

Understanding food insecurity and health issues amongst the Inuit Peoples of Nunavut,

Canada through basic income: A rapid review

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I respectfully acknowledge the Squamish, Tsleil-Wuatuth, Kwekwitlem, and Musqueam Peoples on sacred, unceded, and ancestral land on which I reside and work. I am grateful to the lands for nurturing me and allowing me to grow.

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Position of self

I faced food insecurity myself multiple times as a student. However, I did not know what that meant initially as a social and health phenomenon. As an international student, the conversion rate from Indian rupee to Canadian dollars is consistently high and fluctuates quite often. My experience of food insecurity exacerbated in the initial months of the pandemic. As banks were closed, my mom could not transfer money for my expenses. I had to actively make some difficult decisions to pay my rent and utilities on time while also managing to feed myself.

A couple of months in, I came across an article by CBC detailing the food insecurity crisis in Newfoundland and Labrador. After reading the article, I could relate to the issues laid out regarding the access and utilization of food. Upon further research, I happened to find multiple articles discussing the issue of food insecurity in Nunavut. Intrigued by the topic, I approached Dr. Rochelle Tucker about doing a directed studies class with her. In that class, I read articles and wrote reflection papers on food insecurity issues among the Indigenous population in Canada. The primary motivation was to have the directed studies class mature into an Honours program.

The exposure to the material regarding food insecurity fuelled the drive to pursue an Honours program under Dr. Maya Gislason with a detailed vision on understanding food insecurity through basic income among Inuit Peoples in Nunavut, Canada, using a rapid review approach. The insecurities I faced during the initial pandemic days, coupled with my interest in Indigenous studies, helped me connect the dots between food insecurity issues and Northern Indigenous populations.

Introduction

Food insecurity is the inadequate or insufficient availability of food that influences various aspects of health, including physical, social, and mental health (Bradette-Laplante et al., 2020). Increasingly recognized as a severe health problem across several affluent nations, food insecurity is considered a strong indicator of increased health care utilization and expenditure (St Germain et al., 2019). The interacting causes and consequences of food insecurity are important to understand. Upstream efforts to address food security include both changing the food supply chain to increase access to nutritious food and efforts to increase the spending power of individuals. Therefore, a central aim of this undergraduate honours thesis is to understand the relationship between food programs (i.e., Food Mail program and Nutrition North Canada), food insecurity and basic income strategies. The relationship is important to understand because these programs seek to provide financial resources to combat poverty in order to aid food security based on the logic that financial aid limits material deprivation in low-income households and improves access to nutrient dense foods (Tarasuk, 2017). This project is focused on understanding food insecurity specifically in the context of Nunavut, the homeland of the Inuit in Canada. In particular, this research explores whether a basic income guarantee would enable Inuit in Nunavut to live and build on Indigenous ways of life.

At the centre of this work is a rapid review through which I examined the literature on the effects of a minimum guaranteed income for individuals experiencing food insecurity. The conceptual framework guiding this work was developed by the Council of Canadian Academies (CCA) (2014) titled, “Aboriginal Food Security in Northern Canada.” The report encapsulates the distinct experiences of household and community level food insecurity amongst northern First Nations, Inuit, and Métis communities (CCA, 2018). The report also discusses the confounding factors affecting food insecurity such as the fast-paced transitions

experienced in social, economic, and environmental spheres (CCA, 2018). The panel's use of a holistic approach to look at the various complexities presented by food security was why the CCA conceptual framework was selected for this study. This report illustrates the need for collaborative efforts between the government and the people belonging to the Northern communities and urges policy-makers to push for holistic solutions (CCA, 2018).

The findings of my work are presented in this thesis by first introducing Nunavut the study context, the problem of food insecurity and the health disparities and material deprivation faced by the Inuit. Second, I discuss the methods employed in the research. Third, I report on the key findings of how the food insecurity problem in Nunavut has been addressed. I will critique the Nutrition North Canada (NNC) program by focusing on the inexplicit eligibility criteria and overall drawbacks. Fourth, I attempt to illustrate the importance of country foods, cultural identity, and traditional knowledge of the Inuit Peoples. Fifth, I discuss the triumphs of poverty reduction strategies and their effect on food insecurity. Then, I discuss key insights that emerge from this review. Finally, I conclude my review by reiterating its purpose and key findings.

Study Context

According to the Government of Nunavut's January 2021 reports, the territory is home to approximately 40,000 people (Government of Nunavut, 2021). Due to the distinct geographic location and climate, there is a food insecurity crisis in all four Inuit regions. The Inuit Tapiriit Kanatami report that "in one Inuit region, 70% of Inuit adults were found to be living in food-insecure households. This is six times higher than the Canadian national average and represents the highest documented food insecurity prevalence rate for any Indigenous population residing in a developed country" (2021). A range of factors interact to produce food insecurity in the region, beginning with colonization (Madwar, 2018). Inuit

peoples have been affected by colonialism differently than other Indigenous peoples in Canada due to their geographic location (Madwar, 2018). In 1950, the Canadian government stripped Inuit Peoples rights to their traditional lands and fishing grounds and robbed youth of their culture under the guise of “protecting” them from the effects of the Cold War (Madwar, 2018). The relocation of Inuit Peoples resulted in the loss of their rights, disrupted access to traditional foods and lands, which precluded their ability to practice traditional ways of life and to have cultural continuity, and compromised water quality among many other impacts (Madwar, 2018; Inuit Tapiriit Kanatami, 2017). The relocation still weighs on the Inuit Peoples to this day (Madwar, 2018).

The territory has severely cold winters (average temperature between -40°C and -15°C) and cool to cold summers (average temperatures between -10°C and 5°C) due to its geographic location (Tarasuk et al., 2019; Travel Nunavut, n.d). Such climatic conditions are not conducive for importing goods and raw materials to the territory. The high costs of transportation are one reason for the high costs of perishable foods in the region which in turn leads to pressures on purchasing power (Tarasuk et al., 2019). Traditional foods (e.g., migratory birds, moose, deer, caribou meat, whales, etc.) are essential food resources for Inuit Peoples and are core to cultural identity (Tarasuk et al., 2019). These foods provide more nutritional value than preservative-ridden non-perishable food items and also have cultural importance (Tarasuk et al., 2019). Due to the climate change crisis, procuring traditional foods has been made more complicated for the Inuit (Tarasuk et al., 2019). The unavailability of traditional foods, alongside the effects of the monopolies of supermarkets – resulting in higher costs of food in Nunavut - has led to increased levels of psychological and physiological distress amongst Inuit Peoples (Tarasuk et al., 2019).

To build an evidence-based understanding of food insecurity in Canada, Statistics Canada gathers food insecurity-related data through a population-based survey called the

Canadian Community Household Survey (Statistics Canada, 2020). This survey consists of 18 questions, ranging from general questions about food insecurity and material deprivation (e.g., low income, number of household members) to questions that depict severe food insecurity (e.g., eating less throughout the day, skipping meals for multiple days, going hungry for more than a day and so on) (St Germain et al., 2019). Since the administration for food insecurity began, the territory of Nunavut has consistently reported the highest rate of food insecurity in Canada compared to other provinces (St Germain et al., 2019).

A study published in 2020 by Bradette-Laplante and colleagues aimed to assess the link between household food insecurity and psychological distress among Inuit adolescents. Their findings revealed that adolescents from Nunavik who experienced high levels of household food insecurity had a higher probability of reporting symptoms of psychological distress. Several studies have further validated the findings that mental health issues and food insecurity are closely linked (Bradette-Laplante et al., 2020; Tarasuk et al., 2019).

Health effects caused by food insecurity and material deprivation

Health disparities and growing reliance on market foods typically low in vital nutrients lead to health disparities (Inuit Tapiriit Kanatami, 2017). Among other significant health issues, mental health has been at the forefront, including suicidal ideation, suicide attempts, depression, and psychological distress (Bradette-Laplante et al., 2020). The most vulnerable group that experiences psychological distress and suicide attempts include Inuit men aged 15-29 and young females (Bradette-Laplante et al., 2020). Some researchers associate food insecurity with being a significant contributor to the cluster of cases related to psychological distress and suicidal ideation among the Inuit (Leblanc-Laurendeau O, 2020).

The following quote puts into perspective the effect of food insecurity on adolescents' mental health in Inuit communities:

“Food insecurity was common, with about four of ten adolescents experiencing severe food insecurity. Higher food insecurity in adolescence was associated with specific concurrent symptoms of distress: depression and withdrawn attitude.” [p. 2621] (Bradette-Laplante et al., 2020)

The quote above talks about symptoms of distress being concurrent with high food insecurity. The feeling of despair is further compounded by factors that cause food insecurity, such as high poverty rates, lower rates of education, crowded housing without room for ventilation, and lack of sanitation (Bradette-Laplante et al., 2020). Such factors do not foster academic and psychosocial development in children (Bradette-Laplante et al., 2020). The effects of mental health can lead to social exclusion which can hinder the positive development of the social and cultural identity of Inuit Peoples (Inuit Tapiriit Kanatami, 2017).

Longitudinal associations between food insecurity and psychological distress reveal that any food insecurity experienced in childhood is linked to emotional problems and depression later in childhood and adolescence (Bradette-Laplante et al., 2020). Hunger prevents children from learning and tampers academic performance, further leading to poor educational outcomes. Food insecurity has also been reported to heighten vulnerability to malnutrition amongst individuals, leading to infection and chronic illnesses such as obesity, diabetes, and cardiovascular disease (Bradette-Laplante et al., 2020). The presence and increasing rates of chronic conditions occur due to the transition from the consumption of nutrient-dense country foods to usually low-nutrient market food alternatives (Inuit Tapiriit Kanatami, 2017). To reduce the effects of food insecurity on the population, material deprivation must be countered. The following quote explains material deprivation:

“Calls to subsidize household goods, infant care products, and personal hygiene items, whose costs pose significant burdens for many northerners, have gone unheeded. Other items formerly subsidized under food mail, such as hunting and fishing equipment and craft items, are not supported under NNC. Although NNC subsidizes retail sales of country food produced and shipped from federally-regulated food

processing facilities, country food accounts for less than 0.1% of subsidy expenditures annually, making this component of NNC of limited efficacy in promoting the availability of traditional foods in northern communities”. [p. 12] (Galloway, 2017).

The quote above talks about how essential personal hygiene products and infant care products are not subsidized, despite being brought to attention by research. The Inuit population is relatively young and one of the fastest-growing in Canada. Hence, costs that aid the acquisition of materials essential for day-to-day life need to be subsidized (Galloway, 2017).

The dilemma of not having country foods available, either shipped or harvested through hunting, creates a sense of cultural isolation as country foods are the core of Inuit health, well-being, and identity. The FoodMail program, launched before the NNC program, identified hunting, fishing, and craft items/equipment as essential means of Inuit livelihood and hence, subsidized it (Galloway, 2017). However, the failure of NNC to identify hunting and fishing equipment worthy of subsidy furthers the understanding of indirect ways government policies and programs have continued to marginalize the Inuit (Galloway, 2017; Inuit Tapiriit Kanatami, 2017).

Due to the community members’ efforts in collaborating and managing the times for hunting with government bodies, some progress has been made. However, the main issue that remains unaddressed is creating jobs to lift people out of poverty and basic income strategies to counter health issues and material deprivation, ultimately facilitating the sharing of traditional knowledge and cultural practices.

Methods

Search Strategy:

In this thesis, in order to understand the complexity of food insecurity in the Arctic region in Canada, I conducted a rapid review of pre-existing literature on food insecurity, basic income, climate change, and mental health challenges amongst the Inuit in Nunavut. The review also includes grey literature gathered from articles that address food insecurity amongst Inuit Peoples in the Northwest Territories, Yukon, and Quebec.

A rapid review is a systematic review that entails rigorously synthesizing the desired literature while also allowing the research to be done promptly (Tricco et al., 2019). This form of a review usually includes a single person in charge of the research idea who screens and searches literature (Tricco et al., 2019), in this case, the author.

Other forms of systematic reviews are longer, have broader inclusion criteria, and require many resources to achieve the desired outcome (Tricco et al., 2019). Rapid reviews, however, often entail the concessions of specific research characteristics by limiting some aspects when conducting research compared to the broader scope of a systematic review (Tricco et al., 2019).

There are several limitations when conducting rapid reviews, including a shorter list of inclusion criteria, superficial reporting of methods employed, and bias risk (Tricco et al., 2019). To counteract the aforementioned limitations, this work is presented as transparently as possible in order for it to be reproducible, reduce bias, thoroughly report the methods employed, and to showcase the path used to inform the literature. Although a rapid review is somewhat abstruse and is not ideal for informing health care decisions, an excellent rapid review could be used as a blueprint for a systematic review when time and resources are not the limiting factors (Tricco et al., 2019).

The overarching review question guiding this research is: What is currently known about the state of food insecurity in Nunavut? Subsequent and complementary research questions included: 1) To what extent have various programs designed to address food insecurity made

a significant difference in the experience of food insecurity in a household in the region; 2) How have various determinants of health in the context of food insecurity been addressed to date?; and 3) To what extent have poverty reduction strategies helped diminish the impact of food insecurity and what changes need to be made to improve impacts in the future?

Review Methods

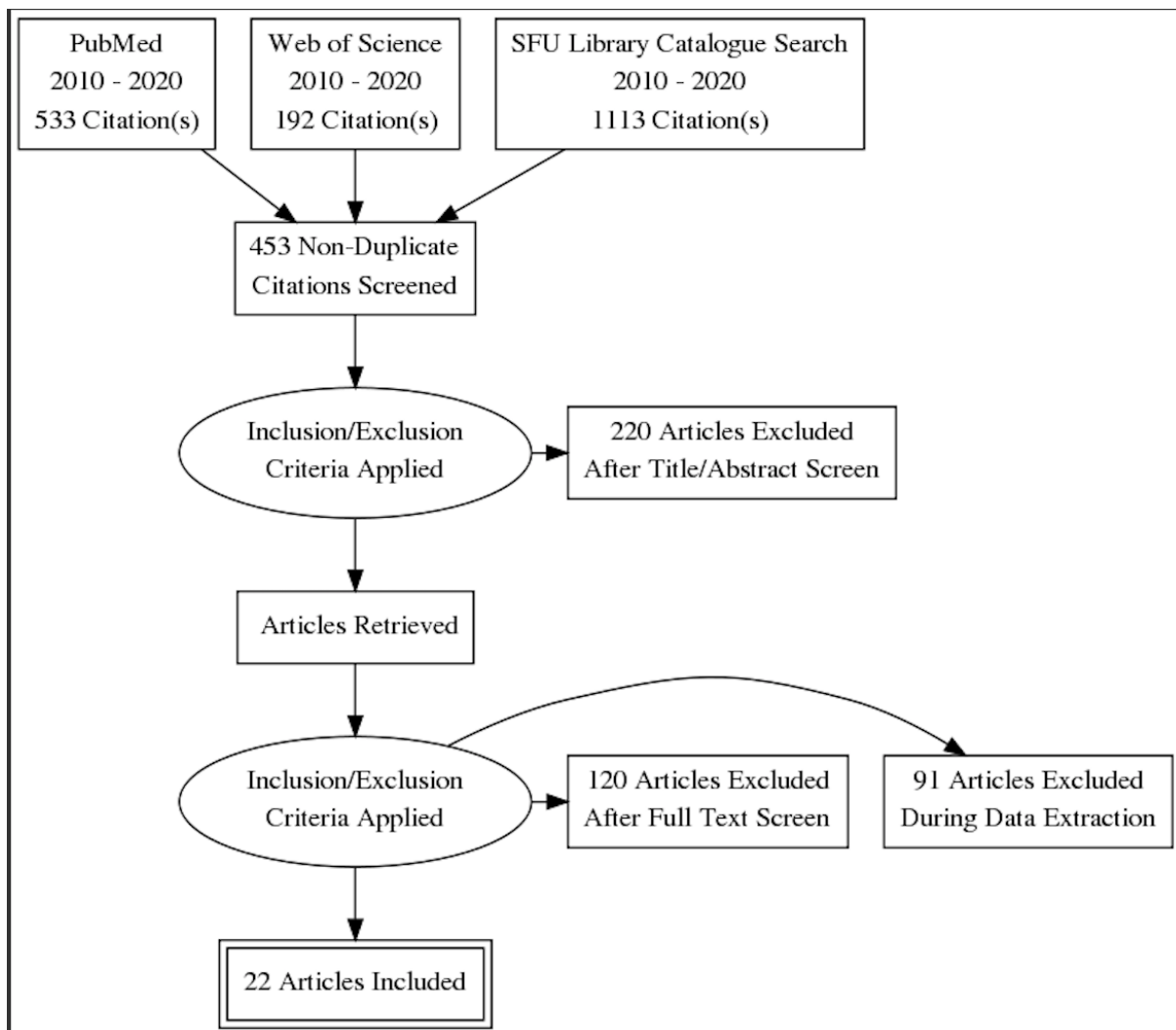


Figure 1: PRISMA Diagram of Search Strategy

The PRISMA chart illustrates the databases used to search articles. The articles in the study were collected from PubMed, Web of Science, and an SFU Library Catalogue Search using relevant search terms ("food insecurity"[All Fields] AND ("Inuit"[All Fields] OR "Nunavut"[All Fields] OR "Arctic"[All Fields] OR "North"[All Fields]) OR "food

securit*[All Fields] OR "health*[All Fields] OR "mental health"[All Fields]) AND ("food
insecurit*[All Fields] OR "basic income"[All Fields] OR "poverty reduc*[All Fields] OR
"strateg*[All Fields]).

The Inclusion criteria included: 1) articles between 2010 and 2020; 2) articles that directly addressed the research question of this review; and 3) either peer-reviewed articles or documents procured from government websites. The articles that did not fit the date range and did not directly address the research question were excluded. Some articles were excluded later on based on their abstracts and some upon reading full texts.

A total of 1838 records were identified through these three database searches, of which 233 titles were identified for abstract screening. Of the 233 abstracts reviewed, 120 were identified as relevant, and full-text was reviewed. After screening these articles' full text, 22 articles were analyzed in Excel and the remaining were rejected during full-text screening. Of the 22 articles analyzed, nine pieces employed quantitative analyses, six employed qualitative analyses, and seven mixed methods, community consultations, evaluations of theoretical literature, and scoping reviews were also studied.

This review also includes five PDF files retrieved from government websites that add to the knowledge of the aforementioned academic articles. The reason for separating the government literature from the 22 academic articles mentioned above is the way they were procured. The said PDF files were retrieved from government websites and google searches to supplement the research being done in this review and to provide extra information on themes identified in the results section.

Gray literature can make useful contributions to literature reviews (Paez, 2017). It can reduce publication bias, as most articles used in a literature review are procured from peer-reviewed publications, and thereby facilitate an unprejudiced view of the evidence (Paez,

2017). Gray literature can also foster comprehensiveness by adjusting the sensitivity (completeness) and specificity (manageability) of the study (Paez, 2017).

The list of gray literature (5 PDF files) included in this review is as follows:

Makimaniq 2 – A shared approach to poverty reduction (2017- 2022); Inuit Specific Approach for the Canadian Food policy (2017); Implications of Basic Income Guarantee for Household Food Insecurity (2017); Paying for Nutrition: A Report on Food Costing in the North (2016); and, Food Insecurity: Reasons and Solutions for Vulnerabilities in Nunavut (Paxton-Dunn, 2016).

Analysis

For this review, I conducted a thematic analysis using Microsoft Excel. The process entailed identifying key themes and topics pertaining to food insecurity presented in the results section of the review. Such analysis aims to identify key themes across the dataset that help to answer the research question.

Key themes were identified based on reading the article and highlighting quotes relevant to answering the research questions. The themes are presented in the results section corresponding to the quote that they were coded with on the Excel Sheet. Quotes from selected articles were chosen and presented in the “quotes” section of the Excel sheet. Upon reading those quotes, themes surrounding the Nutrition North Canada program, cultural and traditional knowledge, Inuit health, hunting, and poverty reduction strategies were identified. Detailed explanations using relevant quotes are provided in the results section to understand the pattern of occurrence.

Responding to Food Insecurity in Nunavut

In this section, I report on the key findings from my rapid literature review and begin by presenting literature that speaks to the process of developing evidence-based interventions.

Recognizing food insecurity as a significant health concern, the federal government has initiated two well-studied food programs with varying levels of success and garnered a range of criticism as well. The first was the 'Food Mail program,' implemented in November 2006 to offset Nunavut's challenges on healthy eating and address food insecurity in the territory (Olding, 2017). The program targeted reducing transportation costs of nutritious perishable food to the region as grocery stores are otherwise expensive locally (Olding, 2017). Many parts of the territory are remote and unreachable through conventional modes of transport, making this program valuable for distant communities (Olding, 2017). The Food Mail program subsidized Northern retailers, enabling them to sell non-perishable food items and other essentials at reduced postage rates. The list of eligible items was put together by consulting Health Canada representatives from Indigenous and Northern Affairs Canada (INAC). The program was designed to meet the need for healthy foods in the North while also reflecting on the culture and diet of the Inuit Peoples.

However, the program soon garnered criticism as it fell short of reducing food insecurity levels in the territory (AANDC, 2013). One of this program's criticisms was the high retail mark-up of essential goods, a strategy used by retailers to profit from consumers, despite the retailer's receipt of subsidies (AANDC, 2013). Grocers received subsidies from the government and the supply chains; however, they "passed the savings on to the consumers" (AANDC, 2013). Such a strategy increases profit solely for the shop owners, meaning the consumer loses. (AANDC, 2013).

Another criticism included that some prime targets could not extract the most benefit from the program, as many individuals did not have access to a credit card (AANDC, 2013). The reason being that individuals who possessed a credit card, could make a direct purchase on items that were eligible under the Food Mail Program and save up to 25% on their purchase, as direct purchasing is less expensive and does not include retail mark-up prices

(Olding, 2017). Additionally, the list of eligible food items did not include traditional food (Olding, 2017). Therefore, the need for a more culturally appropriate and economically feasible program was required to address: 1) food insecurity through a Northern Indigenous perspective and 2) a core facet of Inuit identity.

The federal government replaced the Food Mail program with the Nutrition North Canada (NNC) program in 2012 (Galloway, 2017; Olding, 2017). Although the NNC followed the same guidelines as the Food Mail program - to offer transport subsidies on shipping nutritious foods to remote communities in Nunavut, the NNC was distinct from the Food Mail program in various ways (Olding A, 2017). For example, the NNC program provided a two-tier subsidy (full subsidy for highly nutritious foods such as fresh fruits and vegetables and partial subsidy for food items of moderate to low nutrient density (e.g. frozen foods- pizza dinners, frozen pasta, and ice creams) (Olding, 2017).

The key idea behind the two-tier subsidy was to incentivize the purchase of perishable, highly nutritious items rather than the purchase and consumption of low nutrient foods (Olding, 2017). Despite the NNC helping reduce the prices of certain goods, it also garnered heavy criticism as it did not make supplementary items affordable, such as traditional meats, making access to traditional foods increasingly challenging (Galloway, 2017; Olding, 2017). The tools required for hunting were also not included in the subsidy, making it difficult for hunters to obtain the supplies needed to hunt for traditional foods (Galloway, 2017; Olding, 2017).

One crucial factor within food insecurity is the interplay between low income and poverty rates, which significantly diminishes the buying power and choice profiles of individuals and families, and communities. The link between food insecurity and poverty has led some to argue that reducing poverty through strategies such as a basic income guarantee comprise an essential part of an effective campaign to reduce food insecurity. According to

Dr. Tarasuk, a basic income guarantee would preclude individuals on the verge of poverty from being food insecure (Tarasuk, 2017). Tarasuk and colleagues demonstrate the significance of basic income guarantees by assessing the relationship between food insecurity and household income (Tarasuk, 2017). The implications of the assessed relationship denote the significant reduction in the rates of food insecurity in very low-income households through the aid of financial resources (Tarasuk, 2017).

Learning from the Nutrition North Canada (NNC) Program

In this section, I critically explore The Nutrition North Canada (NNC) program, with a focus on its inexplicit criteria and overall drawbacks. Several articles have summarized and critiqued the various programs which exist to counteract the effects of food insecurity in Inuit communities, such as the Food Mail Program (2006-2009), Nutrition North Canada (2012-) (NNC), and the Food Basket program. The main reason for only including the Nutrition North program in the analysis is the length of the program and the fact that it is a federally run program.

Nutrition North (a retail subsidy program) followed the Food Mail subsidy program and had the mandate to bestow the residents of 128 isolated Arctic communities with “reliable, affordable access to nutritious perishable food” (Galloway, 2017, pp.1). Given that many remote communities do not have roads and railways connecting them, airplanes are often used to ship goods. As such, the Nutrition North program relied on shipping perishable items to retailers through air freight (Galloway, 2017). The Government of Canada website provides eligibility criteria for communities as follows: to be considered an isolated community, the community must be reliant on air transport due to its remoteness and lack of rail/roadways connecting the northern communities (Government of Canada, 2020). The community must also meet the territorial and provincial definition of a northern community;

it must have an airport, post office, and grocery stores and must have residents staying in the community year-round (Galloway, 2017).

Such criteria leaves many isolated communities that do not have airports, post offices, or grocery stores without full subsidy for food items and precludes such communities from having fresh commodities due to their remoteness (Galloway, 2017). Different modes of addressing this issue must be put forth to counteract the effects of lack of total subsidies in remote communities (Galloway, 2017). The critiques of this program are also related to the lack of transparency pertaining to the eligibility criteria, affordability of food, lack of program accountability, and the absence of retail competition (Galloway, 2017; Olding 2017). Interestingly, one central theme in the examined literature was the limitation of relying on air freight when receiving perishable foods and concern that the NNC subsidy did not cover more appropriate and sustainable methods of year-round food transfer:

“In winter, weather-related flight cancellations mean stores await re-supply, often for 2–3 week periods. From April to October, temperature fluctuations mean that frozen perishables often thaw en route, necessitating their disposal from the risk of spoilage. Direct order and country food purchases are no solution to these challenges as they must be shipped by air. In 2013, the Grise Fiord co-operative store purchased a refrigerated container to protect the integrity of frozen foods during marine transport. However, foods transported via sealift are ineligible for NNC subsidy” (Galloway, 2017.p. 13).

This quote illustrates frustrations caused by limited retail options in Arctic communities leading to the wastage of frozen perishables due to weather-related flight cancellations (Galloway, 2017). The lack of eligibility to acquire subsidies on food items brought into the territory using other means of transport makes nutrition-rich foods expensive for the consumer (Galloway, 2017; Little et al., 2020). Looking for a local solution, the Grise Fiord co-operative store showed the initiative to purchase a refrigerated container to regulate food items’ temperature but did not ultimately resolve the problem as the NNC program does not subsidize food transported via sealift (Galloway, 2017).

The aforementioned problem illustrating the lack of subsidy recognition for different modes of transport may be one of many factors that causes the pricing difference across northern communities (Galloway, 2017; Little et al., 2020). Depending on the degree of isolation, the subsidy received for a particular community may range between 15 and 20% of their non-subsidized prices (Galloway, 2017). Although the NNC program aimed to provide an equitable subsidized food supply to all “remote northern communities,” the costs associated with transporting perishable items leads to an inequitable variability in prices of foods (Galloway, 2017).

The following quote from Galloway’s article illustrates the lack of accountability by the federal government related to the NNC program:

“Most concerning is the lack of accountability within the NNC program for northern retailers. Subsidy claims are processed using limited amounts of randomly selected data to verify the accuracy of claims. Food cost estimates are unavailable for many communities in which retailers receive subsidies, including some single-retailer communities where consumers are highly vulnerable to retail price fluctuations. Lack of detailed fiscal reporting makes it difficult for consumers to compare food availability and affordability by the community and by store. A limited number of retailer compliance audits have been undertaken, none recently.” [p. 17] (Galloway, 2017)

As the quote suggests, the subsidy claiming process (fiscal reporting) saw a lack of accountability due to outsourcing and limited oversight on quality and precision pertaining to subsidy claims (Galloway, 2017; Little et al., 2020). The confusion, tampered quality, and accuracy may be due to the absence of cross-referencing subsidy claims between the community and the retailer, as both are entitled to subsidies (Galloway, 2017; Little et al., 2020). Hence, the customers’ difficulty accessing subsidies affected the availability and affordability of many perishable food items (Galloway, 2017; Little et al., 2020).

The ‘lack of accountability’ debate is further related to the lack of retail competition in remote regions (Galloway, 2017; Olding, 2017). The market-driven subsidy model, to make a notable difference in the community and for its members to experience retail subsidy,

must have a competitive marketplace option which enables individuals in the community to choose from different retailers. In addition, there needs to be a robust fiscal framework that ensures evidence-based targets are met in order to facilitate the successful performance of the program (Galloway, 2017; Olding 2017). However, the lack of retail stores to choose from in distant communities thwarts the program (Galloway, 2017; Olding 2017). Hence, the very structure of the program precluded its success (Galloway, 2017).

Another quote from Galloway's article that puts the inequitable food shipment allocation to various communities in the North in perspective is as follows:

“Lower per capita food shipments may indicate that NNC is not serving these communities in these regions as well as those in Nunavut, Ontario, and Quebec. Recent changes to the list of eligible communities may result in similarly inequitable results if the pattern of regional differences results from factors such as lack of retail competition or prohibitive freight costs.” [p. 12] (Galloway, 2017).

This quote explains the inequitable food shipment allocation to various communities in the Arctic as the eligibility criteria for the program and illustrates the lack of transparency in detailing the flow of subsidy to the consumer. (Galloway, 2017).

Cultural practices, traditional knowledge, and the importance of country foods

“In the belief system common to Nunavut Inuit, harvested food is seen as a gift from nature, in which animals offer themselves to the hunter or fisher, and where the sharing, distribution, and consumption of wild foods is closely linked to cultural identity. Country foods are thus often viewed as belonging to the people and not having a cash value.”
(Ford et al., 2016, pp. 37)

An essential component of the Inuit culture is the procurement, gathering, and preparation of traditional foods (Inuit Tapiriit Kanatami, 2017). Despite colonizers deliberate attempts to estrange the Inuit from their traditional roots and the effects that colonialism had

on Inuit food systems, country foods remain central to Inuit health and well-being (Inuit Tapiriit Kanatami, 2017).

The Inuit food system before colonization was unique (Inuit Tapiriit Kanatami, 2017). The reliance on nutritionally dense country foods, wild berries, and roots as sources of energy were integral to Inuit culture (Inuit Tapiriit Kanatami, 2017). Post colonization, commercial harvesting of the establishment of barter items, such as caribou meats and skin, whales and walruses, led to the over-exploitation of several animal species (Inuit Tapiriit Kanatami, 2017). The irreversible dependence on the newly introduced market economy saw an increase in the entanglement with the economy and hard foreign goods (Inuit Tapiriit Kanatami, 2017).

The transitions described above led to a food system shift and a high dependence on market-foods, and is often referred to as the “nutritional transition” (Inuit Tapiriit Kanatami, 2017). The following quote explains the frustrations of the entanglement with economic forces faced by hunters.

“Westernization has introduced market foods that can be of poor nutritional quality and high cost as a result of costly transportation to Arctic communities. The cost of market foods is at least twice that of the southern Canadian cities. Nonetheless, a dietary transition toward more consumption of market food continues in Inuit communities, likely due to various factors such as market labor activities, which reduce the time available to hunt, environmental changes, which create new challenges to hunting and fishing practices, and an increase in the cost of gas and equipment necessary for hunting, fishing, and harvesting.” [p. 541] (Huet et al., 2012)

The market foods shipped from the South are usually low in nutritional value and make up a considerable chunk of the current Inuit diet (Inuit Tapiriit Kanatami, 2017). Consumption of market food items - usually high in calories - has led to a diet low in nutrient-dense country foods. The invariable presence of country foods has been traced back to the restrictions imposed on hunting by the colonizers (Inuit Tapiriit Kanatami, 2017).

The Canadian Wildlife Service, agitated by the issue of possible wildlife depletion, tampered with the self-sustaining nature of procuring country foods by imposing heavy tariffs and bans on harvesting the wildlife (Inuit Tapiriit Kanatami, 2017). Using snowmobiles and new technology that facilitated the hunting of most wildlife species can explain the failure to bequeath traditional knowledge on hunting to new generations (Inuit Tapiriit Kanatami, 2017). Therefore, the government must involve itself in co-management practices and community members must share and implement traditional ecological knowledge and support the (re)learning of traditional hunting skills (Villanueva E, 2017).

Traditional ways of life and the Inuit Peoples' cultural identity have been fraught with many interlinked challenges (Inuit Tapiriit Kanatami, 2017). The federal imposition of residential schools on children was one of many challenges Inuit populations faced (Inuit Tapiriit Kanatami, 2017). Experiences such as loneliness, alienation from Inuit ways of life and, physical and sexual abuse were common (Inuit Tapiriit Kanatami, 2017). Experiments pertaining to forced starvation, among other nutritional experiments, were conducted on Inuit children, which led many to develop dietary deficiencies (Inuit Tapiriit Kanatami, 2017). Such preclusion of Inuit children, due to coerced means, from traditional ways of life such as hunting, led to the failure of learning essential life skills necessary for survival.

Triumphs of poverty reduction strategies and their effect on food insecurity

High levels of distress in the socio-cultural context are generated as a result of Inuit food insecurity. With imposed restrictions on hunting, knowledge on trapping, gathering, and food sharing are not being passed down, and many Inuit youth are not entirely aware of such practices. The following quote also discusses the high cost of living in the territory and low-

income rates causing problems related to managing money within a neoliberal economic framework

“Shifting socio-economic conditions have also been identified as a significant determinant of food security. With regards to the socio-cultural context, Inuit food security is negatively impacted by a reduction in the number of active hunters harvesting traditional food. The high cost of obtaining food is a prevalent food security determinant amongst Inuit throughout the circumpolar north. Compounding the issue of high costs and low incomes is concerns over money management skills, which have been attributed to the relatively recent shift to a cash-based economy among Inuit, as well as limited experience of western concepts of budgeting.” [p. 2] (Wakegijig J et al., 2013)

The undesirable entanglement with the economic forces has seen Inuit Peoples’ increased dependence on foreign commercial goods instead of country foods (Inuit Tapiriit Kanatami, 2017). Yet, as money management skills and cash-based economy were not a part of traditional knowledge or the Inuit culture, the population demographic only has limited experience in colonial concepts pertaining to budgeting (Wakegijig et al., 2013; Inuit Tapiriit Kanatami, 2017).

The complex nature of understanding the recent shift to a cash-based economy entails the intersection of various social determinants of health (Inuit Tapiriit Kanatami, 2017). Low income caused by institutionalized discrimination increases stress pertaining to living conditions (Inuit Tapiriit Kanatami, 2017). As the cost of living is high in territories like Nunavut, most of the income is devoted to rent and groceries (Inuit Tapiriit Kanatami, 2017). Lack of educational opportunities presented by such challenges pushes secondary educational attainment down the priority list (Inuit Tapiriit Kanatami, 2017).

Poverty reduction strategies have been found to help address food insecurity issues. The following quote explains the contents of the approach adopted by Newfoundland and Labrador in 2006:

“Reduced odds in Newfoundland contrasts with trends seen in the rest of Eastern Canada. This finding is likely attributable to a poverty reduction strategy launched in 2006 that was active during the study period (2009-10 for Newfoundland). Among many policies, this strategy increased the minimum wage, lowered or eliminated provincial taxes on the midlowest and lowest earners, raised general welfare rates, and engaged in measures to increase subsidized housing for people with and without disabilities” [p. 8] (Schwartz et al., 2019)

The poverty reduction strategies mentioned above have produced significantly reduced odds of food insecurity. Dr. Valerie Tarasuk, in her 2017 research paper on ‘Implications of Basic Income Guarantee for Household Food Insecurity’, explains that as income increases, severe household food insecurity decreases sharply (Tarasuk, 2017). However, as the adjusted household income drops below \$30,000, the prevalence of food insecurity increases (Tarasuk, 2017).

The aforementioned explanation seems rather uncanny as a one-to-one relationship between income and food insecurity does not exist (Tarasuk, 2017). Some households have low income and are food secure, and some homes have a considerably high income and yet food insecure (Tarasuk, 2017). Such a strange relationship demonstrates the complicated nature that encapsulates the households’ material conditions to measure food insecurity (Tarasuk, 2017). This means that the certainty and adequacy of income, along with assets such as owning a home, dictate food insecurity in most households (Tarasuk, 2017).

Discussion

As mentioned in the introduction to this thesis, the study’s main aim is to document and critically appraise the shortcomings of the NNC program and explore information on poverty reduction strategies that foster food insecurity reduction. This rapid review also aims to better understand food insecurity through basic income guarantees, for example, through poverty reduction strategies.

Poverty reduction strategies are programs, usually led by government organizations that intend to reduce the effects of poverty caused by many reasons and to foster economic growth in the community (Government of Canada, 2020). Tackling poverty requires upstream measures as poverty and is often associated with illness (Deschener, 2018). Access to good quality, nutritious food is vital for physical, mental, and psychosocial health, particularly for developing bodies (Deschener, 2018; Bradette-Laplante et al., 2020). In addition, chronic conditions like diabetes are difficult to manage when impoverished (Deschener, 2018).

As the payment of expenses that are fixed (e.g. housing) must be sorted before food budgeting, many Canadians living in the far north and other remote communities rely on the purchase and consumption of low-quality, nutritionally scarce, inexpensive market foods when they experience a shortage of money (Deschener, 2018). A basic income guarantee could enable impoverished populations to exercise autonomy pertaining to their personal expenses (Deschener, 2018). A program, like the basic income guarantee, can provide money that could foster the passing down of traditional knowledge, workshops for hunting, procuring hunting tools, and snowmobiles, among other things.

A negative income tax, adopted in Alaska, could deem beneficial as a form of basic income (Deschener, 2018; Pawlowski, 2020). A negative income tax works as follows: If an individual's income is below a specific threshold, they will receive a government cash transfer top up with "no strings attached" (Deschener, 2018; Pawlowski, 2020). This entails that the poorest Canadians will receive the maximum amount possible transferred to them, more than more affluent Canadians receiving transfers according to their income (Deschener, 2018; Pawlowski, 2020).

The negative tax income could also benefit students attending university who report having lower incomes, single-parent homes, and individuals with insecure employment

conditions (Pawłowski, 2020). Although the example here is Alaskan, a Canadian context can be applied as this solution could be used in countries with greater public support with a drawback of taxation rise (Pawłowski, 2020). Implementing such a program could elevate work disincentives as it does not entail concrete requirements (Pawłowski, 2020). An increase in labor could be hypothesized, thinking that a basic income guarantee in any form would not demotivate individuals from seeking a job that pays better than the social support money (Pawłowski, 2020). Thus, a basic income guarantee is theorized to be efficient at providing financial relief and is a simple social policy that may see fruitful results (Pawłowski, 2020). Such a guarantee precludes cataclysmic changes in the economy, which means that the desired outcome could be achieved with minimum economic effects (Pawłowski, 2020).

The review will also propose certain agreements between the government (provincial/territorial and federal) and Inuit peoples to safeguard the population's interest.

Examples of generative agreements include:

- 1) Having an agreement between all government bodies with Inuit representatives and band members present- stating that the government bodies would safeguard FN interests (for income-poverty reduction strategy).
- 2) Long-term solution, yet not exceeding ten years. The reason being the agreement's rigidity would refrain any alterations in the contract if a better plan were to emerge.
- 3) The agreement comes up for amendment every four years as a new provincial government is sworn in. If the research carried out regarding basic income provides robust and fruitful results, they can be incorporated into the said agreement.

Following those agreements may yield a better outcome for basic income guarantee programs. The contracts would need the participation of members in the Nunavut government associated with poverty reduction strategies and Inuit band members of all communities across Nunavut.

Makimaniq 2, a successor of Makimaniq 1 “Shared Approach to Poverty reduction,” is a provincial government-based public engagement process that led to the Nunavut Roundtable formation for Poverty reduction in the hopes of creating a poverty reduction action plan (Makimaniq 2, 2017). To address the complexity involved with understanding and dealing with poverty, Makimaniq 2 identifies eight long-term outcomes (Strengthened Foundation through Working Together, Increased Community Decision-making, Strengthened Local Economies, Strengthened Support of Healing and Well-being, Strengthened Life-long Learning, Increased Food Security, More Supportive Income Assistance Programs and Increased Access to Housing) that the government, in collaboration with public engagement, can work towards (Makimaniq 2, 2017).

Makimaniq 2 is an essential approach as it addresses systemic causes of poverty and encourages a collaborative effort to reduce poverty (Makimaniq 2, 2017). The use of values and goals from Makimaniq 2 can enable the achievement of reducing food insecurity as material conditions of living would also be addressed. The program’s necessitates the long-term commitment to reduce poverty, stable funding, and the will to change and modify relationships and systems (Makimaniq 2, 2017).

The initiative underlines the need for increased community support, life skills, and improved policy legislation to address food security in Nunavut (Makimaniq 2, 2017). A proposed action under “More Supportive Income Assistance Programs” calls for developing and implementing conditional cash transfers for specific productive choices (Makimaniq 2, 2017). A basic income guarantee program could prove to be the perfect fit for cash transfer, and the specific productive decisions could be used to justify the money being spent to promote Inuit ways of living by the Inuit themselves.

Participation in hunting, fishing, and food skills could be achieved using a basic income program. Bequeathing traditional knowledge and maintaining cultural identity is a crucial aspect of both the “Aboriginal Food Security in Northern Canada” framework and Makimaniq 2, resonating with Inuit culture. Money could also be spent on purchasing tools required for hunting, trapping and gathering country foods.

Conclusion

This rapid review attempted to critically appraise programs implemented for food insecurity against the current state of food insecurity in Nunavut. Data collection from a small yet rich dataset enabled the research to discuss salient features of past literature such as the Nutrition North program, health disparities and material deprivation and triumphs of poverty reduction strategies. The review is a sincere effort to understand and address food insecurity issues and employ methods to counter the issue in a culturally appropriate manner.

Basic income guarantee programs may help address food insecurity and reduce material deprivation. These programs can enable youth to seek help and learn traditional knowledge and skills that resonate with their cultural identity. Inuit youth can also seek to fund themselves for programs on hunting, fishing, harvesting, and cooking. Acquiring tools for hunting and the upkeep of those tools can be supported by the basic income guarantee program, thereby attempting to aid Inuit ways of life and providing resources to reconnect to their Inuit identity through engaging in a range of cultural food harvesting practices.

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