

'Going to the Supermarket was Hard': Pandemic Foodscapes and Unsettled Food Practices of Refugees in the Waterloo Region

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Abstract

In this paper, we examine how the 'new normal' of pandemic-living transformed the local food environment in Ontario as pandemic foodscapes. Using selected findings from mixed methods research with a small sample of recently resettled refugees in the Waterloo region, we evaluated how these changes affected their grocery shopping and food-sourcing habits. We identify the distinctive ways the pandemic-related restrictions altered our participants' interactions with their local food environment and influenced their food availability and accessibility. Our study found that participants spent more time acquiring food from a reduced number of food sources and experienced an overall weakening of their household food security. The decline in food access and availability was most pronounced for the ethnocultural foods that immigrants and refugees preferred to consume. We offer a nuanced understanding of how the broad set of circumstances of our respondents and their household members shaped their mobility experiences about food provisioning. Most participants attempted to minimize their trips to purchase groceries due to the risk of coronavirus but were unable to do so, especially in large households. An insignificant segment of the study cohort successfully followed new adaptation modes, such as grocery delivery, because of associated costs. Moreover, vulnerable sections of our research cohort drastically limited their food provisioning and remained greatly dependent on their social networks' assistance, generosity, and circumstances in acquiring groceries.

Keywords

COVID-19 pandemic, foodscapes, food environment, food provisioning, food security, resettled refugees

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Cover Image

Empty supermarket shelves caused by panic buying in March 2020. Credit: Marc Bruxelles/Alamy



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Introduction

“Going to the supermarket in itself was hard. The weather was cold, and you had to wait in line for a long time. I would change what we wanted to cook based on that. If we had to wait for a long time, we would go back home and make do with what we had. Also, a lot of the shelves were empty, so you wouldn’t even find what you wanted” (Syrian participant).

The COVID-19 pandemic disrupted and dramatically altered how human beings carry out their mundane activities of daily life: working, studying, buying groceries, various modes of food consumption, outdoor activities, and social interactions with others, especially outside of their household. In Canada, as in the rest of the world, an unprecedented set of government interventions and stringent containment measures were implemented. Social distancing was introduced as an effective non-pharmacological control measure to reduce person-to-person contact, and to limit the spread of the coronavirus (Huang et al., 2021). As a province hardest hit by the coronavirus infections, many parts of Ontario faced these restrictions for extended periods. These onerous restrictions were imposed abruptly multiple times in response to rising COVID cases from 2020 to 2022. These COVID-related restrictions had substantial implications for the operations of the food retail and food service industry and how residents could interact with their local food environment or ‘foodscapes.’ Such changes had consequences for the food security of various vulnerable populations regarding food accessibility and availability, particularly access to nutritious foods and preferred foods such as high-quality and culturally appropriate foods.

To date, very few studies have examined the effects of the pandemic on consumer food behaviours in relation to the food environment, unlike the attention given to food supply, food security, and food consumption (O’Meara et al., 2022). This deficit also applies in the Canadian context. Likewise, studies have mainly focused on the effects of the pandemic-related financial shocks in Canada on the food security of individuals and households at the expense of preexisting vulnerabilities and their intersectional impacts on at-risk communities (Ahmed & Eguiguren, 2024; Si et al., 2025). Less attention has been directed to the consequences of other key aspects of COVID-19, such as changes in the food environment and household engagement with limited food sources during the lockdowns and restrictive periods. In this paper, we attempt to rectify this gap. We use the term ‘pandemic foodscapes’ to identify some important ways the food environment in the Waterloo region and the province of Ontario were modified through the imposition of the lockdowns and public health measures, particularly the social distancing requirements. We also evaluate if and how these extraordinary transformations posed a hurdle to the food security of our study participants. The key findings of this paper have policy implications for the food provisioning and food security of at-risk communities during crisis periods.

For our analysis, we draw on a detailed survey and in-depth interviews between July and September 2022 with a sample of resettled refugees from Afghanistan, Somalia and Syria residing in the Kitchener-Waterloo region of Ontario, Canada. The research team conducted 37 in-depth interviews and completed 85 surveys with participants. Study participants were recruited using local refugee/migrant support organizations, peer researchers from the three ethnocultural national communities, and snowball sampling.

COVID-19, Food Retail and Food Service in Ontario

The accessibility of food outlets, the availability of a variety of nutritious foods, and the affordability and quality of these foods are key elements to evaluate the regular food environment (Kim, 2022). Vonthron et al. (2020) characterize foodscapes as food environments shaped by social and economic processes, public policies, and practices of individuals, households, and communities. Foodscapes are not only about the physical environment of food availability, but also constitute socially constructed landscapes defined by social and economic hierarchies. Foodscapes reflect the uneven distribution of food resources and their interactions with people, culture, and politics (Miewald & McCann, 2014; Vonthron et al., 2020). In this paper, we build on the concept of foodscapes to discuss the “pandemic foodscapes.” By pandemic foodscapes, we refer to the modified and limited food environment forged by the public health containment measures and circumscribed further by social and economic changes forged by the pandemic. Next, we outline these important changes.

As a result of the strict pandemic-related controls implemented in early 2020, the local and provincial food environments witnessed an extraordinary transformation across most parts of Canada in terms of their operations. In Ontario, as in many other areas of the country, most businesses selling food products, including fresh and packaged foods, such as supermarkets, grocery stores, convenience stores, some farmers’ markets, and other establishments that primarily sell food, were deemed essential services. These businesses were allowed to remain open during the various waves of the COVID-19 pandemic, even through Stage 1, when the most stringent restrictions and lockdowns were in place (Government of Ontario, 2021c). Discount and big-box retailers were also allowed to operate, provided they sold groceries to the public. However, strict capacity limits were imposed based on physical distancing requirements, that is, the need for store visitors to maintain a distance of at least two metres from all other shoppers and store employees at these business establishments. In the shutdown zone in Phase 1 of the pandemic through 2020, the total number of store visitors could not exceed 25% of store capacity (Government of Ontario, 2020a). This numerical capacity of store visitors was determined by the store floor space (i.e., total square metres of floor area excluding spaces covered by shelves and store fixtures divided by 16 and 8 for 25% and 50% capacity, respectively).

Consequently, larger stores with a bigger spatial layout could accommodate more shoppers than smaller stores during the restrictive periods of capacity limitations (Government of Ontario, 2020a). These capacity limits were expanded to 50% for essential retail services, including food stores, during Step 2 of the reopening. It was increased further during Step 3 of the gradual reopening of Ontario. Ontario moved into Step Two of its *Roadmap to Reopen* on June 30, 2021, after 70% of adult residents had received one dose and 20% two doses of the COVID-19 vaccine (Government of Ontario, 2021a). The province moved to Step 3 on July 16, 2021, and back to modified Step Two on January 5, 2022, after a surge in COVID cases (Government of Ontario, 2021b, 2022). For small and independent food stores, including cultural and ethnic grocery outlets, stringent limitations on the number of shoppers based on size likely undermined their regular sales and routine operations. Like the bigger grocery stores, these retailers also faced additional operational costs to meet the public health guidelines (e.g., hygiene and sanitation routines such as plexiglass barriers, use of PPEs, hand and surface washing, washing of food products, and monitoring of their employees' health) and health risks such as employees contracting the virus leading to staff shortages and store closures (Coppolino, 2021). Employees' absenteeism and missing staff caused by COVID-19 protocols of isolation after exposure to the virus or illness from such infections had additional detrimental outcomes for the regular functioning of the independent grocery stores (Bundale, 2022; City News, 2022; Overvelde et al., 2024). A rare study of the situation faced by employees in Ontario's food retail industry highlighted the additional challenges they encountered, including burnout, which was not commensurate with the financial, interpersonal and job security support they received (Overvelde et al., 2024).

It is unclear how smaller independent grocery stores were affected during the pandemic and the constraints they encountered in their day-to-day functioning. As noted by a study of large grocery stores in Canada at the height of the first COVID wave, there is a dearth of research on the nature of grocery retail as an essential service through the pandemic (Jacobson et al., 2021). Moreover, very little is really known about the impacts of the pandemic's restrictions and its significant outcomes on the operations of smaller food stores, especially those serving Canada's ethnocultural communities from immigrant and diaspora backgrounds, such as halal meat stores and stores selling Syrian, Afghan and Somali foods. We could locate very few detailed studies and, for that matter, many newspaper articles, commentaries and other materials, such as public health unit reports on the COVID-19 experience of such retailers.

The *Food Retail Environment Study for Health & Economic Resiliency* or FRESHER study has shown that the financial hardships faced by employees and employers of small retail food stores, such as specialty food shops, were one of the primary damaging outcomes of the pandemic (HEAL, 2021). The Human Environments Analysis Laboratory (HEAL) (2021) organized the FRESHER (Food Retail Environment Study for Health & Economic Resiliency) pilot study to evaluate the effects of the pandemic on restaurants, fast food

outlets, grocery stores, cafes, bars, pubs and alcohol retail stores across the province. The report highlights some important challenges small food retail stores faced, including supply chain issues, problems associated with shutdowns, and restrictive eligibility criteria to benefit from government support programs. Despite these hurdles, few grocery stores closed due to the pandemic-related restrictions, and increased food purchases benefitted them. However, the study categorizes grocery stores by size and does not treat ethnocultural food stores as a discrete category. Operators and employees of Chinese grocery stores and restaurants faced escalated levels of discriminatory and racist behaviour, resulting in decreased customers and weaker sales (Ghaffar, 2020; Wells, 2021). Chinese immigrants and diaspora members were treated as carriers of the coronavirus after the first outbreak in the Chinese city of Wuhan (Chakraborty, 2022). As a result, Asian-owned businesses, including stores and restaurants, had to manage two sets of complex challenges during the pandemic: intensified racism and the deleterious effects of the COVID-19 lockdowns (Ma, 2022).

Some restrictions were imposed on other types of spaces offering food items for sale. Indoor farmers' markets were excluded from the list of food businesses deemed 'essential services' and could not operate well until 2021 (Berberyan, 2021). Only outdoor farmers' markets where half or more of the vendors sold food were allowed to function at 50% of their capacity and expected to follow the guidelines developed by Farmers' Market Ontario in accordance with the provincial government's pandemic reopening strategy (Farmers' Market Ontario, 2022). These markets were also required to submit a safety plan to their local public health unit (PHU) and adapt these protocols based on suggestions provided by their PHU (Farmers' Market Ontario, 2022). These pandemic-related changes in the local food environment also negatively affected other stores selling food. For example, convenience stores faced great uncertainty in the first three months of the pandemic through significant decreases in sales, lower customer footfalls, and rising operating costs, as indicated in a submission by the Convenience Industry Council of Canada (CICC) to the House of Commons Standing Committee on Industry and Technology (CICC, 2020).

The food service industry was severely affected as restaurants and other eating places were closed for in-dining and only allowed to provide curbside pickup, delivery, and drive-through services (HEAL, 2021; Wray et al., 2024). Some restaurant businesses adopted flexible practices, such as selling groceries (HEAL, 2021; Kulshreshtha & Sharma, 2022; Messabia et al., 2022). Temporary closures were a more viable option for a segment of restaurants against offering limited pickup and delivery services (Hobbs, 2021). Yet, a new study has shown that two-thirds of restaurants that opted to close during the pandemic restrictions shut down permanently (Wray et al., 2024).

In the early days of the pandemic, especially immediately after 17 March 2020, when Ontario declared a state of emergency and the extraordinary set of strict checks were

first imposed, panic buying and hoarding of groceries (such as basic packaged foods and frozen products) and other essential products was witnessed (Hobbs, 2020). These panic-driven reactions resulted in long queues outside food stores and temporary shortages of food products (Hobbs, 2020; Sagan, 2020). “The grocery store,” as *The Globe and Mail* newspaper article observed, “became an epicentre of anxiety in the age of COVID-19”, where shoppers encountered the many uncertainties and unknown elements surrounding the pandemic, mainly through the early months of lockdowns (White, 2020). Grocery sales surged in the next few weeks, as people stocked up on dry and canned goods, frozen foods, and comfort foods (Agri-Food Analytics Lab, 2020; Statistics Canada, 2020). To prevent stockpiling and contain these shortages, many stores limited the purchase of certain food items and, in some cases, reduced their hours of operation and regulated the time customers could spend inside their stores (Colpitts, 2020; *Retail Insider*, 2020).

Pandemic Food Habits and Food-Focused Activities

Public health measures introduced to limit the spread of the novel coronavirus and high anxieties about personal and household well-being quickly modified the food practices of residents, in particular, their grocery shopping behaviours (Heaven, 2021). Restaurant closures and ban on dining in restaurants and other eating places contributed to the sudden shift away from cooked food purchases to increased grocery buying, that is, from food service to food retail (Goddard, 2020; Khanam & Uppal, 2020; Richards & Rickard, 2020). A survey conducted in 2020 showed that beliefs about personal and food safety related to restaurants and food service outlets also contributed to this marked change (Music & Charlebois, 2021). School closures, the emphasis on work-from-home, and the closure of most public places, such as entertainment and sporting activities, meant that most family members remained at home and consumed nearly all their meals at home (Hammons & Robart, 2022; Nielsen et al., 2022). This marked transition meant that grocery purchases expanded for most households, reflecting the changes in the daily activities of many persons and families. In a study of Quebec adults, 60% reported increased grocery spending (Nielsen et al., 2023). Since in-dining was prohibited, people adopted off-premises dining through increased curbside pickup and third-party services (Abebe et al., 2022, 2023). The strong desire to maintain physical well-being and protect against the coronavirus also led to a greater emphasis on healthy eating among higher-income groups through the increased consumption of highly nutritious foods, such as fresh produce (i.e., fruits and vegetables) (Lamarche et al., 2021; Tessier et al., 2023).

Numerous social distancing policies were an important public health response to limit the transmission and population exposure to SARS-CoV-2. However, these policies immediately forged new challenges and hurdles for residents, including new difficulties and the intensification of pre-existing problems related to food provisioning. Sikali (2020) has identified elevated social rejection, greater emphasis

on individualism, and the loss of the sense of community as serious risks of social distancing. Maintaining distance, especially with people outside one’s household, constrained food accessibility in various ways. It undermined the shared cooperative and communal food provisioning for migrant households, especially newcomers (Si et al., 2025).

Individual and household efforts to cope with the pandemic and adhere to social distancing mandates also exposed the impacts of significant socio-economic disparities on their pandemic-living. Huang et al. (2021) examined the “luxury nature of social distancing” during the pandemic in the US by revealing the incongruity in mobility dynamics between lower-income and high-income groups. Upper-income groups could respond more effectively to mobility restrictions by minimizing their movement outside their homes in contrast to the lower-income cohorts. Similarly, Klar et al. (2023) note that “visible minority groups may be more likely to live in specific parts of a city which may have less availability of important destinations or less availability of public transportation options” (p. 258). A Neilson IQ Study on the changed consumption dynamics in a COVID-19-altered world distinguished between the constrained and unconstrained shoppers/customers. Of these, the former had their income and spending significantly curtailed due to unemployment or other COVID-19 challenges (NIQ, 2020). By contrast, the latter were relatively immune from income shocks and continued to have the same or elevated levels of discretionary resources because they could not indulge in restaurant dining, entertainment and travel (NIQ, 2020).

Research conducted before the pandemic (2019 and earlier) has shown that because of the food deserts, persons and families with limited economic resources living in poorer neighbourhoods travel longer distances to access healthy and preferred foods. Food deserts refer to the underserved local environments where reasonably priced, nutritious, and wide range of foods is less available than other neighbourhoods (NCCEH, 2017). These areas may have more unhealthy foods (Abraham, 2016). Using the Privy Council Office Survey on Current Issues data, the Competition Bureau (2023) study on the Canadian retail grocery industry found that lower-income residents earning less than \$40,000 a year had inferior food store proximity as they were more likely living in food deserts. That is, they were more likely to have fewer than three food stores in their neighbourhoods within fifteen minutes walking distance of their residences and travel longer distances to purchase their groceries. This established pattern of grocery shopping changed after March 2020, with lower-income individuals in Canadian cities continuing to shop in person for groceries during the pandemic, although travelling shorter distances (Smith et al., 2023). This marked shrinkage in food sourcing, the procurement of food from within a specific distance or geographical area, also implies a decline in the availability of nutritious foods for this vulnerable cohort. A different study (Klar et al., 2023) has sought to deepen this understanding of the association between mobility and socioeconomic status by distinguishing between absolute mobility (i.e., actual distance traveled and time spent travelling) and accessibility of the number of destinations.

Pandemic Grocery Shopping, Food Accessibility and Availability

The COVID-19 pandemic suddenly altered how residents purchased groceries and prepared food, including the frequency of food shopping and the number of stores they regularly visited. During the in-depth interviews, our participants discussed these stark changes and their exertions in food provisioning, which inevitably resulted in undesirable consequences for their food consumption, especially given the increased demand for food for their families. Some of our participants revealed that they could not access the types of food regularly consumed by their families, particularly after the abrupt imposition of restrictions in the first COVID wave. Our participants' struggles were amplified during the winter months when low temperatures prevented them from waiting in queues outside the food stores for lengthy durations. A Syrian participant remarked, "It was hard to leave home and buy groceries, so it was a challenge. Food consumption also increased, for us, it was bread that increased the most." Another Syrian participant summarized the general difficulties she and her family encountered in food provisioning under the strict mobility restrictions and the need to maintain physical distancing with others.

Going to the supermarket in itself was hard. The weather was cold, and you had to wait in line for a long time. I would change what we wanted to cook based on that. If we had to wait for a long time, we would go back home and make do with what we had. Also, a lot of the shelves were empty, so you wouldn't even find what you wanted.

A different Syrian participant outlined these added exertions: "I did not have a car, so it was hard to access food. I would wait for someone to drive me or buy me food. And then I had to wait in line in the cold due to maximum capacity regulations." The need to sanitize purchased groceries for safety reasons posed an additional challenge, increasing the time spent on food provisioning and food-work, as noted by another Syrian participant: "It was very hard to adjust [to the restrictions]. We would wait for two hours in line to buy groceries, then spend an hour to sanitize. We sanitized the bags and the produce and containers. It was a lot [of work]."

The general instructions to 'stay at home' as much as possible and the palpable fear of contracting the virus in public places motivated most of our study participants to shift how and where they bought their groceries and limit the number of stores they generally visited. Some participants opted to buy all their groceries from one store to minimize the number of visits for food shopping. A Syrian participant explained her pandemic-era modified shopping practices, "I reduced the frequency of leaving the home and bought groceries all at once especially because of the long lines and would not meet people a lot." In some households, one designated member carried out the food sourcing work alone, as a female Syrian participant indicated: "The load of getting groceries was entirely on my husband. I had to stay with the kids at home and we wanted to limit the number

of people exposed to the public. Also, we would change the store according to the wait-line."

Several participants said that the higher need for physical distancing from those outside their household due to various reasons led to a palpable decline in access to food for their household. This cohort had limited options to access food because of their limited mobility. They did not own a car and had restricted incomes, which prevented them from using other safe food options, such as grocery delivery. Some participants could also not seek their social networks' frequent or regular assistance to obtain their household's groceries. These support networks are important resources for migrants and refugees to acquire food (Berggreen-Clausen et al., 2021). A Somali female respondent whose husband has serious medical issues summarized these limitations: "Since we were all home, I had to cook more but could not purchase more due to lockdown in the first phase. I was afraid to go out and do grocery shopping for fear of putting my husband's health at risk."

Specific cohorts, especially single mothers with young children, were decidedly vulnerable to these challenges. As a result, they were far more adversely affected regarding their food provisioning during periods of stringent restrictions. This cohort also experienced very high levels of fear and anxiety about their personal safety and that of their children, which made them more reluctant to engage in regular food provisioning. Two Somali female participants talked about these elevated impediments for their households:

It was difficult to access food during the beginning of the pandemic due to closure of food stores, social distancing. I had little kids, and I was afraid to go and buy food for the fear of contracting COVID-19 and bringing [it] home. So, I was confined inside the house of most of the pandemic and I had to rely on brothers to do grocery shopping for me. At times, my brothers tested positive for COVID-19 meaning I had to scrape by with [the] little food I had.

We needed more food as we were all home but could not purchase them all because of the pandemic as well as our income level. My eldest daughter also got tested for COVID-19 and had to isolate in one room while I shared the other room with my other two daughters. I cannot speak the English language properly.

A section of participants was part of households consisting of at least one member with serious medical conditions unrelated to the coronavirus. As a result, these households faced elevated health risks during the pandemic, and their members had to take extra precautions and isolate themselves. In some cases, they had to remove themselves from the company of close family members, such as children, who did not live with them. A few participants indicated they had to isolate themselves temporarily after exposure to the coronavirus. Some among this group explained that their relatives, friends, and, in one case, their neighbours bought groceries on their behalf. In the words of a Syrian female

participant, “I was self-isolated. Even my daughter was not able to leave the home, although she tested negative, out of precaution. So, my friend would buy our groceries and leave them at our doorstep.” Other participants indicated these purchases by their social contacts provided them with groceries. However, it did not always consist of the types of food they desired to consume, or food purchases by others did not conform to their own cost-effective grocery buying habit.

Because we were isolating, we needed greens the most for immunity, and we were uncomfortable asking for specific things [from our neighbours]. Our neighbours would buy us groceries as they thought was best for us, but it did not include what we thought we needed.

Due to the closure of food stores and social distancing measures at the start of the pandemic, it was difficult to obtain food. Because I am asthmatic, I was hesitant to take public transportation to go grocery shopping for fear of contracting COVID-19. My daughters would go grocery shopping and sometimes would end up buying unnecessary things. Three of our family members tested positive, and we were all placed in isolation.

The containment measures had pronounced harsh outcomes for the food-sourcing activities of our research cohort when their household had a significant number of members and faced new economic hardships through illness, job losses or reduced working hours. Food inflation further compounded these difficulties regarding food accessibility and availability, as did the social and kinship obligation to continue to send remittances to their relatives displaced in other countries. Our survey result shows that 78% of respondents were remitting to relatives and friends in other countries, with varying frequency. Two Somali participants outlined the various pressures that affected their household’s food security in Canada:

I have to support my family, some of whom are in Somalia and some in refugee camps in Kenya. Remittance takes a significant portion of my income and as a result we do struggle sometimes to feed my family, especially [at the] end of the month just before I get paid. COVID-19 further exacerbated my situation. I was laid off, and I was dependent on CERB which was not enough. I, therefore, had to send less money back home.

I do help my extended family back in Somalia. I used to send money regularly but due [to] reduced income I cannot send every time. I try to help them every now and then. My family back home depend on us for their food and survival, and I feel guilty when I don't help but I also need the same help here in Canada. It is difficult to navigate life at the moment, especially as a single mother with low income.

Results from an Angus Reid (2020) survey titled COVID-19: *Weekly Monitoring of Canadian Perceptions & Behavior* documented changes in grocery shopping across the country in April 2020. 68% of respondents purchased more food so that they did not have to visit the grocery stores as often and half (51%) bought extra food for the longer term. Because of their limited incomes, our study participants could not acquire sizable quantities of groceries to last them for extended periods and limit their food shopping trips, especially when large family sizes were involved. A Somali female participant with 10 household members reflected on the impacts of these multiple aspects on her family’s food provisioning. The large household size made it hard for her family to make food purchases for their entire family at one single grocery store visit. As a result, her household purchased less than more food during this period.

My kids also got laid off just when they started work due COVID-19 but luckily, they received CERB which was very helpful. We had to slightly reduce the quantity of food we prepared and the number of times initially as we navigated the impact of COVID-19. The quarantine rules also affected how we purchased food. Only one of us had to go and buy food at a time and it was difficult for one person to go to the grocery store to buy food for all ten of us.

A Syrian participant observed that despite her household’s best efforts to limit their grocery shopping trips to optimize their limited financial resources and adhere to the COVID restrictions, they were unsuccessful due to their circumscribed food budget and shortages of certain foods.

Because of inflation of hydro, petrol, and rent, you had to calculate your groceries and number of trips. So, you would decide to go just once, and many times items would be out of stock, so you'd have to go more than once. You also had to balance. You cannot reduce rent, so what you have to do is reduce the food budget or change the food types or quantities.

Most participants attempted to decrease their trips to the food stores, following the public health mandates and reducing their exposure to the coronavirus in the grocery stores. A Syrian female respondent explained how her mobility pattern changed during the pandemic:

It is difficult. I do not drive, and it is hard to go by bus and I am afraid of taking the bus since the pandemic hit. If you walk, it is hard to carry them [groceries]. I buy my food from the easiest and closest places. Back home, we would go once and buy things for a week.

Palm et al. (2023) have shown that certain lower-income segments continued to be reliant on public transit to access groceries during the pandemic. Some of our respondents depended on their friends, relatives, and other community members living in Kitchener-Waterloo to buy groceries. This was generally the case when they did not own a car and

used public transport to visit the various food stores. Before the pandemic, some of our Somali respondents also travelled to Toronto or the Greater Toronto Area, accompanying their friends and acquaintances, to buy cultural and ethnic foods, particularly food products that are less commonly available or more expensive in the Kitchener-Waterloo area. However, social distancing requirements with persons outside their household meant they could no longer access or had diminished access to this form of support through their social networks.

For individuals who depended on their adult children or grandchildren for food purchases, social distancing mandates contributed to a decline in their accessibility to food, especially desirable cultural food. Ageing participants who were vulnerable to the coronavirus because of their age and pre-existing health conditions were forced to maintain stricter social distancing with others, including their close family members. A Somali participant made these observations,

...I rely on my adult [children] who have their own children to carry out food related activities, mostly grocery purchases...COVID-19 restrictions made it difficult for them to safely do shopping as we were not allowed to see each other or come in close contact. We had to use online grocery shopping at times which was really expensive and not convenient. Therefore, we had to plan accordingly and buy food in bulk and prepare it in small quantities.

Single mothers with young children were also more likely to be negatively affected by these controls in terms of their diminished social interactions. For these two cohorts, these constraints had a direct negative effect on their food accessibility, including physical access to food sources. In many cases, they were inhibited further by financial limitations. A Somali female participant whose spouse had diabetes revealed that she was “afraid to go out and do grocery shopping for fear of putting my husband’s health at risk.” Another Somali respondent, a single mother, also talked about the extra difficulties she faced:

We could not go out at all especially [in] March 2020, I was afraid of taking public transport for the fear of getting COVID-19 and affecting my daughters...I could not speak the English language properly, and since everyone [was] in lockdown due to COVID-19, I could not call community members all the time for support.

Next, we examine the effects of the pandemic foodscapes on our participants’ interaction with three other sets of food provisioning: school meal programs, e-commerce options and ethnocultural food sources.

School meal programs

A patchwork of measures for meals for school children, such as healthy breakfasts, snacks and lunches, have been operational across Canada in the absence of a national school food program (Ahmed et al., 2023). Although there is

limited work on this topic, previous research on the program in Ontario substantiates that they are vital for strengthening the food security and general well-being of children (Colley et al., 2019, 2021; Ismail et al., 2022, 2023). For example, an older study of the fruit and vegetable program in two regions of northern Ontario showed that children were more willing to eat these foods at home, thus contributing to their dietary diversity (He et al., 2012). Another study of elementary school children’s perceptions of a Centrally Procured School Food Program in southwestern Ontario confirmed that it enhances student nutrition, reduces hunger, and increases their energy (Colley et al., 2021).

The closure of educational institutions, particularly schools, impacted the organization and implementation of these school feeding measures nationwide, including the Ontario Student Nutrition Program (OSNP). The Province of Ontario increased the mandate of OSNP in October 2020 to offer food support to remote learners who would have accessed this program during a regular school year (City of Toronto, 2021). However, it was not until early February 2021 that Ontario allocated \$10 million through the federal Safe Return to the Class Fund. Other documents have claimed that remote learners did not have the same access to OSNP through some segments of the pandemic as before 2020 (City of Toronto, 2021). Food inflation in 2021 and 2022 was also a problematic outcome these programs (Blois, 2023; Ramachandran et al., 2024; Uppal, 2023).

Several studies have claimed that these programs continued to some extent during the lockdowns by adopting new ways to organize meal delivery for school-age children, such as the distribution of grocery gift cards or farm vouchers, food boxes, meal kits or frozen meals and extra support for food banks (Datta Gupta et al., 2022; Government of Ontario, 2020b; Noyes & Lyle, 2021). A report by the Waterloo Region District School Board (2021) states that pop-up services were offered during the emergency school closures, and pre-bagged, non-perishable food options were provided to students when they returned to in-person learning.

A new work assessing the outcomes of the COVID-19 pandemic on the delivery, adaptability and resiliency of school food programs across Canada has argued that funding and increased operating costs were key hurdles to successful partnerships between community members and organizations for maintaining food delivery and adopting new modes for it (Ahmed et al., 2023). In their research on SNP in Ontario in the early period of the pandemic, Noyes & Lyle (2021) show that school closures resulted in losses of program space and other operational aspects combined with loss of access to children and volunteers and, in some cases, retrenchments of staff members of community organizations acting as lead stakeholders in this program. Some participating agencies moved their operations to targeted emergency food assistance for vulnerable children and families, even with financial strains.

Our study respondents were asked if their household received food-related assistance from the Student Nutrition Program (SNP) through the course of the pandemic. An

insignificant share of participating households had acquired food through SNP, with a meagre 5% of the sample claiming that they had received this form of support. It is unclear how many participating households with children benefited from this program before the pandemic. It is estimated that a minimum 21% of students across Canada (notwithstanding limited data for specific areas) participated in the school food programs during the 2018/19 school year (Ruetz & McKenna, 2021). This inferior survey result implies a negative change and a likely decline in the children's food security caused by this deficit. It also imposed a new burden on their households, especially when they were cash-strapped due to the financial shocks of the pandemic.

Several study respondents with children agreed that school closures and remote learning had a detrimental effect on their food budgets. It immediately raised the food costs of their household, with members consuming all their meals at home during the lockdowns. A Syrian participant described it as follows, "It became harder to go to [get] groceries because the children are at home. Also, the consumption increased with them being at home. They eat more frequently." A different respondent, a Somali male, outlined the burdens that significantly limited his large family's potential to source food and the exacerbating complex effect of school closures on his household's food security.

It was difficult to purchase large quantity of food due to our family size. We had to buy a limited amount as allowed by food stores. Most of the places are closed and we could not get kids' food especially from ethnic convenience stores. My income level also changed due to the pandemic. I had less money to buy all the food needed by my family. I got help from CERB, but it was not enough to meet my family needs such as paying rent, buying food, and remitting. In addition, the closure of schools added extra pressure on the family. The kids were at home, and needed extra food and snacks which I could [not] afford to purchase. It was truly a difficult period especially in 2020 and 2021.

A Somali participant, a single mother with seven children, said that the increased food required to meet her family's needs led her household to visit the foodbank: "...The children were all at home taking online classes and this meant more food for them. We had to occasionally rely on the food bank, but it was not consistently available for us as the demand was more than the supply." However, the food her family received from the food bank was insufficient to fill the gap.

E-Commerce and Grocery Purchases

As a result of the pandemic controls, the grocery shopping environment in Canada witnessed a visible shift in other ways through the changed consumer behaviour. A report released in mid-2021 showed a 700% growth in online grocery shopping and grocery e-commerce since March 2020 (Rivera et al., 2021). Another study on food access by Ontario residents during the first wave of the pandemic (May to

August 2020) found that over one-third of participants were ordering online from grocery stores, and an additional 10% were using online vendors to source food (Knezevic et al., 2020). Results of the Neilsen COVID-19 Shopping Behavior Survey administered to a subset of National Consumer Panel participants in the US in July 2020 showed that 39% had shopped online (Duffy et al., 2022). Of these, a majority (89%) were likely to continue using this method in the next month. Higher-income food-insecure households were more likely to adopt this mode of food provisioning. Other reports and studies have confirmed that the pandemic accelerated the increased acceptance and popularity of grocery e-commerce, especially involving large grocery chains, and turned online ordering of groceries into a regular mode of food sourcing for Canadians (Bridges & Fowler, 2022; Duffy et al., 2022; Galusho & Riabchuk, 2024; Partida, 2021; Tyrväinen & Karjaluoto, 2022). As a news report underscored, although increased engagement with e-commerce began before 2020, "online orders and delivery from Canada's major grocers have gone from novel to normal since the pandemic began" (Hansen & Mazerolle, 2021).

These broad findings of increased grocery provisioning through the delivery and curbside pickup mode diverge significantly from our study participants' online food-sourcing activities. Only 8% and 5% of our research cohort had used curbside grocery pickup services offered as part of online shopping by supermarkets and large grocery chains and home delivery through other online platforms, respectively. A somewhat higher share (14%) had purchased cooked food from restaurants using online delivery services, such as *Skip The Dishes* and *Uber Eats*. This finding overlaps with a key result of a new study that used recently published Statistics Canada data to show that immigrant consumers were less likely to use online portals to order groceries (Abdul Hussein et al., 2024). Several of our research participants indicated that the higher costs of online purchases of groceries and their delivery services prevented them from adapting to the expanding grocery e-commerce option. A few respondents said they used this service only when no other alternatives were available to them and on infrequent occasions. For example, a Somali participant used grocery delivery after his wife contracted the coronavirus, and they had to isolate temporarily from their adult children, who were living separately. He characterized these services as "really expensive and not convenient". Another participant from Syria remarked in a similar vein: "You have to pay here. Back home, it [delivery] was for free. Back home, you just call them to bring things up for you, and they only charge you for the cost of the items."

Ethnocultural Food Sources

Easy access to culturally familiar foods and their affordable availability is a key component of the food security and physical and mental well-being of immigrants and ethnic minorities in the receiving country and country of settlement (Gingell et al., 2022; Mansour et al., 2020; Nisbet et al., 2022; Wood et al., 2021). Gingell et al. (2022) have argued that "cultural foods are a critical part of [refugee] settlement into a new country, which is often a time of high

stress and dislocation from friends and family” (p. 1). In a new global scoping review of refugees’ food security, Nisbet et al. (2022) contend that refugees “find cultural foods expensive, hard to obtain, and although people often have cooking skills, the unfamiliarity of new foods and how to prepare them pose challenges” after resettlement (p. 3). Weak arrangements of ethnic-oriented or culturally specific amenities, characterized as “third places” by Zhuang & Lok (2023), including ethnic food stores, thus constitute important barriers for migrants and refugees as they navigate and attempt to rebuild their new lives in Canada. This deficit in cultural foods may be more noticeable in smaller places than in large cities with larger concentrations of migrant communities and better availability of ethnocultural foods. Moreover, this shortcoming has an important bearing on migrants’ and refugees’ food choices, forcing them to forgo these preferred foods in some cases. It can also sometimes compel them to travel longer distances or to nearby cities for ethnocultural foods when such amenities are weakly available or absent in areas where they have settled (Si et al., 2025). These groups, especially newcomers without driving skills and car ownership, may have to rely on their social networks to access these foods.

Our participants underscored the importance of cultural foods in their food provisioning and pointed out the preexisting deficiencies in the availability of these foods in the Kitchener-Waterloo area (Si et al., 2025). A Syrian female respondent discussed the regular pattern of food sourcing of her household and revealed that food purchases from ethnocultural stores were a prominent and regular feature:

For groceries, my daughter and I go on the weekend. I prefer to go to Arab stores because firstly they are more affordable and secondly the choices are more culturally appropriate to us. I also go to [Supermarket Chain 1]. I only know the stores that are appropriate for my income. For example, I cannot go to [Supermarket Chain 2].

A female Somali participant with a young family commented, “I find groceries here in Canada very expensive compared to Kenya. It was challenging to find halal stores in Kitchener-Waterloo compared to Toronto. It is also hard to find Somali restaurants.” A Somali male participant remarked, “The greatest challenge for us is to access cultural Somali food, it is also difficult to access food regularly due to work and financial instability.” A different Somali female participant spoke along the same lines,

It can be difficult to find Somali culture food in Kitchener, especially if you don't drive. Most people travel to Toronto to find Somali cultural foods. When we need to buy Somali food, I always ask friends who drive to take me to Toronto.

Interviews with our study participants confirmed that they had reduced access to these places during the pandemic for various reasons, such as shortages in certain types of food imported from countries outside North America, supply chain issues and temporary shop closures. A Syrian participant explained,

“Some stores were closed and only had online ordering and pickup and even with pickup, you would have to wait for an hour.” Another Somali participant noted similarly: “it is also not easy to get cultural food like the ones in Africa. There are few stores that sell ethnic food, and they were closed mostly due to COVID-19.” Some respondents stated that several ethnocultural food stores where they regularly shopped were closed briefly, reducing their access to their desired cultural foods. This new limitation affected their food security through weakened food availability, especially regarding access to the preferred cultural foods. For others, social distancing mandates acted as a robust hurdle to accessing their preferred ethnocultural food sources, especially when it reduced or deprived them of support from friends and relatives. A Somali single mother remarked on her experience of buying food during the pandemic:

Getting food was difficult at the start of the pandemic. I relied on a friend's car to get to the nearest halal and African stores, but due to the pandemic, my friend decided to stay at home and practice social distancing, because her elderly mother, who is at higher risk from COVID-19, lived with her.

Conclusion

In this paper, we have examined the relationship between the food environment and food provisioning in Ontario, Canada, and under the extraordinary and anxiety-laden circumstances of pandemic living. We have outlined the key shifts in these arrangements, analyzing the latest research, gray literature and policy-relevant materials. We have evaluated these changes against the experience of our study participants, a small cohort of resettled refugees living in the Kitchener-Waterloo area in Ontario. We highlight how modified food provisioning and preparation were central to the adaptation by our participants, with public health restrictions and containment measures exacerbating preexisting challenges related to food availability, affordability, and access. Participants faced new hurdles, including inadequate or unsafe transportation, increased housework and caregiving responsibilities, and prolonged or stricter social isolation. These pandemic-related constraints limited their ability to shop for groceries to suit their family’s needs and preferences, plan meals, and prepare food, directly impacting their household’s food security. Moreover, the pandemic accelerated shifts in food sourcing across Canada, including a greater reliance on online grocery shopping and delivery services—options that many of our participants found difficult to access due to financial constraints. Other sources such as school food programs were also weakly available to these households.

However, the sample size of participants in our study is limited. The extent to which the experience of our participants overlaps with the broader set of recently resettled refugees and other vulnerable immigrant cohorts in Kitchener-Waterloo warrants further in-depth scrutiny. Additional research is also needed into how the pandemic controls reshaped different types of food sources, how these changes constrained the ways marginal residents could engage with

these sources, and how these restrictions affected their food security. There has been a tendency to treat the local food environment as a unified, homogeneous landscape equally affected by the pandemic restrictions. Much attention has centred on the large grocery chains, based on the assumption that most Canadian residents purchase food from these shops. The increased use of other food sources, such as food banks, has also been scrutinized. Our study has shown that participants obtain their food from more significant number of sources beyond the supermarket chains. Very little research has been conducted, for instance, on the pandemic-modified operations of ethnocultural food stores. These 'third spaces' are vital to the cultural food security of Canada's ethnoculturally diverse immigrant, refugee and diaspora communities.

The findings of our study underscore the need for policy interventions to enhance the affordability and availability of ethnocultural foods, including support for local ethnic food businesses, expanded community food programs, and better integration of culturally appropriate options in emergency food assistance services. Finally, policies should prioritize equitable access to food by supporting initiatives such as mobile markets, urban farming initiatives, and refugee-led food cooperatives that provide affordable, locally sourced options. Expanding funding for local-level community organizations that deliver food directly to vulnerable populations and integrating food security measures into refugee settlement services can help mitigate long-term impacts of the pandemic. Addressing these systemic challenges requires a coordinated approach between federal, provincial, municipal governments and other stakeholders to ensure that future public health crises do not further deepen food insecurity among refugee communities.

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