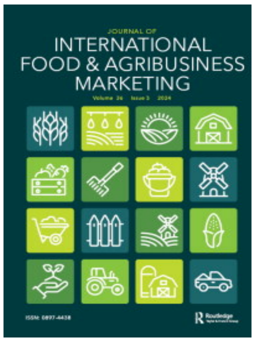

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Archana Kumar & Antoinette Pole

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Grocery Shopping and Food Preferences: The Long and Winding Road of the COVID-19 Pandemic

Archana Kumar[a] and Antoinette Pole[b]

[a]Department of Marketing, Montclair State University, Montclair, NJ, USA; [b]Department of Political Science and Law, Montclair State University, Montclair, NJ, USA

ABSTRACT
The COVID-19 pandemic compelled many consumers to adapt their grocery shopping, food preferences, and consumption behaviors. Based on 18 in-depth interviews with adults in the United States, this study uses a liminality framework to explore how the pandemic altered these behaviors. It also seeks to assess whether individuals have reverted to pre-pandemic consumption behaviors. Results show the mode of grocery shopping shifted; the frequency of grocery shopping declined; and the quantity of food increased in the initial stages of the pandemic with more people remaining home. By summer 2022, more individuals had shifted to online grocery shopping from shopping in-person, a departure from their pre-pandemic behavior. Findings also indicate the frequency of shopping largely mirrors pre-pandemic levels, though the quantity of groceries purchased has declined. Finally, the decline in food purchases is accompanied by increased spending on groceries in all phases of the pandemic.

KEYWORDS
Consumption behavior; food preferences; grocery shopping; liminality; pandemic

The detection of a novel coronavirus in February 2020 ushered in a global pandemic with news headlines reporting dire consequences such as, "U.S. Reports Nearly 50,000 New Coronavirus Cases, Another Single-Day Record" (U.S. Reports Nearly 50,000 New Coronavirus Cases, Another Single-Day Record, 2020) and "Pandemic to Cost U.S. Economy $7.9 Trillion Over 10 Years" (Pandemic to Cost U.S., 2020). Lockdowns and shelter-in-place orders disrupted daily routines, resulting in social distancing, working and attending school remotely, and minimizing activities with others to avoid becoming infected with the virus. Juxtaposed to these grim headlines and government mandates, even mundane activities such as grocery shopping and food consumption were altered, sometimes willingly other times not. The novel coronavirus was characterized by an extended period of uncertainty and fear among the general public. Non-linear societal changes such as masking, vaccinating, phased re-openings, and breakthrough transmissions forced consumers to modify their behavior with both minimal and

CONTACT Archana Kumar kumara@montclair.edu Department of Marketing, Montclair State University, Montclair, NJ, USA

substantial adaptations. By late 2020 news headlines such as “Grocery Sales and Takeout Tacos Do Well as the Pandemic Drags on” (Creswell, 2020) and “Yes, Many of Us Are Stress-Eating and Gaining Weight in the Pandemic” (O’Connor, 2020), illustrate how the food industry and consumption behavior remained in flux as the virus continued to mutate. While the virus’s outbreak occurred early in 2020, experts were unable to predict its capricious trajectory even with the introduction of vaccines in 2021, and boosters in 2022.

Approaches to the unprecedented events of the COVID-19 pandemic varied globally though some similarities emerged. Individuals in many parts of the United States pivoted to ordering groceries online, cooking meals at home, and trying new recipes. As the media and government reported new information about the evolving virus, consumers concomitantly adapted their shopping and consumption behaviors. Supply chain disruptions, un- and underemployment, and rising food prices—hallmarks of the pandemic—impacted both food shopping and consumer preferences (Chenarides, Grebitus, Lusk, & Printezis, 2021; Rha, Lee, Nam, & Yoon, 2021). Infection and vaccination rates, along with new strains of the virus created unexpected disruptions that varied in duration and intensity. Historically during periods of crises, be it natural disasters, war, or economic downturns individuals have turned to consumption to offer stability (Kennett-Hensel, Sneath, & Lacey, 2012). With seemingly unlimited time, creative home-cooked meals with household members filled the void of restaurant meals, which in turn led to more grocery purchases. Fears associated with contracting the virus led many people to adopt more mindful eating habits, while others sought comfort in a pint of ice-cream or an alcoholic beverage.

During this period of uncertainty, consumption helped many individuals to cope, offered stability, comfort, and an escape from reality while simultaneously upending consumption through supply chain disruptions, restaurant closures, and rising prices. Adopting a liminality framework, we segment the pandemic into three phases to study how grocery shopping and food consumption behaviors were modified out of necessity and as a coping mechanism. To evaluate these non-linear consumer behaviors, we seek to understand whether consumer changes arising from the pandemic are a temporary or permanent feature by conducting 18 in-depth interviews in two US states. Though many studies (Fuentes, Samsioe, & Östrup Backe, 2022; Gordon-Wilson, 2021; Güney & Sangün, 2021; Hassen, El Bilali, Allahyari, Berjan, & Fotina, 2021; Marinković & Lazarević, 2021; Rha et al., 2021) of grocery shopping and food consumption chronicle consumer behavior in Europe and Asia, there are few studies that investigate this behavior in the US, and a limited number of studies that examine consumer behavior especially later in the pandemic. Obtaining a better understanding of consumer behavior during the COVID-19 pandemic can assist scholars and food industry experts better prepare for future pandemics and crises.

Grocery shopping, spending, consumer preferences

A fundamental need of humankind is bringing food to the table, and grocery shopping is a means to this end. Demographics such as gender, education, and income along with external factors including the economy, store location, the type of shopping (primary versus refill), and other situational factors influence how, when, and where individuals shop for groceries. Several studies provide insight regarding the factors that influence consumers' grocery shopping experiences (Bawa & Ghosh, 1999; Whaley, Hur, & Kim, 2019; Wilde & Parry, 2022). Grocery shopping reinforces traditional family roles, wherein household labor is shouldered by women more than men, even today (Wilde & Parry, 2022). This extends to decisions about what to cook and purchase, contributing to their mental and physical load, which potentially was exacerbated during the pandemic. Household characteristics such as income, family size, and home ownership impact grocery shopping frequency and expenditures as well as how often grocery shopping occurs. Shopping frequency increases with a larger family size, higher income, and consumers aged 55 and older (Bawa & Ghosh, 1999).

While in-person grocery shopping was preferred by most consumers in the US prior to 2020, online grocery shopping had been growing in popularity for some time. In 2019, online grocery purchases accounted for 3.4% of total US grocery sales (Redman, 2020), and by 2022 it increased to 11.1% of total US grocery sales (Arcieri, 2022). Although the advent of the pandemic accelerated online grocery shopping, online sales during this period exceeded analysts' predictions. Online grocery shoppers tend be younger (less than 40 years of age), highly educated, upper income, and consist of households with children (Duffy, Lo, Hall, Taillie, & Ng, 2022). According to Whaley et al. (2019) while both genders shop in-person, online shopping is preferred by men, whereas adults aged 40 and older prefer grocery shopping in-person. During the pandemic however, online grocery services may have been adopted not due to its inherent usefulness but rather because consumers had few viable alternatives (Tyrväinen & Karjaluoto, 2022). Given the prevalence of online grocery shopping, we consider whether food shopping changed during different points of the pandemic, while using pre-pandemic grocery shopping as a benchmark.

Whether grocery shopping in-person or online, American consumers tend to focus on the price point of items they place in their grocery carts.

A subset of consumers however, do prefer organic products which are typically more expensive than conventional ones. In 2019, one-third of grocery shoppers indicated that at least half of their grocery shopping consisted of organic products (Kitchen Stories, 2019). Consumer demand for organic products in the US has continued to grow, and by 2019 organic food sales comprised 6% of total food sales. With the advent of the pandemic, this number rose to 10% by 2020 while sales declined to 7.7% in 2021; still this exceeds pre-pandemic sales (Crawford, 2022). Regardless of whether or not consumers select organic items, one report indicates that Americans are selecting healthier food options since the pandemic with an increased in-take of fruits and vegetables, and decreased meat and junk food consumption (Bourgue, 2022). This is an unexpected, yet positive consequence of the pandemic. Consumer preferences for natural and organic items has been growing and this research assesses how these preferences varied during different points of the pandemic.

Consumer behavior and the COVID-19 pandemic

Studies have emerged about how the pandemic has impacted food shopping, and consumption behaviors around the world with emphasis on the beginning of the pandemic when lockdowns were commonplace. These studies demonstrate varied responses to the pandemic on a continuum from most to least risk averse with adaptations to food shopping and consumption behaviors.

Chenarides et al. (2021) investigate food shopping behaviors and consumption in two US cities during the early stages of the pandemic. Findings show consumers avoided shopping for groceries in-person, used delivery services, and took advantage of curbside pick-up. As expected, consumers purchased more groceries than usual due to lockdowns and restaurant closures with more than half of respondents noting that they engaged in stockpiling and restocking their food supplies. Further, while consumers might have preferred one brand to another, they reported purchasing what was available. Respondents also said they went grocery shopping less frequently (Chenarides et al., 2021). While in-person grocery shopping remained prevalent during the pandemic in the US, a hybrid approach to grocery shopping—both in-person and online groceries—also appears to have gained traction (Ellison, Ocepek, & Kalaitzandonakes, 2022). Further demonstrating aversion to risk, Fuentes et al. (2022) study of Swedish households illustrates how consumers moved to online grocery shopping during the pandemic to avoid infection, and spreading the virus to others. This was an especially popular mode of shopping among older individuals, and those with preexisting medical conditions. Still, while there were many online grocery options in urban areas this was not the case for rural areas and small towns (Fuentes et al., 2022). A study of Serbian consumers demonstrates significant differences in food shopping habits. Respondents indicated that during the pandemic they spent less time in stores, tried to shop in fewer stores, and took safety precautions while food shopping (Marinković & Lazarević, 2021). A preference for discount and local grocery stores, along with a strong preference for cooking at home was reported by Turkish consumers. While these consumers purchased groceries online, this was not the preferred mode (Güney & Sangün, 2021). Finally Hassen et al. (2021) sample of Russian consumers reveals that 70% of respondents shopped with the same frequency as they did prior to the pandemic, and 58% of respondents never shopped for groceries online. More than two-thirds of respondents purchased the same amount of food as prior to the pandemic. These findings illustrate low risk aversion compared to the previously mentioned studies (Hassen et al., 2021).

Examination of the types of food consumers purchased during the pandemic was undertaken in a few studies. Güney & Sangün (2021) note a positive relationship between natural and organic foods and consumption preferences and behavior, while Hassen et al. (2021) highlight how respondents purchased nonperishable items more frequently, ate out less frequently, and ordered take-out less frequently. A mixed methods study that examined food consumption in English households compared "pre-lockdown" behaviors with "lockdown" and "post-lockdown" behaviors. Respondents reported shopping for food once a week with a smaller trip to top-off larger trips. According to this study interest in local food grew during the pandemic because it was perceived as being fresher, while interest in organic and free trade remained the same. The authors find cooking meals at home and healthier eating has become the norm following lockdowns, while some consumers were hesitant about eating out even after the restrictions were lifted (Ellison et al., 2022; Filimonau, Vi, Beer, & Ermolaev, 2022). Based on these studies we examine consumers' food choices and the frequency of grocery shopping during various points of the pandemic.

Several mediating factors merit mentioning to further contextualize grocery shopping and consumer behavior during the COVID-19 pandemic. The pandemic ushered in global economic instability ranging from supply chain disruptions to job losses coupled with high inflation (Edwards, Essien, & Levinstein, 2022). With inflation leading to higher food prices, US consumers frequented grocery stores less often than pre-pandemic grocery trips, selected store brands, and bought groceries in bulk (Sheffield, 2022). Scholdra, Wichmann, Eisenbeiss, & Reinartz (2022) show that losses in income led to declines in grocery expenditures with fewer groceries purchased. Several studies reported increased grocery prices coupled with the loss of jobs (Güney & Sangün, 2021; Hassen et al., 2021; Marinković

& Lazarević, 2021) altering grocery shopping behavior and food consumption to adjust and compensate for these factors. We suspect economic instability and high grocery prices led consumers to modify how much they spent on groceries. As such we provide a narrative that explains how consumers dealt with high food prices and plethora of unknowns using in-depth interviews.

Liminality framework

The COVID-19 pandemic created periods of uncertainty, disruptions to daily routines, and transformed the collective lives of millions of people. We use the liminality framework to better understand how individuals navigated grocery shopping, food preferences, and consumption. Liminality marks periods of uncertainty, in which "boundaries between time and space in relationships, social roles and contexts" are largely undefined (Hicks & Lloyd, 2022). Anthropologist van Gennep (1960) theorized individuals experience liminality across three stages: separation (individuals become disconnected); transition (individuals are between social roles/life stages); and reincorporation (new relationships and positions have been established) (Kennett-Hensel et al., 2012). Applying the liminality framework to the pandemic (Table 1), we overlay van Gennep (1960) three stages as follows: Phase 1 (separation), Phase 2 (transition), and Phase 3 (reincorporation). Phase 1 is characterized by lockdowns, no vaccines, social distancing, and heightened uncertainty during which time individuals experienced disconnection and separation from their previous identities. Phase 2 is marked by the introduction of vaccines in which transitional behavior is underlined. For example, some individuals remained masked, or avoided restaurants altogether whereas others opted not to mask and dined inside restaurants. The identities of individuals remained in flux, vacillating between Phase 1 and their pre-pandemic self. Finally, Phase 3 marks a return to normal synonymous with pre-pandemic behaviors, or establishing new behaviors—a form of reincorporation. In this last phase, individuals' identities may have crossed the liminal boundaries of time, thereby establishing new behaviors. The data for this

Table 1. Phases of the pandemic and the corresponding stages of liminality.

Timeframe		Description	Liminality
Pre-Pandemic	Prior to March 2020	No COVID	—
Phase 1	March 2020 - May 2021	COVID, pre-vaccines, social distancing, closures	Separation
Phase 2	May 2021 - August 2022	COVID, vaccines, masks, resuming some normal activities	Transitional
Phase 3	Post August 2022	COVID, boosters, fewer masking requirements, returning to normal	Reincorporation

study emphasizes consumer experiences during Phase 1 (separation), and Phase 2 (transition) with the data collected on the cusp of Phase 3 (reincorporation).

Scholars of consumer studies have incorporated the liminality framework in their work (Darveau & Cheikh-Ammar, 2021). Kennett-Hensel et al. (2012) and Pavia & Mason (2004) suggest that obtaining material possessions can provide individuals with a sense of identity during turbulent times and serve as a stabilizing force during a crisis, helping individuals navigate ambiguous circumstances. According to the theory of liminal consumption, individuals engage in behaviors to overcome liminality to reduce their discomfort (Cody & Lawlor, 2011) and mitigate negative feelings of ambiguity (Noble & Walker, 1997) through consumption. In Johnstone & Todd (2012) study, stay-at-home mothers found a temporary reprieve from their domestic duties by frequenting retail spaces, which provided a venue for consumption that eased transitional phases. These venues helped mothers "temporarily leave their domestic responsibilities behind and to connect with their previous self-identity. The retail environment, as well as providing an escape, also offered a sense of continuity" (Johnstone & Todd, 2012, p. 450).

We apply conceptions of liminality to grocery shopping, food preferences, and consumption behavior. Grocery shopping as a retail venue (Johnstone & Todd, 2012) potentially offered some stability and normalcy for consumers during the pandemic. Opportunities to mitigate liminality also included as eating together as a family (Voola, Voola, Wyllie, Carlson, & Sridharan, 2018), which led to more meals cooked at home and therefore more groceries purchased. Since many states in the US asked individuals to shelter-in-place, cooking and eating with household members was commonplace and may have eased uncertainty.

Research questions

Several studies investigate food shopping during the pandemic (Chenarides et al., 2021; Ellison et al., 2022; Fuentes et al., 2022; Güney & Sangün, 2021; Hassen et al., 2021; Marinković & Lazarević, 2021) yet few offer in-depth qualitative analysis of grocery shopping, food preferences, and consumption behavior in the US. Our research explores how the pandemic altered grocery shopping, food preferences, and consumption behavior using the liminality framework. Building on Chenarides et al. (2021) research we compare pre-pandemic to pandemic preferences and behaviors asking the following questions:

RQ1: During the pandemic, what were the grocery shopping, food preferences, and consumption behaviors in the separation (Phase 1), and transitional (Phase 2) stages?

RQ2: How did individuals use grocery shopping, food preferences, and consumption as a mechanism to navigate the uncertainty associated with the pandemic?

RQ3: Have the behaviors associated with grocery shopping, food preferences, and consumption led to temporary or permanent changes as individuals approach the reincorporation (Phase 3) stage?

Significance

Few studies of grocery shopping, food preferences, and consumption behavior exist that provide a detailed narrative of how behavior changed during the various phases of the pandemic. We propose to fill this gap by expanding on Gordon-Wilson's (2021) study of food purchasing and consumption based on 13 in-depth interviews conducted with consumers from the United Kingdom in May 2020. We build on this study conducting 18 in-depth interviews later in the pandemic, which offered interviewees an opportunity to reflect about their approaches to grocery shopping, food preferences, and consumption during various points of the pandemic, compared to their pre-pandemic approaches. Interviews allow us to ask detailed questions exploring how and why respondents engaged in these behaviors, which cannot be asked through surveys. Drawing on the work of Fuentes et al. (2022) we attempt to understand how consumer behavior changed around food shopping and consumption with a pandemic marked by uncertainty. By encouraging interviewees to reflect on their experiences in summer 2022 the data offer insight as to how these behaviors evolved, underpinning the liminality framework. This study will help retailers, specialty food purveyors, and farmers develop strategies to reach a range of consumers in what appears to be the endemic stage of the pandemic.

Methods

Research design

As the pandemic unfurled the federal government sought to manage a global pandemic, while states tailored their interventions at the local level. To collect data for this exploratory and descriptive study we conducted in-depth interviews with individuals in New York and Texas using a "most different design," (Przeworski & Teune, 1970) with the expectation that our results would differ between the states. These particular states were selected because their approaches to managing the pandemic differed, and we expected grocery shopping and consumption behaviors to vary. New York initially implemented a range of mandates including staying at home, masking, and social distancing. After the introduction of vaccines, some restrictions were eased depending upon a locale's population density, and

COVID-19 transmission rates. By contrast, there were fewer restrictions in Texas, and again mandates varied by locality. Coinciding with the introduction of vaccines, in March 2021 Texas was one of the first states to lift mask mandates, whereas New York did not lift mask mandates until February 2022. Selecting respondents from two states with different approaches to containing the spread of the virus may yield different perspectives.

Data collection

This study—approved by Montclair State University's Institutional Review Board—relies upon a combined purposive-convenience sampling approach to identify individuals who grocery shopped and made decisions about meals in their household during the pandemic (Patton, 2002). Four screening questions were used to determine the eligibility of participants. These questions included: (1) Are you 18 years of age?, (2) Do you reside in New York or Texas?, (3) Have you lived in this state since March 2020?, and (4) Do you shop for groceries, and are you one of the primary decision makers about meals for your household?

To gather a convenience sample, participants were recruited through social media and email between May and August 2022. Approximately twice a week we posted a solicitation for participants on social media, and we asked our networks to share our call. Initially the convenience sample yielded a homogenous pool of respondents across age and political identification, hence the call was amended to recruit a more diverse sample. A $10 Amazon gift card was used to incentivize participation.

The interview instrument consisted of a total of 67 open and closed-ended questions designed to evaluate behavior related to grocery shopping, food preferences, and consumption. The instrument was composed of the following sections: food shopping; the types of food purchased; cooking and baking; consumption practices; views on the pandemic; and demographics. We conducted structured interviews and recorded them via Zoom, which averaged 90 minutes. Interviews ceased once we began to hear similar responses and reached theoretical saturation (Glaser & Strauss, 1967), which occurred with 18 interviews.

To improve recall, we invited interviewees to keep a food diary for three days and/or to photograph their meals. We also asked interviewees to take pictures of the food in their shopping carts, or after they unloaded their groceries upon arrival to their home. Interviewees were asked to save their grocery receipts from the previous one to two weeks. During the interviews respondents were prompted to look at these visual aids to assist in answering questions.

Data analysis

When conducting interviews we used the transcription feature on Zoom. The video and transcripts were content analyzed by a graduate assistant, and the authors. Data based on grounded theory is not predicated on generalizability, but rather the generation of theory (Glaser & Strauss, 1967). The authors identified the major themes and categories, and a graduate and an undergraduate student coded the transcripts into the identified categories. This was reviewed and verified by the authors. We created the following schema to code the transcripts: (1) mode of food shopping (online, curbside pick-up, in-person), and frequency; (2) food retailers (local, regional, national chains), specialty markets (butcher, bakery, fish, ethnic markets), and alternative food networks (Community Supported Agriculture (CSA), food co-operatives, and farmers markets); (3) types of food purchased (whole foods, minimally processed foods, processed foods), and production/cultivation methods (conventional, organic, local); (4) quantity of food consumed, and location of consumption (home or restaurant); (5) spending on groceries; (6) demographics (gender, age, education, occupation). The categories were then quantified to obtain descriptive statistics. We also tracked each respondent's data across relevant variables to gain an understanding of their behaviors across time during the three phases. For example, among respondents who indicated purchasing fewer groceries we cross-referenced this with the question on eating out to see whether purchasing fewer groceries was consistent with eating out more often.

Findings

To contextualize the findings of grocery shopping, food preferences and consumption behavior during the three phases outlined in this study, we provide socio-demographic characteristics. Table 2 illustrates the demographic profile of the sample. The sample consisted of four men, and 14 women ranging from 23 to 70 years of age. A majority of respondents consist of well-educated, higher-income households, who are employed full-time. Sixteen interviewees identified as white, and four interviewees identified as Hispanic or Latino.

We asked interviewees to rate their concern about contracting COVID or a family member contracting COVID on a scale from 1 to 100, 1 being "not at all concerned" and 100 being "very concerned." Fifteen interviewees rated their concern to be more than 80 in Phase 1, whereas by Phase 2 the level of concern dropped to less than 50 for just over half of interviewees. These well-educated interviewees likely display a high degree of trust in vaccines. When asked whether or not they believed the pandemic

Table 2. Demographic profile of interviewees.

Variable	Sample (%) ($n = 18$)
Gender	
Male	22% (4)
Female	78% (14)
Age	
30-39	22% (4)
40-49	11% (2)
50-59	39% (7)
60-69	17% (3)
70 ≥	11% (2)
Race*	
White	89% (16)
Native American	17% (3)
Hispanic	
Yes	22% (4)
No	78% (14)
Education	
High school	11% (2)
Bachelor's degree	44% (8)
Master's degree or higher	44% (8)
Employment Status	
Full-time	67% (12)
Part-time	6% (1)
Unemployed	17% (3)
Retired	6% (1)
Student	6% (1)
Household Size	
1-3	83% (15)
4-5	17% (3)
Annual Household Income	
$50,000 - $99,999	22% (4)
$100,000 - $149,000	50% (9)
$150,000 ≥	28% (5)

Note: * Respondents were able to choose more than one race, hence the total exceeds 18.

was a permanent feature, all respondents said yes. Interviewees reported that they believe COVID eventually would become akin to the common cold or flu.

To mitigate the spread of infection federal and state guidelines recommended individuals mask, social distance, and vaccinate. Findings show 16 out of 18 interviewees masked while grocery shopping during Phase 1, consistent with the Centers for Disease Control (CDC) guidelines. After vaccines were widely available in Phase 2 seven interviewees indicated that they continued to mask while grocery shopping, most of whom lived in New York. A small percentage of interviewees noted that they were sometimes masked in Phase 2 depending on the time of the day they went grocery shopping, or COVID transmission rates.

Interviewees also were asked whether or not they faced any major life events between March 2020 and August 2022 to assess whether grocery shopping, food preferences and consumption behaviors changed due to the pandemic or other life events. Nearly two-fifths of interviewees reported a job loss or a change in their job, a disruptive event that might have led to food and lifestyle changes. Although five interviewees continued to work in-person at the height of the pandemic, more than half of the respondents were asked to work remotely, which likely led to more individuals eating at home. According to Voola et al. (2018) shared meals together likely eased liminal periods of separation. Four respondents reported an additional household member at some point during the pandemic potentially contributing to shifts in grocery shopping, and consumer preferences and consumption.

Mode and frequency of food shopping

Results show that prior to the pandemic a majority of respondents were primarily shopping for groceries in-person and a small percentage of individuals shopped online (Table 3). During Phase 1 of the pandemic many respondents shifted to online grocery shopping and curbside pick-up. Underling this one interviewee said, “We did start online curbside shopping with the pandemic because it was free. Before the pandemic, you had to pay probably an extra 5 bucks for online shopping and now, I think we would continue as long as it is still free.” Initially motivated to shop online due to the pandemic one enthusiastic respondent’s view of online grocery shopping highlights behavioral change as follows,

> I will never go grocery shopping again if I can avoid it. I do not like to go to the grocery store. It is time consuming, you also buy a lot more stuff when there…I love the ability that I can put it in [my online shopping cart] and it gets delivered. I will say though, there is a drawback because if you are in the store, you will know when an item is out of stock, and sometimes online doesn’t notify you until it reaches my porch.

Respondents who shopped online or opted for curbside pick-up during the pandemic stated that they used retailers such as Walmart, and H-E-B (a regional chain based in Texas), or an intermediary such as Fresh Direct or Instacart. These findings are consistent with other studies that show some consumers pivoted to online grocery shopping during the pandemic (Bracale & Vaccaro, 2020; Fuentes et al., 2022; Grashuis, Skevas, & Segovia, 2020). Some respondents reported shopping for groceries online due to health and safety concerns, however a few interviewees admitted that they did not plan to use this mode in the future.

Table 3. Grocery shopping by frequency and mode across time.

Mode of Shopping	Pre-Pandemic	Phase 1	Phase 2
Shopping in-person	94% (17)	50% (9)	72% (13)
Shopping online	22% (4)	33% (6)	28% (5)
Curbside pick-up	–	28% (5)	22% (4)

Notes: The total count for each column may exceed 18 since respondents potentially shopped both in-person and online.

Although online grocery shopping and curbside pick-up offer conveniences such as allowing users to create grocery lists and collecting their groceries during a specified time, most interviewees preferred to shop in-person. According to one respondent, "I really like grocery shopping, so I am not a huge fan of online grocery shopping." Still another interviewee said, "I don't particularly want somebody else touching all my stuff [who] I don't know." Further illustrating their commitment to grocery shopping in-person an interviewee explained,

> I still don't trust it [online grocery shopping] to be honest. I don't trust them. I like to inspect produce. If it's an item like cereal, a box of cereal is a box of cereal, it's a pretty standardized product. But with produce, what my fruit looks like, what my meat looks like, I'm checking every egg in the carton to make sure it's not smashed. I feel more comfortable having control over that. I have done a Fresh Direct order once or twice in my life. I still want control over that. I want control over the cost of prices.

Similar to stay-at-home mothers who frequented retail spaces as a reprieve from their domestic duties, in-person grocery shopping during the separation stage might have offered an escape from the confines of home for respondents (Johnstone & Todd, 2012). Akin to the experiences of online shopping, curbside pick-up did not afford shoppers the same affordances as in-person grocery shopping. While studies of Russian (Hassen et al., 2021) and Turkish (Güney & Sangün, 2021) consumers show most individuals did not use online grocery services during the pandemic, studies of Italian, Swedish, and American consumers (Bracale & Vaccaro, 2020; Fuentes et al., 2022; Grashuis et al., 2020) demonstrate how online groceries were preferred early on in the pandemic. Underlining the preference for in-person grocery shopping despite the potential risks an interviewee explained,

> So my husband took over the shopping because he's a bulk shopper in general, and to be quite honest, we were all really, really terrified of COVID probably more terrified I would say than your average person at the time. My husband would double mask. I think he might have even worn gloves. He would come in the garage and we'd leave everything out there. Wipe it all down with the Clorox wipes. I think he would change his clothes too.

These safety approaches were not uncommon, occurring in many other countries. Other studies illustrate how respondents used disinfectants and masks in stores, and practiced social distancing in various countries (Fuentes et al., 2022; Marinković & Lazarević, 2021).

We tracked respondents' behavior to evaluate whether or not the mode and frequency of grocery shopping changed during different points of the pandemic. As noted in Table 4, the data show a small shift in consumer behavior during the pandemic. Compared to pre-pandemic grocery

Table 4. Tracking interviewees' mode of grocery shopping across time.

Number of Interviewees	Pre-Pandemic	Phase 1	Phase 2

Total (*n* = 18)	online = 17% (3) store = 83% (15)	online = 56% (10) store = 44% (8)	online = 44% (8) store = 56% (10)

Notes: Numbers in parentheses denote n.
= online shopping or curb-side pickup.

= in-person shopping only.

Table 5. Frequency of grocery shopping across time.

Frequency	Pre-Pandemic	Phase 1	Phase 2
Daily	–	6% (1)	6% (1)
Several times a week	33% (6)	17% (3)	39% (7)
Weekly	44% (8)	56% (10)	50% (9)
2-3 times per month	22% (4)	17% (3)	11% (2)
Monthly	–	6% (1)	–

Note: Numbers in parentheses denote n.

shopping online and curbside pick-up more than doubled in Phase 2. These findings suggest that even though online food shopping was steadily growing since its introduction in the early 2000s (Saunders, n.d.), the advent of the pandemic temporarily contributed to the significant growth of online food shopping. Although online grocery shopping appears to have dropped off slightly in Phase 2, it remains higher than pre-pandemic levels. These findings are supported by industry data (Verdon, 2022), which also confirmed an increase in online grocery shopping.

A comparison of the frequency of grocery shopping highlights notable shifts during the pandemic. Prior to the pandemic a majority of respondents shopped weekly or several times a week (Table 5). This however shifted in Phase 1 of the pandemic. Respondents who grocery shopped several times a week decreased the frequency with which they shopped. Still, irrespective of the mode and frequency, grocery shopping occurred with regularity and we believe grocery shopping offered consumers solace bridging the gap between pre-pandemic behavior and the separation that ensued because of the pandemic (Kennett-Hensel et al., 2012). These findings are expected and supported by other studies (Filimonau et al., 2022; Güney & Sangün, 2021; Hassen et al., 2021; Laguna, Fiszman, Puerta, Chaya, & Tárrega, 2020; Marinković & Lazarević, 2021) that demonstrate consumers visited grocery stores less frequently, stayed in stores shorter periods of time, and went to fewer stores to avoid exposure to the virus and mitigate spread. Yet by Phase 2, the data show that most respondents reverted to the frequency with which they shopped prior to the pandemic. This suggests people felt safe enough to shop for groceries whenever they desire. This may signal a steady demand; thus retailers should ensure supply chain resiliency to mitigate disruptions. Further, retailers should consider locally sourced products—if possible—to reduce out-of-stock occurrences.

Food retailers, specialty markets, and alternative food networks

We also asked what type of grocery stores our respondents frequented, and whether they patronized big box stores. Respondents reported using local, regional, and national chains such as bodegas, Wegmans, and Walmart. A majority of respondents indicated that they frequented big box stores prior to and during the pandemic. Popular big box stores mentioned in this study include Costco, Target, and Walmart. Interviewees often qualified these responses noting they purchased specific items such as nonperishables, or baking supplies from these types of stores. An interviewee recalled, "We would try and really order like flour, sugar, that kind of stuff from Target you know, just to make sure we always had supplies on hand." This is a departure from studies that show consumers in Italy (Bracale & Vaccaro, 2020) and Turkey (Güney & Sangün, 2021) avoided large supermarkets during the pandemic in favor of local stores that were closer to their homes. Still, half of respondents said they never patronized Walmart, WholeFoods, and Amazon with strong negative feelings about Walmart's labor practices, WholeFoods' prices, and Amazon's founder Jeff Bezos. Despite strong negative feelings these retailers remain popular with a majority of US consumers perhaps due a wide range of products and dependable supply chains.

We also inquired whether or not interviewees shopped at specialty stores including the butcher, bakery, fish, or ethnic markets, and alternative food networks (e.g., Community Supported Agriculture, food co-operatives, and farmers markets) prior to and during the pandemic (Table 6). Patronage of specialty stores convey one's identity and social position (Bourdieu, 1984). The use of specialty stores and alternative food networks declined precipitously during Phase 1 of the pandemic. One interviewee mentioned using specialty stores less frequently during in Phase 1 stating,

> Yeah, we would go to our bakery, however I don't think we used it consistently; sometimes weekly, and other [times] monthly. [Sometimes] we would skip a month; not that consistent. In Phase 1, I don't think we went to the bakery, maybe [we went] toward the end. We were too concerned [about health and safety], and now Phase 2, I think it's similar to pre-pandemic, my mom would go monthly.

Table 6. Frequency of shopping at specialty stores and alternative food networks across time.

	Pre-Pandemic		Phase 1		Phase 2	
Frequency	Specialty[a]	Alternative[b]	Specialty	Alternative	Specialty	Alternative
Weekly	11% (2)	6% (1)	6% (1)	6% (1)	11% (2)	11% (2)
Several times a week	–	–	–	–	6% (1)	–
Daily	–	–	–	–	–	–
2-3 times per month	22% (4)	17% (3)	–	–	11% (2)	–
Monthly	33% (6)	22% (4)	–	–	33% (6)	17% (3)
Not applicable	33% (6)	56% (10)	94% (17)	94% (17)	39% (7)	72% (13)

Note: Numbers in parentheses denote n.
[a]Specialty denotes specialty stores such as butcher, bakery, fish, or ethnic markets.
[b]Alternative denotes alternative food networks such as Community Supported Agriculture (CSAs), food co-operatives, and farmers market.

Demonstrating a shift between the two phases an interviewee recounted, "During the pandemic, the fish market was not open. Pre-pandemic I would say we'd go there maybe every two months or so…there is a fish market that my husband has been going to lately. He's gone there twice in the past two weeks." By Phase 2 however, a majority of respondents returned to shopping at specialty stores. For these respondents procuring food at specialty stores is a marker of identity and provides a stabilizing effect during the pandemic (Kennett-Hensel et al., 2012). A study of Turkish consumers illustrated how local markets, green grocers, and butchers were preferred to supermarkets during the pandemic, contrary to our findings (Güney & Sangün, 2021).

When asked whether they patronized alternative food networks, many interviewees reported in summer 2022 they no longer patronized alternative food networks. Several respondents in Texas said the distance to drive to farmers market was problematic. Respondents in New York City indicated that long lines during Phase 1 dissuaded them from visiting farmers markets. Highlighting this, one respondent said, "waiting in a long line for local veggies, just wasn't how I wanted to spend my time," while another person said, "the lines were insane." This had serious implications for farmers who sold directly to consumers. We believe alternative food networks can recapture this market by offering delivery and/or more convenient pick-up locations; subscriptions with greater choice; and small monetary incentives for subscribers. Some preliminary reports indicated increased CSA subscribers during the pandemic (Borchers, 2021), contrary to our results however this might be attributed to regional differences within the US.

Food preferences and consumption

We asked interviewees to use three adjectives to describe the food in their carts during Phase 2. "Healthy" and "fresh groceries" were the two most frequently mentioned adjectives used to describe the food they placed in their carts. Other respondents also mentioned “consistent,” “convenient,” and “staples.” The latter set of responses underlines the role of food as a stabilizing force during liminality (Kennett-Hensel et al., 2012). As evidenced by the adjectives, a majority of interviewees indicated that the food they purchased in Phase 2 mirrors their pre-pandemic grocery cart, while a plurality said that the food they purchased is arguably healthier. For example, prior to the pandemic respondents described their food selections as “snacky,” “unhealthy,” “processed,” “frozen,” and “quick.” One respondent who said, “It is more nutritious now [Phase 2] and we try to be more conscientious about our health now than before.” These patterns of consumption during liminality support Cody & Lawlor (2011) study, in which respondents sought to reduce discomfort through consumption. Another respondent stated,

> During Phase 1, we were buying more junk food and we ate more because we were stressed, right, and we had restaurants around us closed, so we ate more comfort food and then in Phase 2, we transitioned and started doing meal boxes. Quantity has changed the most for us and upped the quality during the phases.

Absent commutes and an enduring reluctance on the part of some respondents to frequent restaurants, resulted in interviewees reporting they selected healthier items. The healthier items underline respondent’s attempt to bolster their health and mitigate contracting COVID. This illustrates a conscious effort to reduce ambiguity through consumption (Noble & Walker, 1997). According to da Silva et al. (2022) consumers opted for nutrient-dense food during the pandemic to fortify their health. Retailers should promote nutrient-dense options for consumers accompanied by a nutritional score to guide consumer choice. Alternatively, retailers might offer more convenient options, which also are unprocessed and nutritious.

We also asked respondents how much of the food in their cart was selected from the perimeter of the store. Food located around the perimeter of the grocery store tends to be minimally processed, whole food items (e.g., produce, dairy, meat, and seafood) and might be an indicator of a healthier diet. A majority of respondents said that more than three-quarter of their cart contained items from the perimeter the store. Retailers should prioritize items from this section of the store, ensuring it is fully stocked with ample variety. Additionally, retailers might encourage consumers to purchase from this section of the store through incentives.

Respondents were asked whether they preferred conventional, organic, or local products. Half of the sample purchased organic foods, and five respondents said they sought out local products. These consumer preferences are a deviation from the norm in the US (Crawford, 2022), and reflective of a convenience sample. Less than half of the interviewees described purchasing conventional food along with local and organic for specific items. Respondents who purchased conventional food reported, "I usually shop [purchase] conventional. Yeah, and mainly because it's usually the cheaper option." Another person said, "I do not buy organic, the reason being because it does not last very long." Still many respondents favored organic food. According to one interviewee,

> [During the pandemic] I tried to get as much organic as possible. Not so much local, and over the pandemic, I guess I got a little more lenient and became more conventional. When I buy fish, it has to be wild caught. I won't buy farm [raised fish]…I really don't buy meat anymore."

Echoing these sentiments another respondent explained,

> It's mostly organic when available…definitely produce, and certainly the milk…I guess some of the cheese or some of the yogurts are not organic, but it's still a pretty decent percentage of organic [food]. I mean yeah organic would win over local, but if it's local or, you know, conventional then I would give a preference to local.

Although, alternative food networks appear to have lost customers during the pandemic, the demand for organic and local products remains robust. Alagarsamy, Mehrolia, M, & J (2022) indicate that consumers preferred organic food to boost their immunity during the pandemic not unlike the SARS and Bovine Spongiform Encephalopathy outbreaks, in which demand for organic food spiked. The aforementioned demand sustained momentum, and the authors expect preferences for organic food to continue as the pandemic becomes endemic (Alagarsamy, Mehrolia, M, & J, 2022). Greater interest in local and natural foods is consistent with findings from Güney & Sangün (2021), and Filimonau et al. (2022). This is an opportunity for retailers to capture consumers who are health-conscious and support sustainable farming practices by offering more organic and locally sourced foods.

Quantity of food in cart

We asked interviewees to compare the quantity of food they placed in their grocery carts across the three phases (Table 7). As expected a majority of respondents indicated that the quantity of food placed in their shopping cart during Phase 1 increased, while nearly two-fifths of interviewees reported the quantity of food in their shopping cart was the same as prior to the pandemic. This finding is supported by Laguna et al.'s (2020) study, in which 20% of participants purchased more food during the first few months of the pandemic. A sentiment expressed by one interviewee that was echoed across many interviews said, "It increased during Phase 1 because we were rarely going out. We were also making lunch and dinner every day. That's almost doubling, right, seven days instead of five days."

Table 7. Shifts in grocery quantities across time.

Quantity of Groceries Compared to Pre-Pandemic	Phase 1	Phase 2
Increased	61% (11)	17% (3)
Stayed the same	39% (7)	44% (8)
Decreased	–	39% (7)

Note: Numbers in parentheses denote n.

A small percentage of respondents who noted increased quantities of groceries in their carts, also mentioned the addition of new household members. Lockdowns, reduced frequency of shopping, stockpiling, remote work and school, and the closure of many restaurants led more individuals to cook at home, which likely contributed to these findings. According to Noble & Walker (1997, p. 34) during transitional periods, "symbolic possessions may be used to fill the role that family, friends, and other personal relationships once held in the individual's extended self." We believe food serves as a proxy for possessions during the separation stage of the pandemic when individuals were deprived of social connections.

We tracked respondents' behavior to evaluate whether the quantity of groceries changed during different points of the pandemic. Among respondents who indicated in Phase 1 that the quantity of food increased, we noted a marked drop-off in quantity in Phase 2 among these same respondents, which coincided with the introduction of vaccines (Table 8). Still among five respondents the quantity of food in their cart stayed the same during Phases 1 and 2. Another five respondents also reported an increase in Phase 1, followed by a decrease in Phase 2. Since the amount of food in respondents' carts increased during Phase 1, grocery retailers benefited from the pandemic (Verdon, 2022) despite supply chain issues and disruptions to their workforce (Aull, Coggins, Kohli, & Marohn, 2022). According to one interviewee, "Probably it increased [in Phase 1], because we were still in those big stock up mentality habits, and then during Phase 2 it definitely decreased. We're doing more trips, but smaller baskets." Still another interviewee explained,

> Yeah definitely increased. If the kids were home or not, I was cooking every single night, and if you look at my Facebook page back then you'll see that I was cooking. I mastered everything but pizza. During Phase 2, I would say it decreased because you were able to go out again to restaurants. And you know that you take advantage of that. I haven't been out so long. I want to be out all the time. So it definitely decreased.

The decline in groceries might be attributed to reduced cooking or inflation (discussed in the next section). Retailers must consider how these findings affect their bottom line. They might capture cost-conscious customers by offering coupons or loyalty reward programs. To attract consumers who spend money eating out, grocery retailers should expand and

Table 8. Tracking interviewees' grocery quantities across time.

Number of Interviewees	Phase 1	Phase 2
🧍🧍🧍	↑	↑
🧍🧍🧍	↑	–
🧍🧍🧍🧍🧍	↑	↓
🧍🧍🧍🧍🧍	–	–
🧍🧍	–	↓
Total ($n = 18$)	61% (12) ↑ 39% (7) –	17% (3) ↑ 44% (8) – 39% (7) ↓

Notes:
↑ Increased compared to Pre-Pandemic.
– Stayed the same compared to Pre-Pandemic.
↓ Decreased compared to Pre-Pandemic.

improve the quality of their prepared foods. These strategies might lead consumers to add more food to their carts.

Spending

We asked interviewees to compare spending on groceries in Phases 1 and 2 to their pre-pandemic expenditures. Respondents were encouraged to save receipts for one to two weeks to help them recall the amount they spent on groceries. Additionally, we asked them to consider confounding factors such as cooking more often, dining out less, and inflation. We asked interviewees to compare spending on groceries prior to the pandemic to Phase 1. Table 9 shows a majority of respondents spent more on groceries in Phase 1 compared to pre-pandemic. This increase was expected since most respondents stated that they cooked at home more contributing to increased spending in Phase 1. According to one respondent, "…at one point that it was something like 15% more," while another interviewee noted, "I would say probably more money during Phase 1 but then it eventually evened out." A smaller percentage of respondents stated that their spending either stayed the same, or decreased compared to pre-pandemic.

When comparing pre-pandemic spending on groceries to Phase 2 spending on groceries, a plurality of respondents indicated that spending increased, while one-third stated that it decreased compared to pre-pandemic levels. These findings suggests that respondents might be spending less time cooking, eating out more, and/or purchasing more take-out,

Table 9. Shifts in spending on groceries across time.

Spending on Groceries Compared to Pre-Pandemic	Phase 1	Phase 2
Increased	72% (13)	39% (7)
Stayed the same	17% (3)	22% (4)
Decreased	6% (1)	33% (6)
Don't know	6% (1)	–

Note: Numbers in parentheses denote n.

thereby reducing their grocery bills. All but one respondent said that the prices of groceries had increased during Phase 2 of the pandemic; potentially the result of inflation among food products. During the pandemic several studies reported increased prices coupled with job losses. Underlining the expense of groceries one interviewee said,

> I'm buying more vegetables and things like that to get the kids to eat better, probably buying more expensive stuff just because of the economy…made me decrease my shopping because everything is so expensive. I mean I could go to the store and spend $15 on a steak, and it's not even [enough] for the three of us. It would have to be like $25 for a steak. Well, I could go out to eat for almost the same amount of money.

Still others said, "Phase 1 it [spending] increased for sure, because we were stocking up. And you know we were not going out for the most part, and by Phase 2 slightly it decreased. But a decrease in Phase 2 spending was made up by getting more take-out." One respondent observed a bigger shift that emphasized reducing food waste explaining,

> We've started really kind of dialing it back to like what's a realistic dinner to make on a Tuesday night versus you know, what are we gonna eat on the weekend. So we've been trying to shop a lot smaller and a lot smarter…we can get unlimited deliveries as long as we spend $30, which is not hard to spend $30/[We consider]… what can we actually use in four or four days versus these huge stock up trips…I actually feel like we are probably spending less on groceries because we're wasting much less.

These disparate findings show divergent consumer behaviors that impacted spending on groceries. Further, inflation may have played a role in higher prices, and therefore increased spending (Edwards et al., 2022).

Table 10 illustrates how individual spending changed or stayed during the three phases. Phase 1 of the pandemic caused a surge in grocery shopping and consequently increased spending. For one-third of interviewees this trend continued well into Phase 2 of the pandemic. We were unable to isolate whether this increase in spending in Phase 2 might be attributed to habits formed during the pandemic such as purchasing more groceries to cook, or alternatively because of inflation. Still, an additional one-third of respondents' spending in Phase 2 mirrored their pre-pandemic spending, suggesting the more things changed the more they stayed the

Table 10. Tracking interviewees' spending on groceries across time.

Total # Interviewees	Phase 1	Phase 2
👤👤👤👤👤👤	↑	↑
👤👤👤	↑	–
👤👤👤👤	↑	↓
👤	–	↑
👤👤	–	–
👤	↓	–
Total ($n = 17$)	67% (12) ↑ 17% (3) – 6% (1) ↓	39% (7) ↑ 33% (6) – 22% (4) ↓

Notes: This table depicts a total of 17 interviews because 1 interviewee could not recall their spending prior to the pandemic.
↑ Increased compared to Pre-Pandemic.
– Stayed the same compared to Pre-Pandemic.
↓ Decreased compared to Pre-Pandemic.

same. Despite a global pandemic one-third of the sample continued spending as they had prior to the pandemic. However, four respondents noted an increase in Phase 1 followed by a decrease in Phase 2 when compared to pre-pandemic spending. When tracking the behavior among these four respondents across dining out and take-out, three respondents reported increased dining out and take-out during this phase. Decreased spending on groceries might be attributed to individuals feeling safer eating out, or purchasing take-out in Phase 2 unlike Phase 1. For example, a respondent described her approach saying, “During Phase 1 we would order in from our local sushi place every week. Occasionally from a couple of other places, but that was sort of our standard. During Phase 2 like we started off ordering and our favorite Chinese restaurant reopened. We were so excited.”

We asked interviewees how much they spent on groceries, and whether they took measures to save money. On average respondents spent $167 a week with spending ranging from $60 to $400 a week. All but one respondent indicated that the prices that they see in grocery stores had risen significantly compared to pre-pandemic prices. Still other interviewees said, “Oh yeah, it is definitely more expensive now. Umm I will look at sales for Whole Foods and Trader Joes but I may do less stocking up and spreading out my purchases,” and another noted “Everything has increased! Literally a gallon of milk used to cost me $3.99 and during the pandemic, and I am now paying $5.99 and $6.99 for a gallon of milk. Just buying less and looking for sales are my strategies." According to market research, grocery prices increased 14% in August 2022 compared to 2021, the highest since March 1979 (Wiener-Bronner & Meyersohn, 2022). Findings from our research show interviewees employed a variety of approaches to save money while food shopping. This included cutting coupons, buying in bulk, and not purchasing certain items. One interviewee indicated reducing the purchase of meat and seafood, and another interviewee noted purchasing store brands. Recognizing inflation retailers should offer coupons, discounts, and other promotional strategies to help ease the burden of high prices. Discount grocery retailers like Aldi and Lidl are at an advantage because they offer low prices, passing savings on to consumers.

Theoretical and practical implications

Though the liminality construct was postulated in anthropology, it has since been adapted to various interdisciplinary contexts. The liminality framework is especially useful for exploratory research designed to assess changes in consumer behavior during periods of instability such as pandemics, natural disasters, and wars. This study focuses on segmenting the pandemic into three distinct liminal phases, and it analyzes how consumers overcame liminality through food shopping and consumption. The liminality framework adopted herein bridges the mental state of the consumer with their actions during the pandemic. By drawing connections between the ambiguity created by the pandemic and consumption behaviors, we apply the liminality construct to a global pandemic. Analyzing the pandemic from the lens of liminality provides a magnified view of respondents' daily lives and how they handled the pandemic, thereby broadening the application of the liminality framework. We believe the liminality framework can be used by scholars in other disciplines to contextualize and conceptualize behaviors in disruptive situations be it natural or man-made.

Consumers' grocery shopping, food preferences, and consumption behaviors during the pandemic yields several implications for the food industry. Online shopping continued to grow prior to the pandemic, and this upward trajectory persisted. Our findings show a move to online grocery shopping and curbside pickup consistent with industry data. Ensuring that the user interface for online groceries is seamless and that items are available is critical for an excellent consumer experience. Inventory often is available in-store but not online, hence retailers must better integrate their store inventory with their online platforms. Managing consumer expectations around inventory will lead to greater satisfaction and repeat patronage. Enhancing the online experience with an option for consumers to repopulate past orders adds value by reducing the mental load and saves time. Repeat online customers, enables managers to better forecast their inventory and manage demand. Consumer confidence in online grocery shopping remains lukewarm. Hence, developing protocols that emphasize accuracy will help staff to fill online orders free of errors, potentially retaining and attracting more online consumers. Alternative food networks faced considerable challenges as a result of the pandemic. Farmers should redouble their marketing efforts to recapture consumers who selected other options during the pandemic.

Finally, given the pandemic threatened individuals' health many respondents attempted to eat more mindfully and cooked at home. Data from this study suggests retailers should focus on marketing nutrient-dense food that is easy to prepare, to mitigate time constraints. The adjectives mentioned in this article indicate natural and organic food is preferred though price constrained consumers. Retailers might consider how they can promote natural and organic foods at affordable price-points.

Limitations and future research

These in-depth interviews explore how respondents navigated grocery shopping, food preferences, and consumption during a global pandemic compared to their pre-pandemic approach. First, this is a purposive-convenience sample, and therefore it is not representative. Still, it offers important insights about shifts in grocery shopping, preferences for healthier items, and more meals consumed at home. Second, because the sample is an extension of the authors' networks the respondents are well-educated, high income, and racially homogenous though four respondents identified as Hispanic. Still, regardless of education and income everyone grocery shops and eats, and within the US how this occurs is fairly similar with a majority of households shopping at large grocery stores. Third, we asked respondents to recall earlier phases of the pandemic. Recall is imperfect and often not reliable. In this instance however because the events were unprecedented, we believe recall was heightened due to the novelty and fear associated with the pandemic. Finally because this sample is drawn from the US, the findings about grocery shopping and food preference behaviors might not be extended to other countries.

To address some of the above limitations we recommend conducting a survey utilizing a representative sample of US consumers. In addition, a cross-cultural comparison may highlight how food preferences and consumption behavior varied during the pandemic. Given the decline in the use of alternative food networks reported in this study, which conflict with reports of some CSAs boasting record subscribers during the pandemic, we recommend a study that explores the impact of alternative food networks during this period. Since results show continued enthusiasm for organic and local foods during the pandemic, we suggest a follow-up study that explores the potential revival of demand for these products. Finally, future studies should explore how related behaviors such as cooking, baking, and dining out were impacted because of the pandemic.

Conclusion

By incorporating the liminality framework this study conceptualizes the pandemic into three distinct phases to understand respondents' grocery shopping habits and food preferences. These three phases align with the liminality framework characterized by a separation period in which individuals reduced social contact, and remained at home; a transitional period in which individuals undertook more activity but adapted their behaviors depending on the virus's mutation; and finally, a period of reincorporation in which individuals appeared to have returned to daily activities in-person, unmasked.

The separation period was marked by uncertainty and reduced social interactions, heightening the sense of separation among individuals. Decreased grocery shopping in-person and greater reliance of online grocery shopping, along with larger quantities of groceries purchased characterize this period. Despite the uncertainty and lack of vaccines, many individuals capitalized on this using it as an opportunity to improve their dietary habits. They purchased nutrient-dense items from the perimeter of the store, along with increased fruits and vegetables.

With the introduction of vaccines individuals resumed many daily activities to varying degrees, though this period is characterized as transitional due the evolving nature of the virus and fluctuating transmission rates. This meant some activities related to grocery shopping and consumption remained in flux too. Online grocery shopping increased compared to pre-pandemic levels however its drop-off among some respondents coincided with the introduction of vaccines. While many respondents eventually returned to shopping at specialty stores—consistent with their pre-pandemic levels of patronage—fewer respondents returned to alternative food networks. This transitional period was defined by inflation, and therefore increased spending on groceries.

Finally, as the pandemic became endemic individuals began to resume their pre-pandemic activities. The frequency of grocery shopping largely has reverted to pre-pandemic levels, an indicator of reincorporation that demonstrated a temporary change in behavior during Phases 1 and 2. Online grocery shopping and curbside pick-up has sustained some momentum from the early part of the pandemic, and ultimately it remains higher than pre-pandemic levels. The shift from in-person to online and curbside pick-up, resulted in a permanent behavioral change. Similarly, more mindful eating habits that surfaced during the transitional period were reinforced during the reincorporation period along with a preference for natural and organic food. In the end, the long and winding path of the pandemic had a significant impact on individuals, certainly playing a vital role in shaping grocery shopping, food preferences, and consumption.

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