Consumer perceptions about food retail and services during the first wave of COVID-19 in Canada: An exploratory study

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Abstract: During the first quarter of 2020, the global COVID-19 pandemic disrupted the lives of Canadians, changing the way they worked, studied, and shopped. In addition to restrictions on freedom of movement and gathering, there was confusion spread on social media platforms about points and rates of transmission. Inconsistent messaging from public health authorities and government representatives eroded public trust, despite the initially low rate of infection. This research was carried out through four cross-country surveys to explore the experience and perceptions about food retail and food service during the COVID-19 pandemic in Canada. Results suggest confusion and fear towards food provisioning. As well, telecommuting and adoption of online shopping tools drove consumer behaviour in food retail during the first wave of the pandemic. Our findings demonstrate a need for innovation in the food retailing and service sector.

Subjects: Consumption; Urban Sociology; Urban Studies; Urban Cultures; Health Psychology

Keywords: COVID-19 pandemic; online grocery shopping; telecommuting; restaurants

1. Introduction

During the first quarter of 2020, the global COVID-19 pandemic disrupted the lives of Canadians; changing the way they worked, and shopped. In an effort to reduce the transmission of the virus, most Canadians were subject to some form of lockdown from mid-March to mid-June 2020, months that can be considered (retrospectively) as the first wave of the virus in Canada. These government-mandated restrictions on mobility and sociability changed everyday life for most

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PUBLIC INTEREST STATEMENT

This research presented results of four short surveys on food-related consumer behaviour of Canadians during the early months of the COVID-19 pandemic. A youth development NGO in Hong Kong. The study represents a unique moment in time, for policymakers, and readers interested in understanding and improving the response to uncertainty in food service and distribution, an essential pillar of society. The study adds to the literature on disaster response, consumer behaviour and retailing.
Figure 1. Percentage of respondents that have engaged in food provisioning by Canadian province

![Percentage of respondents that have engaged in food provisioning by Canadian province](https://doi.org/10.1080/23311886.2022.2072556)

Figure 2. Percentage of precautions taken at grocery stores.

![Percentage of precautions taken at grocery stores](https://doi.org/10.1080/23311886.2022.2072556)

Have you made any food provisions as a result of the coronavirus/COVID-19 outbreak?

| Province            | No | Yes |
|---------------------|----|-----|
| British Columbia    | 38%| 62% |
| Alberta             | 43%| 57% |
| Sask/MB             | 46%| 54% |
| Saskatchewan        | 39%| 61% |
| Manitoba            | 48%| 52% |
| Ontario             | 53%| 47% |
| Quebec              | 31%| 69% |
| Atlantic            | 44%| 56% |

When shopping in store now, do you:

(Source: Angus Reid)

| Precaution                                      | Yes | No |
|-------------------------------------------------|-----|----|
| Use extra hand sanitizer                        | 81% |    |
| Wipe your groceries down with disinfectant when you return home | 42% |    |
| Bring your own bags                             | 41% |    |
| Wear a cloth mask                               | 30% |    |
| Wear gloves                                     | 26% |    |
| Use cash for purchases                          | 11% |    |
| Wear an N95 face mask                           | 10% |    |
| No extra precautions                            | 5%  |    |

Canadians in fundamental ways. Individuals were forced to alter many of their routine activities, including influencing their perceptions of risk of infection and food safety. Many Canadians started telecommuting to their jobs (Music et al., 2022). Unfortunately, not everyone was able to maintain their pre-pandemic employment as temporary or permanent job loss effective millions of service-sector employees. Already on the edge economically, unsurprisingly, a greater percentage of Canadians are now experiencing food insecurity (Statistics Canada, 2020b). Of the business sectors most affected by COVID-19, agri-food, specifically grocery retail and the restaurant and food service industry, were particularly impacted by societal shut-down.
In addition to sudden restrictions on freedom of movement and gathering, confusion spread across social media platforms about points and rates of transmission. Inconsistent messaging from public health authorities and government representatives eroded public trust, despite the initially low rate of infection. Early in March 2020, shoppers began to suspect that COVID-19 could be present on many surfaces, including plastic and cardboard as well as unwrapped fruits and vegetables. This early fear led to a significant change in consumer behaviour that has yet to return to pre-pandemic norms.

This paper brings together the results of several survey-based studies conducted throughout the first wave of the pandemic: two surveys on grocery shopping in March and April 2020, a survey exploring consumer attitudes about restaurants in early June 2020, and one focused on telecommuting and food expenses in July 2020. It shows a significant change in where Canadians spend their food budget, with a greater percentage going to grocery stores rather than restaurants and fast-food outlets. Perceptions of food and personal safety were paramount in both experiences, though individuals grew more worried about their safety in restaurants and food service outlets as the pandemic progressed. Although Canadians continued to order take-out during the pandemic, a significant percentage had serious reservations about dining out once restrictions were lifted. Perhaps most damaging for the revival and long-term survival of restaurants and food service outlets is the issue of telecommuting: many individuals continue to work from home, and many want to continue once the pandemic is over. This represents a significant loss of income for the restaurant and food services industry. The vast majority of individuals who worked outside the home pre-pandemic patronized a food service location at least once during the work week.

These four studies raise many questions that can only be answered by collecting and analyzing business informatics from grocery stores, restaurants, and food service outlets, and by conducting more surveys of individual Canadians nationally. Several opportunities for research are discussed in the Conclusion of this article.

1.1. Consumer food practices during the COVID-19 pandemic
Prior to the pandemic, a significant number of Canadians were no longer following the traditional schedule of three meals a day. Many were eating outside the home, in restaurants and cafés, and/or getting take-out; many had less ability or desire to cook their own food (Charlebois et al., 2020).
Table 1. Survey questions

Stockpiling and Risk Perception in Canada in March 2020

1. Are you generally concerned about the coronavirus/COVID19 outbreak?
2. Have you made any food provisions as a result of the coronavirus/COVID19 outbreak?
3. Did you have provisions before the outbreak?
4. Are you concerned about potential health risks when going to a grocery store?
5. Are you concerned about potential health risks when going to a food service facility?

Food retail and food service in Canada in April 2020

1. Have you continued to shop in store for groceries during the Covid-19 pandemic?
2. When shopping in store now, do you:
   - Use extra hand sanitizer
   - Wipe your groceries down with disinfectant when you return home
   - Bring your own bags
   - Wear a cloth face mask
   - Wear gloves
   - Use cash for purchases
   - Wear an N95 face mask
   - Have you noticed the following procedures enacted in store?
     - Plexiglass between cashier and customer
     - Social distancing at the cash register
     - Directional arrows to control flow and allow for social distancing
     - Security limiting amount of people in store at one time
     - Special shopping hours for seniors and immuno-compromised
     - PPE used by cashiers
     - No cash purchases
     - Customers must pack their own bags
3. Have you observed other shoppers following the new safety protocols?
4. When the pandemic is over, what do you intend to do more, if anything?

Consumer pandemic responses to restaurants and food service outlets in June 2020

1. Has your employment status changed since the beginning of COVID-19?
2. Have you been ordering from restaurants since quarantine began?
3. Have you ordered from your favourite restaurant(s)?
4. As provinces work to open their economies, including food service, are you planning to avoid some restaurants because you consider some to be of higher risks to your own health?
5. When do you plan to go out and eat at a restaurant?
6. What are you expecting to see when visiting restaurants now?
7. What kind of restaurant(s) are you planning to visit during your first outing(s)?
8. What are you missing the most about going out to restaurants?

Impacts of telecommuting on restaurants and food service outlets, July 2020

1. Are you planning to work from home more often in a year from now?

(Continued)
Stockpiling and Risk Perception in Canada in March 2020

2. Are you planning to work from home more often in a year from now?

3. If yes, do you expect to be visiting restaurants less often during the workday, in a year from now?

4. How many times did you go to the restaurant/order out for a meal/coffee break during the workday, prior to the pandemic?

5. How many times are you planning to go to the restaurant/order out for a meal/coffee break during the workday, after the pandemic?

6. How many times are you planning to go to the restaurant/order out for a meal/coffee break after work with colleagues, after the pandemic?

7. Is your employer currently planning to allow more people to work from home in the future?

8. Do you agree with the following statement: “Working from home is not as bad as I thought it would be before the pandemic started”?

9. Are you planning to move within the next year since working from home will now be possible in the future?

Furthermore, the share of household expenditure on food purchases away from home were estimated to be about 30% pre-pandemic (Goddard, 2020). With the onset of public health measures aimed at reducing time spent outside the home, these behaviours were disrupted and Canadians were forced to change their food purchasing and preparation habits. Grocery store trips became less frequent, which led to short-term pressures on food supply chains as consumer purchasing patterns changed, almost overnight (Statistics Canada, 2020a).

In mid-March 2020, Canadians were told by all levels of government (federal, provincial, municipal) to grocery shop only once a week (Graveland, 2020); this led to the expansion of home inventories to reduce the frequency of store visits (Cranfield, 2020). The high demand for certain products led to retail shortages, which further reinforced consumer perception of the need to stockpile (Goddard, 2020). Hobbs (2020) argued that panic-buying among consumers identified inefficiencies in the just-in-time food retail inventory management practiced by major grocery store chains. However, the stabilization of grocery store inventory after the first few weeks of the pandemic indicates the resilience of the Canadian food supply chain: at present, food supply in Canada is not in jeopardy (Hobbs, 2020).

In the early days of COVID-19 in Canada, food safety had more to do with concern about virus transmission from contaminated surfaces, not supply chain disruption or food-borne illness. During March 2020, Canadians experienced drastic restrictions in their daily activities and public life as federal and provincial governments quickly imposed a state of emergency, closed-public meeting spaces, and reduced the size of gatherings (Armstrong et al., 2020; Cattapan et al., 2020). Work from home became the new normal and schools K–12 as well as post-secondary were either closed or shifted their teaching online (MacDonald & Hill, 2021). While these changes were necessary to reduce the spread of the virus, they had consequences for mental (Daly et al., 2021; Mækelæ et al., 2021) and physical health (Lesser & Nienhuis, 2020; Rhodes et al., 2020), caused disrupted sleep patterns (Kutana & Lau, 2021) and fundamentally changed the way Canadians shopped for necessities (Goddard, 2020).

Since the advent of the pandemic, the food retail environment in Canada has adapted to meet shifting regulations as COVID-19 infections rose. Grocers, in particular, modified their practices to meet new safety standards, including reducing shopping hours, installing plexiglass barriers, increasing countertop and cart sanitization and limiting the capacity of stores (Bogart,
Despite these adaptations, many Canadians consider in-person grocery shopping a risk to their health and, consequently, report avoiding grocery stores (Haas et al., 2020). As a result, the number of Canadians shopping online for foods, including those utilizing curbside pick-up, had risen exponentially by May 2020—up 112% compared to the pre-pandemic level in May 2019 (Evans, 2020; Goddard, 2020; Hailu, 2020). The retail response to the pandemic-induced shift to online grocery shopping has focused on mechanisms that shift food from the store shelves to consumers’ shelves at home. This has led to a focus on infrastructure and technology upgrades (Dannenberg et al., 2020), product unavailability (Richards & Rickard, 2020) and curbside pickup or delivery (Grashuis et al., 2020). Price is the primary driver of consumer food choice (Charlebois et al., 2017). Indeed, research suggests a significant positive relationship between price and better nutritional quality (Andreyeva et al., 2010). Purchasing power, therefore, affects health outcomes in terms of diet. E-commerce may lead price-conscious shoppers to select cheaper alternatives over more expensive and nutritious foods. Consequently, consumers with lower purchasing power may be disadvantaged if it becomes more expensive to meet national dietary recommendations, increasing the risk of household food insecurity.

### 1.2. Emotional distress, fear of contagion, perceived risks

While social distancing and isolation became necessary interventions for reducing the spread of the virus, they likely increased the use of social media as a means of communication, which heightens the risk of misinformation about and fear of COVID-19. While e-commerce became a necessary and convenient tool to run a household, social media has had mixed impacts on people in isolation (Dubey et al., 2020; Ellis et al., 2020; Razai et al., 2020). Increased traditional media exposure to stressful and traumatic world events is related to worsening mental health (Ahern et al., 2002; Holman et al., 2014; Torpy & Pfefferbaum, 2002; Vasterman et al., 2005). During the pandemic, daily news coverage of infection rates, fatalities, health and safety concerns, and the economic and social impacts of isolation can amplify the perception of risk of contagion among citizens. Indeed, Brooks et al. (2020) find that COVID-19 has increased overall stress levels and generalized emotional distress among otherwise healthy populations. For groups vulnerable to the effects of social and traditional media on mental health, the pandemic has presented particularly difficult challenges as a result of fear and fear compound pre-existing mental health disorders (Pfefferbaum & North, 2020). Brooks et al. (2020) suggest that the impacts of social distancing and isolation can persist in mental health decline for months.

Several prominent events in the recent past have triggered a risk response in many consumers. Economic instability (Stuckler et al., 2011; Zona, 2012), major weather events and natural disasters (Lee et al., 2009; Sun & Sun, 2019), and political upheaval (Gubanov & Gubanov, 2018) have had profound and lasting societal impact and have influenced consumer behaviour. Research suggests that events, which appear uncertain and uncontrollable, with potentially “worst-case-scenario” impacts, heighten perceived risk (Burns et al., 2012). Consumer reaction to risk can drive innovation as is the case with the pandemic (Rowan & Galanakis, 2020). Unlike other motivating factors that lead to societal change, risk perception presents an interesting driver for innovation as it is dependent on personal characteristics, such as gender and age, confidence in risk managers, and inherent ability to cope with traumatic change (Cvetkovich et al., 2002). In the case of online food retailers, COVID-19 forced innovation on platforms that were in their infancy, driving retailers to adapt quickly to meet demand.

Research on food delivery apps has focused on new technology adoptions as driven by the theory of planned behavior (Belanche et al., 2020). There is evidence that suggests consumer behaviour is motivated by perceptions of security (Benson et al., 2015; Davison & Silence, 2010), and convenience (Yeo et al., 2017). Security of financial resources and personal identities in e-commerce have slowed innovations in food delivery apps. Trust is a major factor in e-commerce (Alalwan et al., 2015; Yeo et al., 2017) as is consumer perception of control (Chang, 2008). As well, understanding consumer lifestyles has driven much of the previous research on adoption of new
technology such as food delivery apps (Cho et al., 2019; Hwang & Kim, 2019; Leung & Chen, 2017; Nefike et al., 2020; Ray et al., 2019; Yang, 2013). Yet COVID-19 has impacted consumers’ lifestyles significantly, requiring them to change consumption habits while concurrently being forced to prioritize their personal safety with restrictive stay-at-home measures.

Before the pandemic, food delivery apps had mixed success. Overall, home delivery and mobile app penetration was high for goods and services (Liu et al., 2017), but although several companies had popular grocery brands in the sector, widespread adoption of online grocery delivery apps remained low (Singh & Rosengren, 2020). COVID-19 forced the food delivery sector to expand, companies acted as a third-party intermediary though app penetration, and now branded restaurants are entering the market out of necessity as strict social distancing has forced restaurants to offer easy delivery to remain competitive. Where once the business model of food delivery companies was grounded in the returns offered by the internet (Belanche et al., 2020), food delivery companies now find their competitive advantage in social isolation.

As the first wave of the pandemic ended in June 2020, Canadian scholars have not had a lot of time to conduct research on the rapidly changing situation in food retail and food service; there is not much Canada-specific research on consumer attitudes and behaviours towards food procurement during this global pandemic. As the pandemic is still ongoing, many articles contain preliminary observations on diverse aspects of the Canadian agriculture and food system, including food supply chains (Hobbs, 2020), and consumer food retail (Cavallo et al., 2020) and food service habits (Haas et al., 2020). To our knowledge, this research is unique, as data were collected during the height of the first wave of the pandemic across several months.

2. Methodology and results
This research was carried out through four cross-country surveys to explore the experience with and perceptions about food retail and food service during the COVID-19 pandemic in Canada. Due to the organization of the surveys, each set of responses represents a unique sample of Canadians. As such, the different survey responses could not be directly compiled for comparative analysis. However, the general trends exhibited in these surveys allow for some insights into the behaviours of Canadian consumers. Each survey was designed in line with media reports of consumer behaviour and the relevant literature that existed in the early days of the COVID-19 pandemic. Data for each online survey were collected by a third-party marketing research form, Angus Reid, using a bimonthly omnibus survey and proprietary sample and analyzed using the Qualtrics platform. The average response rate for each study is 84.4% and incomplete responses are not included in the analysis. Each study is weighted to the Canadian population by age and gender within region. All four study samples carry a margin of error of ± 3.1 percentage points, 19 times out of 20. Any discrepancies in or between totals are due to rounding. Ethical approval was granted (REB #:2020-5215) by Dalhousie University’s research ethics board in accordance with the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans. This policy governs all public research in Canada and has been developed using international ethics norms in the conduct of research involving humans, mitigating risk and harm.

First, early in the pandemic, March 13–15, a total of 1,014 Canadians were surveyed regarding their perceptions of stockpiling and health risks associated with bricks-and-mortar grocery shopping. Second, just over a month after the first COVID-19 survey, a total of 1,503 Canadians were surveyed on 30 April 2020. Respondents were asked about new grocery shopping habits caused by the pandemic, in addition to questions similar to those asked in March 2020. The results reflected the dramatic increase of cases of COVID-19 during late March and April 2020, and the strict lockdown imposed on much of Canada. Third, on 2 June 2020, we surveyed 1,505 Canadians to discover attitudes towards the restaurant and food services industry during the COVID-19 pandemic. Finally, towards the end of July 2020, we conducted a survey of 10,851 Canadians about telecommuting in relation to the restaurant and food service industry. A list of survey questions can be found in Table 1.
2.1. Stockpiling and risk perception in Canada in March 2020

Individuals were asked questions to determine their anxieties and actions regarding food sourcing during a global pandemic. 41% of respondents (n = 416) said the pandemic had made them stockpile food provisions. Manitoba had the highest percentage of respondents who indicated that COVID-19 led to purchasing extra provisions at 52% (n = 18) as seen in figure 1. Of these Canadians, 30% (n = 125) bought non-perishable dry and canned goods, while 24% bought frozen foods (n = 100). Only 15% purchased comfort food (n = 62). Also, 15% of respondents bought pet food (n = 62). Manitoba appears to have been the most active region for stockpiling provisions in response to the outbreak.

65% of respondents (n = 659) stated they were concerned about health risks when going to a grocery store. Ontarians were most concerned (n = 740), at 73%, while only 44% of Saskatchewanians (n = 446) had concerns, the lowest in the country; this reflects the relative population densities of the provinces, as well as the relative number of confirmed COVID-19 infections at the time (Government of Saskatchewan, 2020; Government of Ontario, 2020). Among those Canadians concerned about possible health risks in grocery stores, 57% were still buying groceries for themselves (n = 376), while only 5% had asked someone else to shop for them (n = 33). Only 3% of respondents (n = 20) were buying groceries online.

Canadians were asked about perceived health risks in restaurants and food service outlets. Shockingly, only 26% of respondents (n = 264) said they were concerned about going to a restaurant since the outbreak started. Of those concerned, 4% were opting to use food delivery apps more often (n = 11). Of those who were not concerned, 49% of individuals said they were more careful about which restaurants and food service outlets they frequent (n = 378). 25% of Canadians who were not concerned about potential health risks in food service had not changed their behaviours at all (n = 193).

This disparity between food retail and food service could reflect the fact that restaurants and fast-food outlets were not especially busy at the beginning of the pandemic. Also, on 15 March, several provincial governments had not yet ordered the closure of all dining rooms: Ontario and British Columbia, for example, announced the closures on 16 March. It could be argued that Canadians were less concerned about food service in the COVID-19 pandemic because Canadian governments had not told them to be concerned. Grocery stores, however, were very busy, with long lines and little social distancing, and the media were quick to provide coverage of panic buying, which just amplified fears among consumers about food supply (Deaton & Deaton, 2020; Hobbs, 2020).

2.2. Food retail and food service in Canada in April 2020

A total of 64% of respondents still shopped in grocery stores but not as often (n = 674), instead buying more at once. 12% of Canadians bought at least some food online (n = 126), an increase of 9% from just 7 weeks earlier. The Atlantic region had a rate higher than the national average at 17% (n = 179). The number of consumers buying all or most of their food online had tripled since the start of the COVID-19 pandemic (Goddard, 2020). The massive expansion in online grocery orders revealed that the online platforms were not prepared to handle an increase of orders (Hobbs, 2020), forcing food retailers to upgrade systems in a hurry. About 6% of consumers were asking someone else to go to the grocery store for them (n = 63).

81% of respondents who still did their own grocery shopping were now using extra hand sanitizer in grocery stores (n = 853) as shown in Figure 2. 42% were taking extra precautions and wiping down groceries with disinfectant wipes or soap and hot water when they got home (n = 442). Canadians were also wearing personal protective equipment to go grocery shopping: 30% of respondents (n = 316) wore a mask (with 10% using an N95 mask (n = 32)) and 26% wore gloves (n = 274). It is important to remember that while several grocery store chains mandated that customers wear masks in their stores, mask-wearing in public indoor retail spaces was not legally mandated anywhere in Canada at this time. A fairly significant portion of Canadians were
ahead of all levels of government in adopting masks as a preventive measure to stop the spread of COVID-19.

We asked Canadians about their awareness of safety procedures in food retail stores. 95% noticed plexiglass being used in food stores (n = 1000), by far the most noticeable new feature. Interestingly, considering most plexiglass installations were at checkouts, only 58% of Canadians noticed cashiers wearing masks (n = 611). These observations may reflect that not all grocery retailers had made non-medical masks or face coverings mandatory for employees. 91% of respondents (n = 958) noticed directional arrows had been added, both inside and outside the store. 90% (n = 948) noticed security in stores to keep the number of shoppers to the legal limit set by provincial/municipal authorities. During this survey, we also asked Canadians about compliance with new safety rules. Only 12% (n = 126) said that all shoppers are complying with new safety protocols, such as following directional arrows in grocery store aisles. 21% of respondents in Quebec (n = 48) believed that all consumers were following new safety protocols, while only 5% of Saskatchewanians (n = 11) believed their fellow residents were following the rules. Again, this may reflect the severity of the pandemic in each province or region of Canada.

We also asked Canadians about their intentions and attitudes toward food when the pandemic is over. 47% said they will cook more (n = 495), versus 17% who said they will visit restaurants more often than before the pandemic (n = 179). 9% of respondents said they intend to order food online more (n = 95), up from less than 2% prior to the pandemic (n = 21). 6% said they will use food delivery apps more often (n = 63).

Interestingly, these findings are not unique to Canadians: in parts of the United States, consumer behaviour matches that observed in Canada. In a survey conducted of 2,500 American adults from April to May 2020 that examined consumer retail grocery shopping behaviour during the pandemic, this time period saw a significant increase in COVID-19 cases in the United States (Y. Y. Wang et al., 2020). The survey revealed changes in behaviour when shopping in-store, and in how Americans shopped for groceries, with the growth of online grocery order-and-deliver platforms. Notable results indicated a decrease in the frequency of grocery shopping trips, a change in typical shopping times, and an increase in grocery spending compared to before the pandemic; all of these trends were seen in Canada in March and April 2020. For online grocery purchases, the survey noted a preference for door-step delivery over curbside pick-up. Grashuis et al. (2020) focused on grocery shopping preferences during the pandemic. Using a sample of 900 American grocery shoppers, they conducted an online choice experiment where respondents were asked about their preferences for 12 different scenarios. The results of the experiment indicated a link to the consumer’s environment: consumers in areas with increasing COVID-19 cases expressed a preference for online grocery purchase methods, whereas those in areas with decreasing cases did not have as strong a preference. It would be of interest to conduct the same choice experiment survey across Canada to acquire more region-specific detailed data, to compare how public perceptions about safety align with actual COVID-19 infection numbers.

2.3. Consumer pandemic responses to restaurants and food service outlets in June 2020
While the public health orders limited restaurants and food service outlets to take-out and delivery during the fall of 2020 in most of Canada, many food service locations still remained completely shut, making the future of the entire industry uncertain. Such a position was unimaginable the year prior to the pandemic: “the food service sector has been growing considerably, taking food market share away from food retailing” (Goddard, 2020, p. 260), with 30% of every food dollar spent in Canada going to restaurants and food service establishments (Goddard, 2020).

52% of respondents said they plan to avoid eating at restaurants out of concern for their health (n = 783). 26% of these individuals state that the physical layout of a restaurant prompted these health concerns (n = 204). 10% will avoid restaurants and food service outlets due to reputations for food safety (n = 20). 22% who plan to avoid restaurants do so for an undisclosed reason
(n = 172). At 56% (n = 95), British Columbia has the highest rate of respondents who intend to avoid restaurants due to public health concerns while Saskatchewan, at 37%, has the lowest (n = 28).

Survey participants were also asked when they intended to eat in a restaurant. 33% of Canadians plan to wait until the second COVID-19 wave is over (n = 497), while only 18% intend to visit a restaurant as soon as they are able (n = 271). 38% intended to go sometime over the summer of 2020 (n = 572). Ontarians are most concerned about a second wave, with 43% indicating they will wait to visit restaurants until the wave has passed (n = 227). 64% of respondents intend to visit an independent restaurant on their first outing (n = 963). These results represent a significant shift from the beginning of the pandemic, when only 26% of respondents had health concerns about frequenting restaurants during a pandemic (n = 391).

However, Canadians did not wholly abandon restaurants and food service: 62% of respondents have ordered take-out and/or delivery food from a restaurant at least once every two weeks (n = 963) as shown in Figure 3. Saskatchewan has the highest rate of respondents who ordered take-out food during the pandemic (n = 57), at 76%. 59% of individuals stated they had ordered repeatedly from their favourite restaurant (n = 888), while 17% reported that their favourite restaurant is still closed or has closed permanently (n = 256). A total of 81% of respondents between the ages of 18 and 34 had ordered from restaurants (n = 77), which is the highest rate among age groups. Finally, survey participants were asked what they missed most about eating and drinking outside the home. The majority (n = 557), at 37%, said they are enjoying time with friends and family at restaurants, 22% just missing being outside of the house (n = 331), while only 15% of respondents do not miss going out to restaurants (n = 226).

2.4. Impacts of telecommuting on restaurants and food service outlets, July 2020
First, 23.6% of Canadians intend to work more often from home a year from now (n = 2561), although many (n = 1997) either don’t know (18.4%) or won’t know (22%) what they will do a year from now (n = 2387). Quebec has the highest percentage, with 28.9% of respondents saying they want to work more often from home (n = 659). Ontario is second at 24.8% (n = 1076). Millennials (1981–1996) have the highest percentage with 25.3% (n = 659). Of the group who said yes, 20.6% said they would work from home on a full-time basis (n = 537). Again, of the people who intend to work from home, 57% plan to spend less at restaurants because of working from home (n = 1460). Ontario has the highest rate at 59% (n = 2561). A total of 36.4% of respondents admitted they enjoyed working from home more than expected prior to the pandemic (n = 3950). The highest satisfaction rate was measured in Quebec, at 38.5% (n = 877).

Prior to the pandemic, 36.8% of respondents were going to a restaurant for a meal/break at least twice a week (n = 3993). When asked about plans after the pandemic is over, which number drops to 23.3% (n = 2528)—a significant decline of 36.6%. However, numbers show that more people are willing to visit a restaurant once a week after the pandemic (76.7% (n = 8322) versus 63.2% (n = 6858) for before).

3. Discussion
The financial impact of COVID-19 on the food industry is significant as more people work from home and potentially outside urban cores (Music et al., 2022). Before the pandemic, the food retail/service ratio stood at 59/41. Monthly food retail sales in Canada were approximately $7.7B, versus $5.3B for food service (Statistics Canada, 2020f). In May 2020, the last month before restaurants started to re-open, the ratio went to 91/9, with food retail generating $7.8B in sales in May 2020 versus $891 M in food service. Lower aggregate numbers in the spring may be due to overstocking in the early days of the pandemic. Based on numbers generated by our survey and sales, the retail/service ratio was roughly 70/30 by July 2021. This represents a loss of up to $20B over the entire year for the hospitality industry. As more people stay home and telecommute there is a notable shift in the economy. The change in work location may be responsible for at least 30% of
lost sales in food service for this coming year alone. Restaurants located in urban cores across the country will be affected the most.

COVID-19 is particularly challenging for the restaurant industry. Thousands of restaurants were forced to cease operations, never to reopen. Early indications from other countries similar to Canada, where the pandemic is reasonably under control, suggest consumers are reluctant to return to pre-pandemic spending in restaurants once gathering restrictions are lifted (Howe et al., 2021). Of course, the pandemic’s economic toll on the restaurant industry has not been felt uniformly across different dining establishments (Abebe et al., 2022). Restaurants that were easily able to utilize or switch to take-out and delivery using online apps have maintained or increased sales during the pandemic (MacLeod, 2021), while casual-dining and fine-dining restaurants have seen their revenues decline significantly (MacLeod, 2021). Restaurant performance during the pandemic is partially due to consumers working from home and is one of the most significant causes in the decline of restaurant and food services industry. Many white-collar positions were able to relocate from the office to the home, resulting in a significant number of people telecommuting (Music et al., 2022). Restaurants that relied on customers who stopped in for breakfast or coffee during their commute or stepped out for lunch while at the office have been disproportionately economically impacted (Ho, 2020). A strong online-ordering presence, digital loyalty programs, and user-friendly ordering systems have been vital to success during the pandemic, not only for restaurants but also for grocery retailers, as levels of online engagement among consumers have increased significantly.

Our findings have demonstrated a need for innovation in the food retailing and service sector. First, e-commerce at the grocery store suggests that consumers are prioritizing personal safety through purchasing method and are willing to pay a higher price for such. However, consumers that are economically disadvantaged may be taking on more risk as indeed household food insecurity has risen to 14.3% since the start of the pandemic (McNicoll & Curtis, 2020). As the COVID-19 pandemic continues, we expect to see significant differences in the food retail preferences among regions with divergent rates of the disease. Preferences for curbside pick-up, third-party delivery, and in-store retail may differ significantly across the scenarios (Grashuis et al., 2020). It is unclear to what extent consumers will return to pre-pandemic levels of comfort in terms of fear of contagion by COVID-19 or another virus. Food retailers should use this opportunity to create a shopping experience that meets the needs of the entire consumer base, those who return to in-store shopping and those that do not.

4. Conclusion
The data from these four short consumer surveys demonstrate how attitudes rapidly changed over the course of four months as Canadians reacted to guidelines from the federal, provincial, and municipal health agencies and the rise and fall of COVID-19 infections in Canada. Before the virus’s symptoms, routes of infection, and seriousness were understood, Canadians adjusted their behaviour to protect themselves and their families. Social distancing and isolation became the norm, resulting in broad changes to consumer food purchasing.

The COVID-19 pandemic has had an undeniable impact on the way Canadians purchase food. Preliminary survey findings suggest that purchasing behaviour has shifted to further allow for online purchases, while simultaneously decreasing order frequency and increasing order size. The surveys presented in this paper reflect short-term changes in consumer behaviour. However, the nature of the surveys did not permit understanding of temporal comparisons of behaviour. Additional research is needed to determine how long-term behavioural shifts, with comparisons between pre-pandemic and mid-pandemic, and eventually post-pandemic, behaviours will impact the food retail and food service industries. Furthermore, due to the differences in policies among the provinces and territories of Canada, it may be of interest to conduct local surveys to contrast provincial/territorial behaviours and experiences to national ones. Finally, there may be further changes in consumer behaviour as Canada prepares to reopen to the “new normal” amidst COVID-19.
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