concerned with animals used as food sources. A structured questioning route, accompanied by possible question probes or comments to maximize the amount of information gathered, was developed according to Krueger and Casey (2000). We collected data pertaining to the participants' opinions and concerns regarding all aspects of country foods, including the safety of country foods, their nutritional value, access to these foods, and their role and importance in the community. Focus group discussions were centred on participants' perceptions and opinions of country foods and country food safety. Similar topics were covered in the key informant interviews, although probes were tailored to focus on each participant's area of expertise. Transcripts of all interviews were checked for accuracy using the original audio recordings.

The focus group and key informant interview data were analyzed together. We used thematic analysis, which is intended to identify patterns or themes about a process or phenomenon that are generated from data provided by participants and shaped by their views (Braun and Clark, 2006; Creswell, 2007). Major coding categories were derived from all question responses and were divided into specific themes using an iterative process, as discussed in the literature (Krueger and Casey, 2000; Green and Thorogood, 2005; Creswell, 2007). Independent reviews of the transcripts by three authors, using the same codes, established an intercoder reliability of 0.95. Direct quotations, with names removed, were used to support and illustrate the results presented. In this paper, we have annotated quotations that needed clarification or context, indicating our changes with square brackets.

RESULTS

Perceptions of Country Foods

When the participants, all of whom ate country foods, were asked what they liked about them, the responses were rapid and numerous, and country foods universally incited positive connections, connotations, and feelings. On the basis of their responses, we coded perceptions of country foods into four main themes: physical aspects, health, identity, and connections.

The physical aspects of country foods included the sub-themes of taste, freshness, variety, and healthfulness. For instance, several participants stated that country foods were "health food," "for your health and for your body," "good and ... healthy," "tasty," and that there was "nothing like having [food] fresh." Moreover, they discussed how country foods were preferable to southern store-bought foods. Participants believed that country foods tasted "better than chicken, beef and ham, things like that." They also preferred country foods to southern "bulk" foods because country foods were fresher and had greater variety. Freshness was important because all of the store-bought meat is shipped in from the south and, according to some participants, often tasted stale, or of freezer burn. Variety was important not only for how many different animal species were accessible as a food source, but also because "there's something different about every season and [it] gives you something to look forward to." Finally, the participants discussed the healthfulness of country foods both in itself and in comparison to foods from the south. People not only felt that country foods provided them with many nutrients, but also knew there were no additives, such as hormones or antibiotics, in the meat:

We know it's not contaminated with God knows what... you know there's no chemicals used in the wild animals or... at least not like there would be from something that you buy in the store.... When we get our own, we know it's fresh ... we know it's healthy.

You know there's nothing in it, except whatever the animal ate, and that's it.... No additives or ... preservatives.

Participants regarded country foods as important to their physical, mental, and spiritual health. Regarding physical health, they discussed the perceived nutritional value that country foods provide, and the fact that some participants felt satisfied only after a meal of country foods. For example, one person described her experience when she was away at university, unable to eat country foods: "[I was] shaking and hungry, and ... my body needed that country food. I can last for maybe five days without it." Another participant said "[My] body is used to it. [I] crave it ... if I can't have it for awhile."

Hunters felt that the act of hunting itself benefited them, as it is good just to be out on the land “in the fresh air and [as] an absolute free soul.” The mental and spiritual health came in part from the sense of pride as a result of hunting: “There’s great satisfaction in being able to get your own food.”

Similarly, participants felt that country foods constitute a vital element of their identity. One participant explained, “Labrador Inuit tie themselves to the land; they see that they are a part of the land, so the food is part of who they are,” and another stated that country foods are “just what makes me who I am.” Participants also explained that they felt rich because they had country foods:

One day [name omitted] brought me a couple of partridges and seal meat and something else, and I said “Well, I feel quite rich. I feel rich because I’ve got fresh food.”

Participants felt that country foods connect them to the community and to their past, as well as to the land. Many related stories of their youth, saying that their fondest memories often involved country foods. They added that country foods connect people within the community because they are shared “not just with your family, but with other people.”

In contrast to the many benefits they cited, participants mentioned very few reasons to dislike country foods. Two people mentioned the minor hassle it can be to dress the animals after capture, although they spoke partly in jest. Otherwise, many people strongly asserted that there was nothing about country foods that they did not like, repeating themselves several times. Even conversational probes specifically designed to elicit reasons for disliking country foods did not generate discussion.

Country Food Safety Concerns

Although participants did not dislike the country foods themselves, they were concerned about the safety of these foods.

They questioned the safety of eating animals from areas viewed as polluted, with statements such as “But you have to wonder if they’re safe to eat from down by the dump,” and “I’d be paranoid about fish, especially down at the dump.” The participants felt that the dump was affecting nearby water and could make fish unsafe to eat. The repercussions of mining operations were also mentioned:

Well, in Voisey’s Bay there is pollution going on there all the time because there is a pipe and the settling ponds are up underneath. They’re supposed to be regulated according to federal regulations, but there is pollution going into that bay, no doubt. And remember the end of the year, when something happened up there ... and it killed all those fish.

Others reported noticing a change in the taste of the food from areas with known pollution, such as gas or oil:

Last time I had mussels from across the harbour they tasted oily, after they had the oil tanks over there.

Mussels stay in one place, too, and they get the oily taste from over there because the gas station and the oil are all over there.

The second concern related to fear of the unknown. People were afraid of what the animals might eat or pick up when they migrate. It was what they could not see that truly worried them:

It’s not so much what I’m seeing, as where they’ve been.... We know they’ve got to go south. We know they’ve got to eat down there somewhere and if anything, that’s what concerns me.

[At] the Saglek site there was a massive area that had to be cleaned up, PCBs and a lot of contaminants, and this is where a lot of our wildlife feed ... and there was a lot probably that we don’t even know about.

These concerns were somewhat offset in the hunter focus group by the belief that most hunters have been active long enough to know a sick animal from a healthy one:

I think that most everybody here has been hunting long enough; you know a healthy animal when you’re cleaning it, and stuff like that. So you know if there’s a really unhealthy animal, you just don’t eat it.

While this traditional knowledge may eliminate or reduce human consumption of the meat of visibly affected animals, the hunters acknowledge the concept of bioaccumulation and realize that consuming even small amounts of contaminants over a long period of time could have health consequences: “The contaminants in fish or wildlife..., or even shellfish, it might be very small, but ... if you eat a lot it might affect you more.”

Another concern, particularly in the community focus group, was that increased knowledge about the possible dangers of country foods may cause people to avoid eating them:

I don’t really think about it [contaminants in country foods] because I like country food more than store-bought food.

[My husband] hasn’t mentioned it [parasites in country foods]. I’m glad that he hasn’t! We probably wouldn’t be eating it, because I know myself ... and once I saw that there were worms in some fish, I couldn’t eat fish.

One hunter expressed the idea of not wanting to learn more but simultaneously being concerned about the unknown, as seen with pollution concerns: “The more you find out, the more you don’t want to know. But I think we need to know before we’re eating stuff that’s contaminated.”

As the larger IPY project deals with zoonotic parasites, we asked participants specifically about parasites in country foods. In general, parasites were not viewed as a major concern. One person reasoned that way “because if the caribou can eat it, if the arctic hare can eat it, if the fish can eat it—if they can eat it, I can eat it.” However, the fact that the hunter focus group brought up parasites without being prompted indicates that they are highly conscious of the issue, even though they stated that parasites did not particularly concern them: “It doesn’t really bother me, but I keep an eye out.”

When participants did show concern about parasites, it was more an aesthetic concern than a health concern: the prevailing opinion was that you could “just flick [the worms] out and eat it.”

Everyone agreed that overall, the benefits of country foods far outweighed the concerns: “What became important to me is that even if there is some PCB contamination in some of those animals, you’re probably still better off eating that than eating [southern meats].”

Concerns Regarding the Role of Country Foods in a Changing Inuit Society

Participants discussed the role of country foods in a changing Inuit society. Their concerns related to community sharing, potential waste of country foods, human expansion in the North, and country foods and Inuit youth.

Several participants perceived a lack of sharing of country foods within the community. In the past, when Nain was smaller and more closely knit, it was easier to share country foods among everyone. But now, the participants explained, it is necessary to know a hunter to get country foods because Nain’s population is just too large to share a catch with everyone:

The Inuit way, as I’ve seen it, is to share. But the community is bigger now, and it’s not as close-knit as it was. There is still sharing within families, but there’s not the degree of sharing that ... it appears there was, based on the stories from previous [years].

Another recent concern that particularly interested the participating hunters was wastefulness with country foods. In the past, an animal was used in its entirety, and no one caught more than was needed at one time. In the focus group with hunters, however, participants told stories of whole rabbits and other small game found at the dump:

Because quite often ... you go down to a landfill and you see arctic hares thrown away. You know, people just

throw them out. I don’t know if they’ve just become too lazy to skin them after so long or what, but quite often you see a lot of waste.

The participants worried that this apparent lack of respect for country foods, and associated changing values, may have repercussions in the future:

You get kind of scared thinking about what’s going to happen [to country food] in 10 or 20 years’ time. Are we going to have it? Because right now, we’re not protecting it very well—not like our ancestors.

The hunters were also concerned that disrespect for country foods signaled a loss in the traditional values of their society:

There was enforcement in the past ... by our parents. They would give you hell if you [had] done something that went against their traditional hunting beliefs.

The younger people ... don’t really care because they’re not used to that kind of food.

[The youth] don’t really know anything about wild country foods.... They see it in a picture, I guess, but they don’t really understand.

Some participants noted the change in attitude that they see in the youth. Both focus groups and two key informant interviews had passionate discussions about the worry that their traditional knowledge and values were being lost, as many children now preferred store-bought food over country food. Most participants in the community focus group agreed with one participant when she stated “I think nowadays, some of the tastes that we enjoyed [are lost to] our grand kids.... They’re not eating country foods like they used to. They don’t like seal meat; they pick at the partridge—but I think that’s because other things have come, and they’ve gotten used to that.” Other participants made similar comments:

A lot of Labrador Inuit aren’t as dependent on wild food as they used to be because they’ve developed a taste for this trash that is processed and full of salt and all that kind of stuff, so that, you know, the young ones need help to be brought back to that.

Most [young people] don’t know about wild food. They don’t know. They know Coke and chips, that’s all they know now.

The participants also expressed concern about human expansion in the North, in terms of both settlements and mining and possible impact on the animals:

You may think ... oh, there's lots and lots and lots of land, but my concern is that habitat areas can be affected by too much aircraft, exploration, and all that stuff, that type of thing. Because animals, when they migrate, they usually take a certain route.... There's more and more development, exploration going on now, more people getting into the country, tourists, and who knows what else.

I've often felt like the mining at Voisey's Bay—is it going to harm some of our caribou or any of the wildlife?

Climate Change Concerns

Many participants were worried about the changes happening all around them and how they may affect country foods because they have noticed changes in the populations of moose, bears, porcupines, birds, and fish in recent years. This concern was mentioned in several key informant interviews, and the focus groups agreed wholeheartedly:

With climate change, what is going to happen to our country food? It's got to change somehow.

Because most people don't know what's happening to our animals...and the weather is changing us, and the weather seems to be warmer than it used to be before. So that's my worry—sometimes, not all the time—but what would happen if all of our wild animals....

The respondent's statement trailed off in a worried tone, implying the group's worst fear: that the wild animals might disappear altogether.

DISCUSSION

The focus group discussions and key informant interviews clearly illustrated the important role that country foods play in the lives of the participants. When asked for the first thing that came to their minds regarding country foods, participants gave universally positive responses, and all participants indicated that they ate country foods regularly. The positive aspects of country foods they reported were numerous, varied, and overlapped between groups, while their dislikes were relegated to two light-hearted comments about not wanting to dress the animals after capture. Country foods were integral to the lives of the Labrador Inuit we interviewed because they played an important role in connecting people to their community, the land, and the past. These findings corroborate results from previous work among other Canadian Inuit and aboriginal populations that documented the high importance of country foods and their role in society (Wein and Freeman, 1992; Borré, 1994; McGrath-Hanna et al., 2003; Taylor et al., 2006).

Two major concerns identified in this study also emphasized the importance of country foods. Concern about the unavailability of country foods and the lack of sharing with everyone in the community likely reflected the belief that country foods are an important part of Inuit life and that all Inuit should have access to them. Also, the concern about country foods being wasted emphasizes the high level of respect that those interviewed believed country foods should receive, and may also reflect a concern that this resource is being squandered. These concerns about changing attitudes are connected to other fears about the future: that traditional knowledge is being lost and that people are turning away from their traditional foods. There was a sense among some participants that the community as a whole is becoming detached from the land and traditional food, as many youth now prefer southern store-bought foods to traditional Inuit fare. Previous studies have examined the increasing presence of southern store-bought foods in the Inuit diet and have found that in northern aboriginal communities traditional foods are being consumed less frequently than in the past (Downs et al., 2009). For example, among Nunavut Inuit, nutrient-poor, store-bought foods are consumed with greater frequency than traditional foods (Sharma et al., 2010). Additionally, in a study of 44 Yukon First Nations, Dene/Métis, and Inuit communities, traditional country foods were consumed significantly less among Inuit age 40 or younger than among older Inuit (Kuhnlein et al., 2004). Additional focus groups with Inuit youth are planned to determine their opinions on country foods and the reasons behind the decrease in their consumption. Future research also needs to investigate the potentially increasing detachment from the land and tradition, its basis, and subsequently, how communities might want to address this issue.

Participants are concerned about the dangers of environmental contaminants and human expansion in the North, particularly polychlorinated biphenyls (PCBs), pollution from the nearby dump, and mine tailings, which they felt might be toxic to the animals and endanger those eating animals that fed near these areas. The hunters also discussed the concept of bioaccumulation and the repercussions of prolonged exposure to certain contaminants, since chemicals, even in small doses, can be harmful over time. They are concerned with the potential for severe long-term consequences of environmental contamination. Participants' food safety fears appeared to be well founded, as data collected from the mid-1980s to 1998, in a study involving food sources for over 40 000 First Nations and Inuit people from across Canada, indicated that toxic chemicals in marine mammals and fish, such as heavy metals and PCBs, can exceed acceptable intake levels and may pose a health hazard to those who consume these foods as a large part of their diet (Van Oostdam et al., 2005). The health consequences of these chemicals to people can include cardiovascular disease and negative impacts on brain development, the immune system, and endocrine function (Van Oostdam et al., 2005). Toxic effects have also been reported in fish exposed to mine tailings and PCBs in

northern environments (Tkatcheva et al., 2004; Kuzyk et al., 2005), including Labrador (Payne et al., 2001). Historic contamination of the soil with PCBs in Saglek Bay, Labrador, has affected fish (Kuzyk et al., 2005), birds (Kuzyk et al., 2003), and terrestrial mammals (Johnson et al., 2009b). While no formal, scientific study has described such events at the Voisey's Bay mine site located on Inuit land, a news report documented two incidents during which alkaline water spilled into a brook, killing about 400 fish (CBC News, 2005). Such events suggest that the Inuit are justifiably concerned about human expansion in the North and its potential dangers to their health and their environment.

Our participants perceived pollution and environmental contamination as greater concerns than parasites, which were seen as an aesthetic rather than a health issue. This perception indicated that participants may have a gap in their knowledge about country food safety with regard to zoonotic parasites. Participants appeared to assume that all parasites in their food would be visible and that they could "flick [the worms] out" to eliminate the foodborne disease risk. Some participants also thought that the parasites found in animals are not harmful to humans, which is not always the case. For example, both *Trichinella nativa* (Margolis et al., 1979; MacLean et al., 1989) and *Toxoplasma gondii* (McDonald et al., 1990; Mikaelian et al., 2000), which have been found in country foods from various animal sources, can cause disease in humans. Perhaps not surprisingly, it was the participants actually involved with health or hunting and fishing (i.e., the nurse and hunters) that were more aware of the real issues surrounding parasite infestations. While the authors recognize that bacteria are another major category of pathogen that can pose a hazard in raw or partially cooked meat, the study participants made no mention of bacteria. Thus, no inferences could be made about participants' perceptions and beliefs on the safety of traditional foods in this regard.

Some participants commented that they did not particularly want to know about health hazards associated with country foods for fear that knowing might make them reluctant to eat such foods. People are averse to finding out information that might have a negative impact on them in some way, and such sentiments are commonly observed in risk perception studies (Martin, M.W., 2009), especially when health is involved (Harris and Keywood, 2001; Twomey, 2006). On the other hand, it was what the participants did not know that worried them the most about the safety of country foods. For example, it was the lack of knowledge surrounding contaminants and mining, how much was being dumped, or even if animals were exposed to pollutants from such activities, that most worried the participants. Over the past decade, participants and researchers have reported a steadily increasing interest among Labrador Inuit in what they eat (Martin, D.H., 2009). The ideas of not wanting to learn more, but simultaneously being concerned about the unknown, seem to be at odds, but as one hunter said, the more knowledge frightens you, the greater your need to know more.

Past research has shown that outreach and education in aboriginal groups are most successful when the programs are community-driven, culturally relevant, consistent with traditional knowledge, and readily understandable by the target audience (Burhansstipanov et al., 2005; Polley, 2005). Community uptake and application of new information is likely to be enhanced if results are presented in a culturally appropriate way and shown to be relevant to the community. This study, through our work with community members and government officials, has increased the likelihood that the research results from our larger IPY study will find practical application in the community. This study has also highlighted the importance of country foods to the physical, mental, and spiritual health of Inuit. Hence, northern and Arctic researchers should be particularly careful of how they present new information pertaining to the safety of country foods. The authors suggest that it is important for researchers to emphasize how potential health risks can be minimized, rather than encouraging people to stop eating country foods. Such actions, if warranted, are more appropriately left to the community, because only they are in a position to balance risks and benefits.

The intent of qualitative work is to acquire depth of knowledge on a specific area, and not necessarily breadth. Qualitative research methods, which emphasize people's opinions or personal experiences, are well suited for study of complex or detailed phenomena (Creswell, 2007). Using these methods to derive interpretations helps to empower the participants being interviewed, in that researchers encourage them to share their stories and opinions, listen to them actively, and engage them more thoroughly in the research than is possible in quantitative studies (Creswell, 2007). Qualitative research methods also help the researcher to better understand the context of the issue under discussion (Creswell, 2007). As this study took place in a northern Labrador Inuit community, the interpretation of the results applies directly to this context.

Despite the richness of the data gathered, focus groups and key informant interviews do have their limitations. Qualitative interviews do not generally provide information on the perceptions of the population as a whole. Hence, the perceptions expressed in this study may not reflect those of the larger population. Sampling can cause selective participant entry, and selection bias may have skewed the results of the study toward positive perceptions of country foods, as the northern partner recruited general members of the public that she thought would be sociable and interested in the topic area. Such sampling, however, is common in qualitative work, and the participants' diverse range of ages and roughly equal ratio of males to females may have helped to minimize this bias. Finally, while the total sample size was small (two focus groups and five key informant interviews, or 19 participants), the resulting data were consistent across all groups.

CONCLUSIONS

Country foods were considered to be a vital part of the lives of our participants, who viewed them as important to Inuit physical, mental, and spiritual health. These foods were important aspects of the participants' identity, community, and past, and provided linkages with all three and with the land itself. The food safety concerns they had were related to environmental contamination and pollution; concerns regarding parasites were minimal, and the associated discussion suggested that they lack awareness of the potential risks of foodborne parasites. Because of the current importance placed on country foods, not only must researchers working among Inuit present their results to the community, but it is critical that they do so in a culturally sensitive and appropriate manner.

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