RESEARCH
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Barriers to Accessing Healthy Food and Food Assistance During the COVID-19 Pandemic and Racial Justice Uprisings: A Mixed-Methods Investigation of Emerging Adults' Experiences

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ABSTRACT

Background A steep rise in food insecurity is among the most pressing US public health problems that has resulted from the COVID-19 pandemic.

Objective This study aimed to (1) describe how food-insecure emerging adults are adapting their eating and child-feeding behaviors during COVID-19 and (2) identify barriers and opportunities to improve local food access and access to food assistance.

Design The COVID-19 Eating and Activity Over Time study collected survey data from emerging adults during April to October 2020 and completed interviews with a diverse subset of food-insecure respondents.

Participants/setting A total of 720 emerging adults (mean age: 24.7 ± 2.0 years; 62% female; 90% living in Minnesota) completed an online survey, and a predominately female subsample (n = 33) completed an interview by telephone or videoconference.

Main outcome measures Survey measures included the short-form of the US Household Food Security Survey Module and 2 items to assess food insufficiency. Interviews assessed eating and feeding behaviors along with barriers to healthy food access.

Analyses performed Descriptive statistics and a hybrid deductive and inductive content analysis.

Results Nearly one-third of survey respondents had experienced food insecurity in the past year. Interviews with food-insecure participants identified 6 themes with regard to changes in eating and feeding behavior (eg, more processed food, sporadic eating), 5 themes regarding local food access barriers (eg, limited enforcement of COVID-19 safety practices, experiencing discrimination), and 4 themes regarding barriers to accessing food assistance (eg, lack of eligibility, difficulty in locating pantries). Identified recommendations include (1) expanding the distribution of information about food pantries and meal distribution sites, and (2) increasing fresh fruit and vegetable offerings at these sites.

Conclusions Interventions of specific relevance to COVID-19 (eg, stronger implementation of safety practices) and expanded food assistance services are needed to improve the accessibility of healthy food for emerging adults.
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THE COVID-19 PANDEMIC IS AN ONGOING PUBLIC health crisis. In the United States, this crisis led to a surge in unemployment and has placed unprecedented strain on the food system.[1] The resulting rise in food insecurity is disproportionately impacting Black people, Indigenous people, and persons of color across the nation.[2-4] This disparity stems from the entrenched public health crisis of racism and is exacerbating existing health inequities.[5,6] Both public health crises, the COVID-19 pandemic and all forms of racism, must be addressed to equitably respond to the growing

problem of food insecurity. It is of urgent importance that rich information be gathered on the condition of food insecurity during the pandemic so that federal and local policies and programs can be responsive to the intersection of these and future public health crises. The life stage of emerging adulthood (18-29 years) is a time of particular vulnerability for experiencing food insecurity and its impacts on health, including increased risk for elevated blood pressure and prediabetes.[7-9] Emerging adulthood is also a life stage when young people may begin providing meals for children of their own[10,11] and accordingly, the influence of food insecurity on the feeding behaviors of emerging adults has the potential to impact the health of the next generation.

Research conducted in the United States during the initial months of the COVID-19 outbreak has documented a high, increased prevalence of food insecurity among emerging adult populations and the many challenges they have faced in accessing adequate food resources.[2,12-14] For example, a rapid response survey of the Eating and Activity over Time (EAT 2010-2018) study cohort was conducted by Larson et al[12] in the spring of 2020 and found that more than 1 in 4 of the emerging adult participants had recently experienced food insecurity; the prevalence was nearly 1 in 3 among those who identified as Black or African American and 46% among those who were parents of their own children. The food-insecure participants in this ethnically and racially diverse cohort identified several needs, including eligibility for a larger amount of food assistance benefits, having food delivery or pickup options, and access to more food at food pantries.[12] Furthermore, the results of the spring 2020 study showed that being treated with less respect or courtesy than other people, being threatened or harassed, and experiencing interpersonal racism in the past month were more often reported by emerging adults who were food insecure.[12] These results were based on surveys completed prior to the death of George Floyd in Minneapolis, Minnesota, and the racial justice uprisings that subsequently impacted food access for many emerging adult participants in the study cohort.[15] The many problems highlighted by the spring 2020 study by Larson et al[12] and the uprisings are complex and indicate the need for more in-depth research on lived experiences of food insecurity to inform public health strategies for emerging adult populations and subgroups at increased risk (ie, parents, persons who identify their race as Black or African American).

The current study was designed to build on prior research by describing the prevalence of food insecurity among a diverse sample of emerging adults and the experiences of those who were food insecure in 2020 amidst the COVID-19 pandemic and racial justice uprisings. Aims of the study were to (1) examine how food-insecure emerging adults are adapting their eating and how those who are parents may also be adapting their child-feeding behaviors during COVID-19 and (2) identify barriers to food access and opportunities to improve local access and the accessibility of food assistance resources for emerging adults.

RESEARCH SNAPSHOT

Research Question: How are food-insecure emerging adults adapting their eating behaviors during COVID-19? What are barriers and opportunities to improve local food access and the accessibility of food assistance services?

Key Findings: Interviews identified various themes with regard to changes in at-home eating and feeding behavior (eg, more processed food, sporadic eating), local food access barriers (eg, limited enforcement of COVID-19 safety practices, experiencing discrimination), and accessing food assistance (eg, lack of eligibility, difficulty locating pantries). Identified recommendations include (1) expanding the distribution of information about food pantries and meal programs, and (2) increasing fresh fruit and vegetable offerings.

METHODS

Study Design and Sample

The C-EAT (COVID-19 Eating and Activity over Time) study was designed to build understanding of resources needed by emerging adults to support their weight-related health and psychosocial well-being during the COVID-19 pandemic.[12,16] Participants in both waves of the EAT 2010-2018 longitudinal study (n = 1568 participated in 2009-2010 and 2017-2018) were invited to complete a C-EAT survey in 2020 and a selected sample of survey respondents who reported a recent experience of household food insecurity (n = 81) were also invited to complete an in-depth interview. C-EAT surveys were completed online by 46% of the cohort sample (n = 720) during the months of April to October 2020. Although C-EAT survey participants were less likely than 2018 survey participants to identify as male, identify their race as African American or Black, and have a parent of lower socioeconomic status (SES), the respondents in 2020 were of diverse backgrounds. Interviews were completed with a food-insecure subsample (n = 33) by telephone or videoconference to ensure the safety of participants during the ongoing pandemic. All interviews were completed during the months of July to October 2020 and accordingly also occurred in the context of racial justice uprisings in the neighborhoods where participants were living.[15] C-EAT study participants were middle school or high school students in Minneapolis and St Paul when they participated in the baseline EAT 2010 survey, and 90% of C-EAT survey participants were still living in Minnesota during the pandemic.[7,17,18] E-mail and text message invitations and up to 5 reminders were sent to encourage participation in the C-EAT survey. Similarly, invitations to participate in the interview portion of the study were sent by e-mail and up to 2 reminders were sent by e-mail and text message. All participants were mailed a financial incentive following survey completion, and those who completed an interview were provided with additional compensation for their time. The University of Minnesota Institutional Review Board Human Subjects Committee approved all protocols.

Past year experiences of food insecurity were identified by C-EAT survey participants in response to the 6-item US Household Food Security Survey Module.[19] Reports of experiencing food insecurity (defined as lacking dependable access to adequate food for active, healthy living) were used in combination with C-EAT survey data on past month experiences of food insufficiency (defined by having eaten less than you felt you should and having been hungry because of lack of money to buy food) and parental status to identify

potential interview participants.[7,12] Invitations to participate in the interviews were sent out in batches of 10 to ensure approximately equal participation of food-insecure parents and emerging adults who were not living with children of their own; emerging adults who had recently experienced food insufficiency between April and October 2020 were prioritized for recruitment. Interview invitations stated the purpose of the study was to learn about food access challenges that young people are experiencing and how food assistance programs and services could be improved. A semistructured interview script was developed by a multidisciplinary group of experts in emerging adult health, piloted by the team of emerging adult interviewers, and refined prior to its use to complete interviews with survey respondents who replied to the interview invitation and completed an online consent form. The interview recruitment process was continued until the researchers determined that new participants were providing few additional insights and theoretical saturation had been reached. All interview questions focused on experiences during COVID-19 and questions of relevance to the current analysis are included in Figure 1; the full interview script with all open-ended questions and optional prompts is available from the authors upon request. The average amount of time required to discuss the interview questions was approximately 30 minutes.

- How has COVID-19 affected your own eating habits? How do you feel about these changes? What aspects of the current situation have led to these changes in your eating habits?
- What sorts of challenges have you experienced in getting enough food for you and your household to eat in the last few months since March 2020? What sorts of challenges have you experienced in getting certain types of food?
- Please tell me about any experiences over the past few months that you or your household members have had with getting food from a community or church *food pantry or food shelf*. Have you had any experiences with getting food from another community distribution site?
- Do you have any ideas for improving how food pantries and food shelves can most safely help young people?
- Please tell me about any experiences over the past few months that you or your household members have had with getting food from a *soup kitchen* or *free meal program* that is not connected to a school.
- What ideas do you have for improving how soup kitchens and free meal programs can most safely help young people?
- Please tell me about any experiences over the past few months that you or your household members have had with applying for or getting recertified for *government food assistance programs like SNAP*[a] or *WIC*[b].
- What forms of *government food assistance*, if any, have you or your household received over the past few months? Please tell me about how well the program(s) have worked during the COVID-19 outbreak.
- Although racism is not new, there has recently been more attention on the challenges faced by Black people, Indigenous people, and other people of color in the United States. Would you please tell me about any experiences that you or a family member has had with racism or harassment while shopping for food?
- I am curious what types of changes in your neighborhood or community would make you feel better during these challenging times and help you to get enough healthy food to eat?
- How have recommendations for social distancing such as keeping at least 6 feet of physical space between people in public affected how you and your household go about getting the food you eat?
- How hard has it been for you or other household members to maintain social distancing while getting food? What are some ways it could be made better?
- Thinking about the people in your neighborhood, how often are people wearing masks? Are there any businesses that require wearing a mask when you enter?

The following questions were asked only when a participant reports living with children in their household:

- How has COVID-19 affected the eating habits of your child(ren)?
- How has your household been impacted by the closing of schools, summer programs, and child care facilities due to COVID-19 and how has your household adjusted to these changes?
- Please tell me about any experiences you have had with getting food from your school district or child care center during the closures. What ideas do you have for making school or child care food programs better during closures?
- What, if any, changes were made to your school's breakfast or lunch program during this time? What changes do you hope will continue even after the COVID-19 outbreak is over?

[a]SNAP = Supplemental Nutrition Assistance Program.
[b]WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

Figure 1. Interview questions relating to changes in eating and child-feeding behaviors of food-insecure emerging adult participants in the COVID-19 Eating and Activity over Time interview study.

Data Analysis

Quantitative. Frequencies, percentages, and χ^2 tests were examined to assess the prevalences of food insecurity in the past year and food insufficiency in the past month across sociodemographic characteristics of emerging adults. Sociodemographic characteristics of interest were assessed as part of the C-EAT survey (ie, sex, parental status, employment status, household receipt of food assistance benefits, living situation, vehicle ownership) or baseline EAT 2010 survey (ie, ethnicity/race, parental SES) and examined within the full sample of 720 survey respondents.[12,18] The statistical significance of probability tests was determined based on the criteria $P < 0.05$. Analyses were conducted using the Statistical Analysis System.[20]

Qualitative. Audio recordings of the 33 interviews with food-insecure emerging adults were transcribed verbatim and coded separately by 2 of the authors (Larson, Alexander). The authors first read each of the interviews in full to gain a broad sense of the experiences shared by participants and inform development of the codebook. After the authors discussed and agreed on the themes to be coded, each interview was then read at least 1 more time to allow for line-by-line coding of the data using a hybrid deductive and inductive content analysis approach.[21,22] In exploring changes in eating patterns and barriers to food access, the authors initially allowed specific themes to naturally emerge from the interview data (inductive approach). The specific themes were then organized based on an ecological framework to guide attention to the multiple food environments and food policies of influence on eating patterns (deductive approach).[23] The final stages of the coding process involved resolving discrepancies between the first and second author. There were 5 coding discrepancies (less than 1% of coding decisions) that were identified between the 2 coders; each of these discrepancies was discussed to resolution.

RESULTS

The C-EAT survey sample included 447 female participants, 263 male participants, and 10 participants identifying with another sex identity. Demographic characteristics of the C-EAT survey sample and the predominately female subsample of participants who completed interviews are respectively reported in Table 1 and Table 2.

Prevalence and Characteristics Associated With Experiencing Food Insecurity and Insufficiency

Past year experiences of food insecurity were identified by 30% (n = 216) of C-EAT survey participants, and experiences of food insufficiency were identified by 12.8% of participants. Survey data showed that emerging adults who identified as female and those who identified their ethnicity/race as Black, African American, or mixed/other had elevated prevalences of food insecurity in the past year and food insufficiency in the past month (Table 1). Food insecurity was also related to household composition (ie, not living with a parent, living with own children), lower parental SES, lack of access to a car or other personal vehicle, and receipt of food assistance. Food insufficiency was similarly related to household composition, employment status, parental SES, and receipt of food assistance.

Changes in at-Home Eating and Child Feeding Behaviors During the COVID-19 Pandemic

Analysis of the interview data showed that most food-insecure participants had experienced changes in their at-home eating and child feeding behaviors during the COVID-19 pandemic. Some changes in eating were made by choice to promote their own and their child(ren)'s health, but the majority of reported changes were made in response to limited finances and other changes to work and home responsibilities. Each of the 6 themes identifying a specific type of change in eating is described below and in Figure 2 along with examples of relevant quotes.

- Highly processed food intake. Participants discussed eating and feeding their child(ren) more inexpensive, processed snacks and less foods of higher nutritional value. Emerging adults reported that fruits and vegetables were less available in local grocery stores during the pandemic, and they did not have enough money to regularly purchase these foods.
- Water intake. Drinking more water was also reported by a number of participants as a strategy for saving money and for improving one's health.
- Takeout food. Participants reported purchasing more fast food to eat at home because they had limited funds for groceries, wanted to avoid the grocery store, and had found food to be in limited supply at stores.
- Home food preparation. When food availability improved at grocery stores and participants were concerned with limiting exposure to COVID-19, it was also common to report preparing more food at home.
- Smaller portions. A number of participants reported eating less due to financial difficulties and to ensure there would be enough healthy food for their child(ren).
- Meal scheduling challenges. As a result of spending more time at home and changes in responsibilities, participants reported more sporadic eating and feeding of children.

Barriers to Local Retail Food Store Access During the COVID-19 Pandemic

Specific barriers to local food access were also identified based on review of the rich descriptions of challenges encountered by food-insecure participants. The participants described shopping at various food retail stores, including small grocery stores, large grocery stores, and supermarkets. There were 5 themes addressing local food access (Figure 3).

- COVID-19 safety practices. Several participants made comments in relation to concern regarding the transmission of COVID-19 in food retail stores due to limited implementation and enforcement of safety practices. Subthemes regarding COVID-19 transmission included lack of store capacity limits, poor adherence to recommendations for wearing masks, and limited enforcement of physical distancing. Most participants reported that store employees wore masks and followed guidelines for physical distancing, but several comments were made regarding concerns about the practices of other customers or overcrowding.

Table 1. Prevalence of past year food insecurity and past month food insufficiency by sociodemographic characteristics of emerging adult respondents to the COVID-19 Eating and Activity over Time survey in April to October 2020

Characteristics	Overall sample (n)	Past year food insecurity[a], n (%)	*P* value	Past month food insufficiency[b], n (%)	*P* value
Overall	720	216 (30)		92 (12.8)	
Sex			0.02		0.002
Female	447	148 (33.1)		71 (16)	
Male	263	66 (25.1)		21 (8)	
Another sex identity[c]	10	8 (80)		0 (0)	
Age (y)			0.88		0.53
21-24	353	107 (30.2)		48 (13.7)	
25-29	367	109 (29.7)		44 (12)	
Ethnicity/race			0.001		0.02
White	213	47 (22.1)		17 (8)	
Hispanic or Latino	119	33 (27.7)		13 (11)	
Asian American	172	51 (29.6)		22 (12.9)	
Black or African American	130	45 (34.6)		23 (18)	
Mixed or other	85	39 (45.9)		17 (20)	
Parent socioeconomic status[d]			<0.001		<0.001
Low	231	89 (38.5)		42 (18.3)	
Low-middle to middle	265	85 (32.1)		37 (14)	
Upper-middle to high	210	36 (17.1)		10 (4.8)	
Employment status			0.10		0.02
Working full-time	354	99 (28)		38 (10.8)	
Working part-time	114	29 (25.4)		14 (12.3)	
Temporarily laid off or unemployed	162	62 (38.3)		33 (20.5)	
At-home caregiver/not working for pay	66	19 (28.8)		6 (9.2)	
Household receipt of public assistance[e]			<0.001		0.004
No	556	126 (22.7)		60 (10.8)	
Yes	161	87 (54)		31 (19.5)	
Eligibility for free/reduced-price meals[f]			0.19		0.48
No	30	13 (43.3)		6 (20.7)	
Yes	55	32 (58.2)		15 (27.8)	
Living with a child(ren) of your own			0.001		0.005
No	598	163 (27.3)		67 (11.2)	
Yes	122	53 (43.4)		25 (20.8)	
Living with parent(s)			0.008		0.02
No	396	135 (34.1)		61 (15.5)	
Yes	324	81 (25)		31 (9.6)	

(*continued on next page*)

Table 1. Prevalence of past year food insecurity and past month food insufficiency by sociodemographic characteristics of emerging adult respondents to the COVID-19 Eating and Activity over Time survey in April to October 2020 (*continued*)

Characteristics	Overall sample (n)	Past year food insecurity[a], n (%)	*P* value	Past month food insufficiency[b], n (%)	*P* value
Access to a car or other personal vehicle			0.008		
No	138	154 (39.1)		23 (17)	0.10
Yes	581	161 (27.7)		69 (11.9)	

[a]Participants responded to the short form of the US Household Food Security Survey Module. Scores based on the number of affirmative responses were used to define food insecurity (score of 2+).
[b]Participants were asked "In the past month, did you ever eat less than you felt you should because there wasn't enough money for food?" and "In the past month, were you ever hungry but didn't eat because there was not enough money for food?" Food insufficiency was determined by reporting yes to both questions. Four participants did not respond to both questions.
[c]Participants who identified with another sex identity were excluded from the testing of sex differences due to small numbers.
[d]The primary determinant of socioeconomic status was parental educational level, defined by the higher level of either parent. Additional measures of income and employment were used as part of an algorithm to reduce the impact of missing data and to prevent misclassification in ranking socioeconomic status (range: 1-5). Low socioeconomic status was defined as rank 1, middle socioeconomic status as rank 2 to 3, and upper socioeconomic status as rank 4 to 5.
[e]Participants reported receipt of benefits from the Supplemental Nutrition Assistance Program or the Special Supplemental Nutrition Program for Women, Infants, and Children.
[f]Participants were asked to report only if they had a child of their own of age 5+ years.

- Lack of physical safety. Comments were also made by participants with regards to other forms of physical safety concerns in their neighborhood and food stores. These concerns were distinct from concerns about COVID-19 transmission in that they did not relate to preventing illness but to the socioenvironmental context that contributes to health.
- Discrimination in food retail stores. Discrimination in retail food stores was another form of safety barrier reported by several participants who were impacted by acts of racism or xenophobia when shopping. Participants reported concerns about the behaviors of other customers and store employees.
- Store hours and closures. Limited store hours and store closures due to the COVID-19 pandemic and racial justice uprisings were additional barriers to local food access for many of the participants who were interviewed. Finding opportunities to travel to stores that had reduced their hours was a particular challenge for participants who were working or were students. Participants were also impacted by having to travel to stores outside their own neighborhood when several local stores were destroyed by acts of arson and vandalism.
- Limited food availability. In addition to the challenges associated with traveling to a store during operating hours, the limited availability of certain foods at stores was identified as a common problem by food-insecure emerging adults. Participants noted that staple foods such as rice and canned fruits and vegetables were difficult to find, particularly during the early months of the pandemic. Higher prices for other food items, particularly meat products, was another barrier to purchasing a balanced variety of food to eat.

Barriers to Accessing Food Assistance During the COVID-19 Pandemic

Most food-insecure participants had experience with accessing 1 or multiple forms of food assistance. Some participants reported accessing food assistance for the first time during the COVID-19 pandemic, and others had prior experiences. Based on review of their comments, 4 themes were identified and are described here. Figure 4 includes examples of the comments made by participants.

- Qualifying for federal food assistance. Several food-insecure participants made comments in relation to failing to qualify for adequate benefits to support their needs for food. Multiple forms of barriers were identified, including verification requirements, income eligibility limits, and the length of the certification period. Most of the participants were aware of federal food assistance programs (eg, Supplemental Nutrition Assistance Program [SNAP]) and how to apply, but some expressed wariness about reapplying after a previous attempt that had resulted in being declined.
- Locating food pantries and hours of operation. Comments were also made by participants about difficulties with locating a food pantry and time-related challenges in going to a pantry to pick up food.
- Healthy food availability at food pantries. The types of food available at pantries was another form of barrier to their use by food-insecure participants. Participants reported specific concerns about food nearing its expiration, a lack of produce and fresh meats, a lack of health-promoting options, and having little time to prepare complex recipes.
- Safety concerns at food pickup locations. Most participants who reported receiving emergency food assistance indicated that the practices in place were in alignment with recommendations for preventing COVID-19 transmission. However, multiple food-insecure participants had virus-related or other safety concerns about the use of food pantries.

Recommendations for Improving Access to Healthy Food and Food Assistance

Food-insecure participants had several recommendations for improving access to healthy food and food assistance based

Table 2. Characteristics of the subsample of COVID-19 Eating and Activity over Time study participants who completed qualitative interviews in July to October 2020 (n = 33)

Characteristics	n (%)
Sex	
Female	29 (87.9)
Male	4 (12.1)
Ethnicity/race	
Hispanic or Latino	9 (27.3)
Asian American	8 (24.2)
Black or African American	7 (21.2)
White	6 (18.2)
Mixed or other	3 (9.1)
Parental status	
Not a parent	19 (57.6)
Parent of 1+ child	14 (42.4)
Household receipt of food assistance[a]	
No	15 (45.4)
Yes	18 (54.6)
Living situation[b]	
Live alone	3 (9.1)
Live with spouse/partner	5 (15.1)
Live with roommates/friends	6 (18.2)
Live with parents	8 (24.2)
Food insufficiency (in April-October 2020)[c]	
No	9 (27.3)
Yes	24 (72.7)

[a]Participants reported receipt of benefits from the Supplemental Nutrition Assistance Program or the Special Supplemental Nutrition Program for Women, Infants, and Children.
[b]Living situation categories are not mutually exclusive.
[c]Participants were asked, "In the past month, did you ever eat less than you felt you should because there wasn't enough money for food?" and "In the past month, were you ever hungry but didn't eat because there was not enough money for food?" Food insufficiency was determined by reporting yes to both questions.

on their experiences during the COVID-19 pandemic. All 6 of the recommendations made by participants are summarized in Figure 5. The 2 most frequently mentioned recommendations were to more broadly distribute information about emergency food assistance and to provide more produce and other fresh foods.

Broad Distribution of Information About Food Pantries and Free Meal Programs. Several food-insecure participants made comments in relation to the distribution of information, including the importance of using multiple modes of communication. For example, the expense of maintaining a cellular telephone was described as a barrier by 1 participant who had recently experienced food insufficiency and was a parent in a household receiving food assistance benefits. This participant stated, "You see cell phones are such a common thing, but not everybody can afford it and keep up with that bill and have access to get on social media . . . Social media can definitely spread awareness of resources, but I feel like there should be other ways too just because not everybody is on social media . . . like dropping it in somebody's mailbox or just things like that around the neighborhood."

Provide More Fresh Fruits, Vegetables, and Meats. Interest in having access to more fresh food was also mentioned by a number of participants. Participants expressed gratitude for the resources they had received and acknowledged the limited availability of fresh foods but were interested in receiving more healthy food options at pantries. One participant who was a parent in a household receiving food assistance benefits and had recently experienced food insufficiency stated, "I think just helping people have access to more fresh fruits and fresh food, not necessarily the processed food . . . So a lot of people that are in these times that are struggling with money are going to gear towards cheaper processed food . . . So if there was any way that we could figure out how to do that, that would be amazing."

DISCUSSION

This study was designed to inform strategies for improving local food access and food assistance services to better serve the needs of emerging adults during and throughout recovery from public health emergencies. Nearly one-third of emerging adults in our sample had experienced food insecurity in the past year. Furthermore, the results showed disproportionately high prevalences of food insecurity and food insufficiency among emerging adults living with children and those who identified as Black, Indigenous, or a person of color. Many food-insecure emerging adults made changes to their eating and feeding behaviors to cope during the pandemic, but several of the changes could lead to negative health consequences. Despite the use of some measures to reduce COVID-19 transmission in food retail stores, food-insecure emerging adults reported several concerns regarding the implementation of these measures and other notable barriers to local food access (eg, reduced store hours, experiencing discrimination). Barriers to accessing food assistance were also themes among the comments made by the predominately female sample of food-insecure emerging adults; most services were provided in line with guidance for preventing COVID-19 transmission, but factors limiting eligibility for benefits and access to emergency food assistance were identified along with some concerns about food quality, physical distancing, and physical safety at food pantries.

To ensure emerging adults can feel safe in going to local retail stores and accessing healthy food, it is important to address how the implementation and enforcement of safety practices for preventing COVID-19 transmission can be improved. The current study builds on the existing literature in finding that some emerging adults had concerns regarding their risk of becoming infected with COVID-19 while shopping for food. There is an ongoing need to test out and refine public health messaging; state, local, and store policies; and strategies for enforcing store policies designed to promote adherence to evidence-based recommendations for reducing COVID-19 transmission (eg, store capacity limits, mask wearing).[24-26]

Theme	Example quote (participant characteristics)
Highly processed food intake	I think that I make up for fruit by eating baked goods because I have a sweet tooth, but usually, if I have money, I can just buy pineapples and stuff that I really like that is healthy still, but if I don't, I can just go to Walmart or something and just get a bag of cookies or something like that for like two bucks. *(Not a parent, Hispanic, food insufficient, household receives SNAP[a]/WIC[b] benefits)* It [the pandemic] also has increased how much artificial food I have been eating. I don't find as much access to . . . I generally like to eat fruits, vegetables, just things that are not heavily processed, and I have found that, that's not been as readily available in my local grocery stores. This has been interesting to me, and interesting like maybe it's rotting already and things haven't. . . So that's really hard for me to then put money into, so then I feel like my family doesn't get a lot of fresh foods. *(Parent, White, food insufficient, no household receipt of SNAP/WIC benefits)* She's [my niece] been eating a lot more junk food, I guess, because my mom's trying to make her happy and make her more comfortable. So she's been eating a lot of pizza, ice cream, and now she knows how to go into the fridge herself and grab whatever she wants and she loves Hot Cheetos. So it was like, she's eating less healthy. When she was in school she was eating healthier. *(Not a parent, Asian, food insufficient, household receives SNAP/WIC benefits)*
Water intake	So, I only consume water now. I used to buy juice, but then, just with the pandemic, everything . . . I've been trying to decide what I really need versus what I want. *(Not a parent, Asian, food insufficient, no household receipt of SNAP/WIC)* With the kids I try to rotate it with water and more water than anything else. They would have juice here and there, but not as much as they would drink water every day. A lot. *(Parent, Hispanic, food insufficient, household received SNAP/WIC benefits)* Definitely more water ever since COVID. It's just easier and cheaper and you can never go wrong with water. *(Not a parent, Hispanic, food insufficient, no household receipt of SNAP/WIC)*
Takeout food	Sometimes I don't have any money for food or groceries, so I go for the cheapest things and the cheapest things are usually fast food, junk food, and stuff like that. *(Parent, Hispanic, food sufficient, household received SNAP/WIC benefits)* In the beginning I was eating probably more fast food at fast-food places mainly because people were hoarding all the food in stores. So it's hard to find certain parts of making a meal. And then also just wanting to avoid the grocery store in general we would eat out more or order for food to get dropped off whatever the case is. But now I would say I cook more now that there's more availability of food and stuff in stores, so we've transitioned over into cooking more and not eating out as much. *(Parent, mixed/other race, food sufficient, household received SNAP/WIC benefits)* My eating habits have, for sure, gotten worse, to how I considered them to be, I feel like I've just eaten out a lot and just eaten a lot more than I usually do, just because I spend so much time at home and got bored and I feel like eating was my fun thing to do. *(Not a parent, Black, food sufficient, household received SNAP/WIC benefits)*
Home food preparation	Well, it's actually been a little better just because since, well there's restaurants and all that were closed down it motivated me to cook more at home instead of going out. Especially, since I have little ones, I didn't want to be taking them out. *(Parent, Hispanic, food insufficient, household received SNAP/WIC benefits)* Well, because I don't go out as much to eat. So it's just a lot of meals and having to even learn how to cook a little bit at home, and being able to more provide for myself in that sense. *(Not a parent, Asian, food sufficient, household received SNAP/WIC benefits)* So, that means I'm cooking at home more, I'm staying at home more, but when you're done cooking, you get tired of it. So you go buy junk food, and then it's more . . . definitely you only lasts for a certain amount of time where you're trying to eat healthy because you're thinking that, "Oh, this is the time where I could eat healthy, change how you look or feel," but it doesn't have that

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Figure 2. Changes in at-home eating and child-feeding behaviors among food-insecure emerging adults. Themes and examples of quotes from participants in the COVID-19 Eating and Activity over Time interview study from July to October 2020.

Theme	Example quote (participant characteristics)
	motivation and where it takes you to that point. *(Not a parent, Asian, food insufficient, household received SNAP/WIC benefits)*
Smaller portions	So now my daughter's growing up more, she's starting to eat more and so I have to cut what I need to eat a little bit more for her . . . my 4-month-old is still on formula, so that doesn't really affect him. *(Parent, Asian, food insufficient, household received SNAP/WIC benefits)* About the same amount of meals. I mean, they're not as big as how they were before, but about the same amount of meals. *(Not a parent, Hispanic, food insufficient, no household receipt of SNAP/WIC)* I feel like on my part as an adult, yes, I reduce a lot of like, trying to eat less than I used to eat before, just because I want my kids to eat enough and don't feel like they have ate enough. I want them to feel full [until] the next meal I'm preparing. *(Parent, Hispanic, food insufficient, household received SNAP/WIC benefits)*
Meal scheduling challenges	Our schedules were not aligning, I was still working. So I'm working, I'm studying for nursing. Now she has online classes that I got to figure out and try to help out. And sometimes my sister has her. Sometimes my mom has to watch her. So they're feeding her at different times as well. I can't feed her on time as I should and wish I could because on those hours she's usually in school with a consistent schedule and because she was doing online classes because of COVID it messed up her eating schedule. *(Parent, Black, food insufficient, household received SNAP/WIC benefits)* We're a lot more sporadic with our eating. We used to try and have scheduled meals like breakfast, and then we do a lunch. Usually my child and I would be alone for dinner and we'd have a smaller meal. But now it's, created a very lax relationship with eating in that sense . . . we've kind of changed from eating on a schedule, to now I feel like it's just kind of a free for all . . . we're always home, and so to have a distinct meal time has become very strange. *(Parent, White, food insufficient, no household receipt of SNAP/WIC)*

[a]SNAP = Supplemental Nutrition Assistance Program.

[b]WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

Figure 2. *(continued)* Changes in at-home eating and child-feeding behaviors among food-insecure emerging adults. Themes and examples of quotes from participants in the COVID-19 Eating and Activity over Time interview study from July to October 2020.

Most participants were satisfied with the efforts made by retail food stores to require that employees follow safety practices and invest in physical barriers to protect customers and cashiers from transmission of COVID-19 in checkout areas. However, participants reported concerns about overcrowding, lack of directional signage and guidance around physical distancing, and the poor adherence to guidelines for mask wearing by other customers. These findings are in line with an observational study that found fewer than half of customers use face coverings at grocery stores and reports of demonstrations against the use of masks, but little is known about the extent to which customers follow other guidance issued by the Centers for Disease Control and Prevention for limiting their exposure to COVID-19 in stores.[27-29] The development of strategies that encourage customer compliance with safety practices and policies that support retailers in enforcing compliance could benefit persons who experience food insecurity and have very limited or no funds for food delivery.

The role of structural racism in food insecurity is important to address in building understanding and working to reduce the disproportionately high prevalences of food insecurity and food insufficiency among emerging adults who identify as Black, Indigenous, or a person of color.[5,30,31] Findings of the current study aligned with extensive evidence from prior studies documenting stark ethnic/racial disparities in rates of food insecurity among US populations, and an urgent need for research to address gaps in the evidence on how the processes of racism that are embedded in the policies and practices of society and institutions are directly contributing to food insecurity.[3,32-34] The current study extended prior studies by providing evidence of experiences of interpersonal racism, which create barriers to healthy food access for food-insecure emerging adults. Interview participants of diverse ethnic/racial backgrounds reported on several forms of discrimination (eg, excessive monitoring and verbal harassment tied to ethnicity/race and xenophobia) they had experienced while shopping in food retail stores and how concerns about discrimination had influenced how their households managed shopping for food. Findings of the current study were in line with a small number of prior studies that have described experiences of interpersonal racism and food insecurity among emerging adults and households with children.[12,35,36] Prior studies have focused on discrimination in workplaces, schools, and courts that can plausibly be linked to greater food insecurity by pathways involving lower wages, lower rates of promotion, poorer job security, and higher rates of incarceration.[35,36] Future research is needed to inform how best to prevent the

Theme (subthemes)	Example quote (participant characteristics)
COVID-19 safety practices (lack of store capacity limits, poor adherence to recommendations for wearing masks, and limited enforcement of physical distancing)	For the most part most of the stores don't let you come in without a mask. But I've seen people who, as soon as they walk in, they just take it [their mask] off. And as soon as they're going to pay, they put it back on. *(Not a parent, Hispanic, food insufficient, no household receipt of SNAP[a]/WIC[b])* Just the overcrowding in the stores and some people don't really care to follow the rules, so it's, I guess, it's other people that make it harder . . . Maybe having some workers actually keeping people to follow the rules. For example, the stickers on the ground that's basically showing you, "This is six feet apart." Maybe keeping buyers in check, I guess. *(Parent, Hispanic, food sufficient, household received SNAP/WIC benefits)* I wish there was more signs that showed an image of how a face mask is supposed to be worn because especially when I would go to Target, Walmart, there's a lot of people that are just wearing them under their nose and it's really frustrating because I don't feel brave enough to say, "Oh, you're not wearing it right," or just addressing it . . . I think that's the job of the employees or the establishment. *(Not a parent, Hispanic, food insufficient, household received SNAP/WIC benefits)* I asked a woman, she came and she did not wear a mask and she stood right behind me and I asked her politely if she can step six feet back from me and my kids. And she got really upset and she started throwing some racial slurs at me. So that was really hard for me. And the cashier didn't say anything. . . . I like that they have on the floor . . . they'll tell you which aisle to go in and they try to keep you one way and try to not have a vigilant clash together, but not all the customers listen to this. *(Parent, Asian, food insufficient, household received SNAP/WIC benefits)*
Lack of physical safety	I have personally had an issue where I was almost robbed at gunpoint and I don't know, Minneapolis is not really as safe. *(Not a parent, White, food sufficient, household receipt of SNAP/WIC benefits)* There was security at the store before it was burnt down [during the May 2020 racial justice uprisings], but they were always on their phones, not paying attention to anything. *(Not a parent, White, food insufficient, no household receipt of SNAP/WIC)*
Discrimination in food retail stores	So I've had people spit on me. I've had people yell racial slurs, call me the *B* word, call me all sorts of words from *A* to *Z*, and just tell me to go back to where I came from . . . now my kids are scared about these people who they don't know is attacking us . . . And so I have to wait to find somebody to

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Figure 3. Barriers to local retail food store access among food-insecure emerging adults. Themes and examples of quotes from participants in the COVID-19 Eating and Activity over Time interview study from July to October 2020.

Theme (subthemes)	Example quote (participant characteristics)
	come, like a sibling or have [my partner] come and watch the kids while I run to the store or Merkel soup store, and just try to get what we can. *(Parent, Asian, food insufficient, household received SNAP/WIC benefits)* Like my whole life, just being a Latina around the community, how people see you, they just judge you by the outlook. They don't know about like if you know how to speak Spanish or not, you know the rules, they just look at [you] like, "Oh, they don't know anything." And that look that they . . . they don't say . . . I know they don't say anything, but that look that they give you is just so uncomfortable that sometimes I end up like not wanting to go to the store because of the same thing. *(Parent, Hispanic, food insufficient, household received SNAP/WIC benefits)* I don't know, usually if me and my mom were to go into ALDIs or something like that by our house there's a security guard, he follows us around like we're going to steal something, even when I'm with my daughter he would follow us around and he would just be watching us. *(Parent, Hispanic, food sufficient, household received SNAP/WIC benefits)*
Store hours and closures	I work 40 hours at a desk job and I'm a full-time student on top of that. Really the time that I can go shopping, those late hours at night that even now Walmart still isn't open half the time after I'm done for the day with homework and work and school. *(Not a parent, White, food sufficient, household received SNAP/WIC benefits)* I think maybe here in my community, just building up the stores back again, because they got burned down and destroyed, maybe that will help a lot . . . In terms of like the local little stores that we have, they open late or they close out really early. I've noticed that since everything happened from George Floyd. They used to close them . . . some of them used to close at 8:00 PM, or 9:00 PM the latest. Now they're closing at 6:00 PM when such as I end up going at like the last minute, like the last five minutes. *(Parent, Hispanic, food insufficient, household received SNAP/WIC benefits)* A couple of the stores are burned down around my neighborhood, so that kind of was a hard problem because there was no food stores around, so I'd have to go and drive, not that far, but into [city name] or something to go get groceries, or to [city name], because that's where the stores would be. If I didn't have a car, I don't know what I would be doing. *(Parent, Hispanic, food sufficient, household received SNAP/WIC benefits)*

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Figure 3. *(continued)* Barriers to local retail food store access among food-insecure emerging adults. Themes and examples of quotes from participants in the COVID-19 Eating and Activity over Time interview study from July to October 2020.

Theme (subthemes)	Example quote (participant characteristics)
Limited food availability	It's really hard, like if we end up going to the store to buy the things that we need, because the store doesn't have it, or just commuting to one store or to another . . . it's because every time that we go out there isn't enough food on the shelves. *(Parent, Hispanic, food insufficient, household received SNAP/WIC benefits)* It's mostly fruits . . . I've noticed that there is not a lot of fruit where I usually go and do my groceries, or the kind of meat that we want to buy. We usually eat more chicken, but sometimes I want to eat like steak, because for a prepared meal, but it's really hard to find something like that. Or if it is, it's just limited, or if there's meat, it's so expensive. I've noticed that the price went up a lot. *(Parent, Hispanic, food insufficient, household received SNAP/WIC benefits)* The thing is that my dad . . . He is on EBT[c]. So, it was definitely really interesting to just see how that all played out, because he's allotted a certain amount of money each month, but then the things that he wanted to buy weren't available. So, I would say that was our biggest challenge, just not knowing where to find the ingredients we wanted or needed and having to resort to other foods I guess. *(Not a parent, Asian, food sufficient, household received SNAP/WIC benefits)*

[a]SNAP = Supplemental Nutrition Assistance Program.

[b]WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

[c]EBT = electronic benefit transfer.

Figure 3. *(continued)* Barriers to local retail food store access among food-insecure emerging adults. Themes and examples of quotes from participants in the COVID-19 Eating and Activity over Time interview study from July to October 2020.

interpersonal forms of discrimination that are occurring in grocery stores and restaurants. More broadly, there is also a need for efforts to identify and enact policies and practices that can dismantle structural racism and reduce disparities in food insecurity.

Results of the current study also extend the literature with regards to what is known about barriers to receipt of food assistance for emerging adult populations. The existing literature focuses on postsecondary students and barriers to eligibility for SNAP and the utilization of on-campus food pantries.[14,37-40] Identified barriers to the use of food pantries include social stigma, insufficient information about pantry use policies, and inconvenient hours.[38] The current study confirmed these barriers are relevant for diverse populations of emerging adults and identified additional challenges that are being experienced during the COVID-19 pandemic. Several C-EAT study participants indicated they had experienced both time-related challenges and difficulties with locating food pantries or other distribution sites. Although prior research has found that most emerging adults have smartphones and are frequent users of social media,[41] C-EAT participants recommended that information about food pantries be distributed via diverse communication channels because not everyone their age could afford the cost of maintaining telephone services. Additional barriers reported by C-EAT participants were also of particular relevance to the COVID-19 pandemic and the recent surges in unemployment and food insecurity within the US population. Specifically, participants in the current study reported that there was not enough food to go around at food pantries and they accordingly had concerns about accessing produce, expired foods, and fighting among customers. It has been recommended that food pantries distribute assembled food bags or boxes (versus having clients select their own foods) when the level of COVID-19 transmission within a community is high.[42] This strategy could potentially promote safety and have a positive influence on nutritional health as there is some evidence that the composition of assembled bags is associated with client diet quality.[43] It was, however, the case that some emerging adults still had fears about COVID-19 infection as a result of how other customers' behaved when they were waiting in line at a food pantry. Additionally, concerns were raised by emerging adults about their ability to prepare the food received or to use it before it expired.

The results of the current study have several implications for improving the accessibility of food assistance for emerging adults. Findings reported here support recent calls for expanding federal food assistance benefits for postsecondary students[14]; the comments made by many emerging adult participants indicated that both students and workers were not eligible for adequate benefits to meet their food needs. Even among households that reported receiving federal food assistance (eg, SNAP), multiple emerging adults

Theme	Example quote (participant characteristics)
Qualifying for federal food assistance	I was getting SNAP[a] for a while, but then once I started working they dropped mine down to $30 a month or something for food stamps. During the pandemic like COVID and all that, once that hit and they started giving out the pandemic EBT[b] or whatever it was, they gave us an extra $100 . . . it still just wasn't enough because now my son wasn't in day care anymore, so where his childcare was providing breakfast, lunch, and two snacks, I had to provide that at home when normally out of my work money I was paying for just dinner and maybe a couple snacks here and there. *(Parent, mixed/other race, food sufficient, household received SNAP/WIC[c] benefits)* I have always been declined any time that I've tried. They always say I make too much money, or this or that. But, like, I mean, I don't make too much money and I like, legitimately need, need help . . . I have applied, but I just, it never works out . . . I, I mean, yeah. I would just say like, if it asks for you money and like, how much you, you know, you work, all that stuff and, I would say just put into account that the money I make doesn't all, you know, like, there's other things like, I feel like they don't, like, account for bills and the fact that people have other things going on. *(Not a parent, White, food insufficient, no household receipt of SNAP/WIC)*
Locating food pantries and hours of operation	So I counted a lot on the food shelf, but once again, I sometimes don't even get to that because I work my 8 hours and then I go, because I live in [city name], so I have to drive all the way to [city name] to drop off my kids and then drive to [city name] to work . . . So we wake up at 4 in the morning to make it, and it impacts our sleep a lot. *(Parent, Asian, food insufficient, household received SNAP/WIC benefits)* Yeah, I mean, I don't even know where a food shelf is around here. The only ones I've ever known are out in [city name]. Or, like, you know, what I would even need to, to use them. So, I mean, I would say that, like, just getting the word out there more, making it more accessible to people and . . . Yeah, just not make it so, I'm not gonna say hard, 'cause I don't really think it'll probably be hard, just not as accessible, I guess I'll just say. *(Not a parent, White, food sufficient, no household receipt of SNAP/WIC)* I just think just knowing the locations, where exactly they are, because sometimes I can like research it online and sort of like, "They're in this place," but when I end up just going, driving through, around it, there's nothing in there, or there's nobody just standing . . . like maybe I'm just going on the wrong time? Or it's just maybe the time that I search it out also, I end up searching it out late, and when I go they're not there. Or maybe I got the wrong information? *(Parent, Hispanic, food insufficient, household received SNAP/WIC benefits)*
Healthy food availability at food pantries	I went to the food shelf around my neighborhood. Once every month you could go, but usually the one that I go to, they run out of stuff most of the time because there's not enough to go around . . . Well, it's kind of like a first come first served kind of thing . . . [I received] older vegetables. Most of them had, not mold on them, but you know when it's getting old? *(Parent, Hispanic, food sufficient, household received SNAP/WIC benefits)* There's things that you might want and you don't get and the challenge with the pantry on campus is that there's no refrigeration and so they can't provide those sort of things. They can do shelf-stable items and that's why occasionally you have the order of produce, and that's just dependent on if they had a donation that week. Definitely those perishable items are normally missing and sometimes can be the most expensive things from the store. *(Not a parent, White, food sufficient, household received SNAP/WIC benefits)* Yeah, definitely. More fresh fruit and vegetables I think would've been really helpful. But I

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Figure 4. Barriers to accessing food assistance among food-insecure emerging adults. Themes and examples of quotes from participants in the COVID-19 Eating and Activity over Time interview study from July to October 2020.

Theme	Example quote (participant characteristics)
	know those are really hard to come by, because it's just more of they are giving it out on donation basis. *(Not a parent, Asian, food sufficient, household received SNAP/WIC benefits)*
Safety concerns at food pickup locations	Actually the food shelf line people have been fighting the last 2 or 3 times we went. No violence, but people like skipping in the line. People like screaming and fighting before it can get started. People are going up in the lines, grab stuff when we're not supposed to, all kinds of different things . . . There needs to be like real enforcement, and I'm not talking about someone yelling, I'm talking about police or something . . . or just maybe like a harsher penalty or something for not following rules . . . my grandma actually died of COVID. *(Not a parent, White, food sufficient, household received SNAP/WIC benefits)* The school was easier and I felt a little safer because it was less people and everybody was wearing masks and you just pull up with your car and they give you the food. At the drive-up one, you get a bag and you're picking food from other bags and you're around all these people. Some have masks. Some don't. *(Parent, Black, food sufficient, household received SNAP/WIC benefits)*

[a]SNAP = Supplemental Nutrition Assistance Program.

[b]EBT = electronic benefit transfer.

[c]WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.

Figure 4. *(continued)* Barriers to accessing food assistance among food-insecure emerging adults. Themes and examples of quotes from participants in the COVID-19 Eating and Activity over Time interview study from July to October 2020.

reported the need to obtain food from local food pantries or distribution sites. These results align with other studies and highlight the importance of ensuring that information about emergency food assistance sites is broadly distributed through multiple communication channels and that sites vary their hours of distribution to address the needs of emerging adults with diverse life situations.[44] Food and nutrition professionals are uniquely qualified to advocate for expanding food assistance benefits, complete screening to identify persons in need of services, and develop strategies for improving the supply of nutrient-dense fresh foods at food pantries. For example, evaluation efforts could determine if establishing networks between emergency food assistance sites is beneficial so pantry clients could be readily directed to an alternate site when fresh food resources are limited. Future studies could further build on the results reported here by conducting research that is focused on the experiences of food-insecure men and identifying food access barriers that may be specific to different types of food outlets.

There are both strengths and limitations to consider in drawing conclusions from the current study. Strengths include the integration of both quantitative and rich qualitative data, the participation of sociodemographically diverse emerging adult participants, and the collection of action-oriented recommendations for policy and programming. The combination of survey and interview data that were analyzed as part of this study allowed for describing the scope and complexity of problems impacting food insecurity among emerging adults. Interview participants included emerging adults with a range of experiences regarding the composition of their households, access to food stores and pantries, caregiving responsibilities, and involvement in the workforce. Despite the many unique aspects of emerging adults' experiences during the COVID-19 pandemic, it is noteworthy that there were common elements that drove their recommendations for how emerging adults could be supported in maintaining health through the coming months of the pandemic and other public health emergencies.

The recommendations reported in this study are likely to be relevant to diverse populations of emerging adults, although

- Broadly distribute information about food pantries and free meal programs (posted flyers, social media, e-mail, mail).
- Allow food pantry clients to visit as often as every 2 weeks, sign up for appointments, or request food deliveries.
- Expand eligibility for federal food assistance to address the diverse life situations of emerging adults (eg, full-time enrollment in postsecondary studies, providing child care for young children).
- Provide more time options for picking up food from school meal programs or offer deliveries and ensure communication of opportunities to families.
- Continue to maintain strong protocols for physical distancing and ensuring client safety at food pantries and distribution sites.
- Provide more fresh fruits, vegetables, and meats at food pantries and distribution sites.

Figure 5. Recommendations for improving access to healthy food and food assistance made by food-insecure emerging adult participants in the COVID-19 Eating and Activity over Time interview study from July to October 2020.

study limitations should also be given attention. Some caution should be used in drawing generalizations because nearly all of the interview participants were living in Minnesota during the pandemic and only 4 participants identified as male. All interviews were completed during the pandemic, and thus it is not possible to fully determine whether some of the barriers discussed by participants may have represented challenges to food access before the US outbreak of COVID-19. Food insufficiency was assessed with reference to the past month; however, the past year time reference included in the survey items used to assess food insecurity may have captured some experiences that occurred prior to the COVID-19 pandemic. Information on educational attainment and receipt of specific forms of food assistance was not collected as part of the C-EAT survey. It is also salient to consider the small sample size for interviews, which did not allow for examining the consistency of themes across subgroups based on parental status or ethnic/racial identity. Furthermore, it is possible the topics raised as part of the semistructured interview guide may have influenced the types of recommendations that were made by interview participants.

CONCLUSION

The results described here demonstrate that much work is needed to improve access to healthy food for emerging adults who experience food insecurity, especially during and in the aftermath of public health crises. The high prevalence of food insecurity among emerging adults who participated in this study and related research suggests the need for action is urgent to protect the long-term health of emerging adults and their families. Action by food and nutrition professionals to develop and evaluate strategies for promoting compliance with guidelines for reducing COVID-19 transmission would help more emerging adults to feel safe and comfortable in shopping for healthy foods and using their food assistance benefits at local food retail stores. Retail stores need to be guided by evaluations of policies that prevent customers from experiencing violence and acts of discrimination and ensure employees are trained to appropriately respond to incidents when they do occur. Additionally, food and nutrition professionals could evaluate if it may be beneficial for stores to have and broadly advertise varied hours that accommodate time for store cleaning but also on some days allow for customers to shop during late evening hours.

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N. Larson coordinated data collection, conducted the analyses, and drafted the manuscript. T. Alexander helped to conduct interviews and complete the content analysis. J. C. Slaughter-Acey, J. Berge, and R. Widome helped to conceptualize the analysis plan. D. Neumark-Sztainer conceptualized the larger EAT study design and oversaw data collection. All authors contributed to the interpretation of results and manuscript revisions.