

Work-Related Factors Associated With Psychological Distress Among Grocery Workers During the COVID-19 Pandemic



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Introduction: During the COVID-19 pandemic, grocery workers experienced new (in addition to existing) work-related stressors that put them at risk for psychological distress. This study uses the job demands-resources theory to identify and describe the job demands and resources associated with grocery worker distress.

Methods: This study analyzed data from 75 90-minute interviews focusing on grocery workers' experiences during the COVID-19 pandemic. During the interviews, participants also answered questions associated with the Patient Health Questionnaire 4, a validated measure of psychological distress.

Results: Overall, the study found that 36% of study participants exhibited mild to severe psychological distress at the time of their interviews, and a greater proportion of young, female, and White participants reported mild to severe psychological distress than did participants in other subgroups. Qualitative data suggest that the prevalence of psychological distress among participants was likely higher at the beginning of the pandemic and resulted from fear of SARS-CoV-2 exposure, conflict with customers, workplace discrimination, increased workload, and designation as an essential worker. Although about half of the participants in the sample said that their employers provided support to improve workers' mental health, the interviews suggest that more could be done.

Conclusions: These findings may lead to opportunities to improve worker well-being during the COVID-19 pandemic and to prepare for future public health emergencies. Proposed strategies include implementing public health measures as advised by infectious disease experts; offering information and training; providing sick leave, long-term hazard pay, higher wages, and mental health benefits; and better distribution of workloads.

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INTRODUCTION

At the start of the COVID-19 pandemic, approximately 2.8 million Americans who worked in supermarkets, grocery stores, and other specialty food retail stores¹ were declared essential workers in frontline industries by the U.S. Department of Homeland Security.² Nearly half of the grocery workers were cashiers,

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stockers, and order fillers³, and many grocery workers continued to interact with customers throughout the pandemic. Grocery workers often did so for low wages, without benefits, and while living in poverty.^{4–6}

Several studies suggest that grocery workers experienced elevated psychological distress during the COVID-19 pandemic because of work-related factors⁷ (see also Mayer et al.⁸; Mayer and colleagues⁹). These factors can be understood using the job demands-resources theory, which posits that both job demands and resources have independent yet related effects on workers' well-being.^{10,11} According to the theory, job demands—defined as the "physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological effort"—exact "costs" that are detrimental to workers' mental health.¹¹ Job resources, or the "physical, psychological, social, or organizational aspects of the job that are functional in achieving work goals," facilitate worker well-being, decrease job demands, and reduce the costs of job demands on workers' mental health.^{12,13} Workers' personal resources—such as resilience and sense of control over their environment—are posited to have benefits similar to those of job resources, but more research is needed to understand how and whether they fit into the job demands-resources theory.¹⁰

Even before the COVID-19 pandemic, grocery workers (and retail workers more broadly) were exposed to job demands associated with poor mental health, such as fatigue, long hours, customer service, and nonstandard work shifts.^{14–16} These and new job demands associated with the COVID-19 pandemic likely intensified existing stressors and could account for the poor mental health outcomes documented by other researchers.^{7,8,17}

During the COVID-19 pandemic, interactions with customers were a key job demand that undermined grocery workers' mental health. Such interactions exposed grocery workers to elevated infection risks^{18–20} that left grocery workers feeling vulnerable²¹ (see also Mayer et al. 2022). The National Grocers Association reported grocery workers were further risking their health and safety "dealing with the difficulty of abiding by, communicating, and enforcing the new and changing rules and guidelines"; they stressed the importance of an ability to remain calm and to "have it together mentally" to focus on taking care of customers.²² However, work conditions were not always conducive to mental health. In a small yet important study of grocery workers from a single grocery store, Lan and colleagues¹⁸ found that grocery workers who were able to consistently practice social distancing at work were at a significantly lower risk of depression or anxiety. Other work has shown that close working conditions in some workplaces

prevented such distancing.²³ Similarly, Mayer et al.⁹ identified an association between poor mental health and perceived workplace safety, with grocery workers feeling frustrated by their management's safety practices—especially as they related to addressing conflict with customers around public safety measures. A broader study examining workplace violence during the pandemic²⁴ found relatively high rates of physical and non-physical violence in retail establishments. It also found that violent incidents were commonly related to enforcing mask mandates among customers.²⁴

Some grocery stores offered job resources that may have protected grocery workers from poor mental health and its antecedents during the COVID-19 pandemic. For example, the Occupational Safety and Health Administration²⁵ issued guidance encouraging employers to implement a number of public health measures to prevent the spread of SARS-CoV-2, including engineering controls (e.g., physical barriers, rope-and-stanchion systems), administrative controls (e.g., self-check kiosks, surface disinfection, customer signage, store occupancy restrictions, scheduling adjustments, increased use of grocery pickup and delivery services), safe work practices (e.g., hand hygiene), and personal protective equipment (e.g., masks, gloves, eye and face protection). Independent studies have since affirmed that grocery stores implemented these public health measures.^{21,23,26} In addition to adopting public health measures to reduce infection risks, some employers offered enhanced services and support to prevent poor mental health among their employees during the pandemic.²⁷ However, a 2020 work health survey of more than 5,000 U.S. employees across 17 industries revealed that over 40% of respondents did not know what resources they could use if they needed emotional support, and most employees felt they did not receive adequate support from their supervisors to manage stress.²⁸

The characteristics of individual grocery workers were also likely associated with mental health outcomes during the COVID-19 pandemic. Past research suggests that, independent of job demands and resources, workers who were younger in age, less educated, and female tended to be more affected by pandemics than workers in other groups, and experienced disproportionate stress, burnout, anxiety, and poor sleep quality.¹⁷ Grocery workers' characteristics may also affect whether and how they experience job demands and access job resources because of occupational segregation, a condition in which demographic groups are over- or underrepresented in specific job roles.²⁹ Occupational segregation by race, ethnicity, socioeconomic status, immigrant status, and other attributes can contribute to disparities in workers' psychological and physical health.³⁰ For

example, during the COVID-19 pandemic, Black, Hispanic, and Asian workers may have experienced poor mental health outcomes because of health disparities in infections and access to treatment, anti-Asian sentiment, and broader societal racism.^{31–34}

This paper adds to the literature on the mental health of grocery workers during the COVID-19 pandemic by using the job-demands resources theory to identify key work-related factors associated with psychological distress. Although other authors have reported on mental health of grocery store workers during the COVID-19 pandemic⁷ (see also Mayer and colleagues 2022; Mayer et al. 2022), earlier studies focused on specific geographies and were restricted to union stores. To the authors' knowledge, this is the first study to explore job demands and resources among a diverse sample of workers from across the U.S. Understanding work-related factors associated with poor mental health outcomes can help identify policies, support, and resources to improve grocery workers' health and well-being.

METHODS

Data for this study came from 75 individual in-depth interviews conducted from May 2021 through June 2022 to learn about grocery workers' experiences during the pandemic. RTI International's IRB conducted an ethics review of this study (STUDY00021716) and determined that it did not constitute research with human subjects according to HHS regulations because the project was conducted during the COVID-19 pandemic with the goal of informing the U.S. federal response during the public health emergency. Interviewers nevertheless used a standard script to obtain informed consent from all participants after explaining the study goals, emphasizing the voluntary nature of the interview and each question, and specified the benefits and risks associated with participation.

Study Sample

At the start of the COVID-19 pandemic, approximately 2.8 million Americans worked in supermarkets, grocery stores, and other specialty food retail stores.¹ The authors aimed to recruit workers specifically from grocery stores and supermarkets (NAICS code 445110) as well as warehouse clubs and supercenters (NAICS code 452111). Within food and beverage stores, cashiers and stockers and order fillers comprised nearly half of all jobs, and workers earned an hourly mean wage of \$14.68.³

Researchers from two data collection contractors led recruitment and conducted interviews for this paper. Both contractors used a screening instrument to identify interview candidates meeting the eligibility criteria: aged

18+ years; worked in grocery stores before the pandemic, during the initial phase of the pandemic (March–May 2020), and at the time of the interview; Black, White, Hispanic, or Asian race/ethnicity; not employed in senior management positions; and interfaced with the public for at least 75% of their shifts. Both contractors also used maximum variation sampling^{35,36} to recruit a sample diverse by race/ethnicity, age, gender, union status, and geographic location. The study funder set minimum recruitment targets by race/ethnicity, age, and gender with the goal of recruiting a similar number of individuals from subgroups of these demographics (e.g., each racial/ethnic group; younger, middle-aged, and older adults; men and women). Although there were no recruitment quotas by geography, the final sample includes participants from every major U.S. region and from states that adopted a variety of public health measures.

At the time of recruitment, grocery store workers had access to the COVID-19 vaccine, as they were classified as essential workers and were included in Phase 1B of the vaccination rollout plan. Throughout the study period, policies such as mask mandates, social distancing measures, and testing and quarantine protocols were already implemented. However, public safety guidelines varied across states and employers, and as such, grocery workers in the study sample often had different experiences. Despite these differences, all study participants were required to have had experience working in grocery stores during lockdown periods.

Processes used to recruit participants differed across data collection contractors. The first data collection contractor recruited for the initial set of 30 interviews by administering the screener directly to interview candidates who were identified in one of three ways: 1) through existing local contacts, 2) through snowball recruitment using other participants, and 3) through in-store direct recruitment. The second data collection contractor recruited for the remaining 45 interviews used a national recruitment firm. The national recruitment firm recruited 39 eligible interview candidates by distributing the screener to 24,491 individuals in their recruitment network. Because the national recruitment firm was unable to recruit the requested number of Asian workers, the authors used targeted outreach to identify the remaining 7 interview participants. The second data collection contractor partnered with a community-based organization that served Asians and used community health workers to distribute the screener to workers who had an existing relationship with the organization. [Figure 1](#) depicts a timeline of the recruitment and data collection for each phase of the project.

Although the recruitment plan called for a total of 80 interviews across data collection contractors,

| Phase | | Activity | | 2021 | | | | | | | | 2022 | | | | | |
|----------------------------------|------------------------|----------|--|------|------|------|-----|------|-----|-----|-----|------|-----|-------|-------|-----|------|
| | | | | May | June | July | Aug | Sept | Oct | Nov | Dec | Jan | Feb | March | April | May | June |
| COVID-19 vaccine newly available | Recruitment | | | | | | | | | | | | | | | | |
| | Data collection (n=30) | | | | | | | | | | | | | | | | |
| Delta variant | Recruitment | | | | | | | | | | | | | | | | |
| | Data collection (n=38) | | | | | | | | | | | | | | | | |
| Post-Delta variant | Recruitment | | | | | | | | | | | | | | | | |
| | Data collection (n=7) | | | | | | | | | | | | | | | | |

Figure 1. Recruitment and Data Collection Timeline.

Note: From January to April 2022, the authors paused recruitment and data collection while we identified a community-based partner and set up a contract with them for recruitment and translation services.

recruitment of Hispanic and Asian participants remained a challenge, even after the community-based organization was engaged. The funder agreed to stop recruitment after 75 interviews because of the recruitment challenges and after determining through ongoing team debriefings that interviews were no longer revealing new insights (i.e., saturation had been reached).

The large sample size of 75 participants, inclusive of Black, Hispanic, and Asian grocery worker populations, is a noteworthy strength of this study. However, this study was not designed to yield generalizable insights or statistical data that accurately reflected the experiences of all grocery workers during the pandemic. Instead, the study focused on recruiting a large and diverse enough sample to capture a variety of grocery worker attitudes, behaviors, and experiences to inform the immediate COVID-19 response and future research and workplace practice.

Measures

Five trained qualitative researchers participated in an internal training to review the process of obtaining consent and go through the interview guide, which was developed in collaboration with the study funder and piloted using two interviews. The researchers then facilitated the online interviews using a standard script for obtaining informed consent and an interview guide with probes. The final guide used open-ended qualitative interview questions to explore the following topics associated with job demands and resources. This article's Appendix Material provides a comprehensive listing of all interview questions included in the guide.

- Work experience during the COVID-19 pandemic
- Safety and prevention perceptions

- Vaccine-related knowledge, attitudes, and health behaviors
- Information needs and recommendations related to SARS-CoV-2 and COVID-19
- Workplace violence (defined as any verbal abuse, threat or intimidation, actual physical attack, or property damage)
- Discrimination at work (defined as whether the participant or a coworker had been treated badly at work because of race, cultural, gender, where they were from or anything else about one's identity, how they look or how they speak)

After interviewers had asked all the open-ended questions in the interview guide, they administered the Patient Health Questionnaire 4 (PHQ-4), a validated depression and anxiety screening tool.³⁷ The PHQ-4 allows for ultra-brief and accurate measurement of core symptoms of depression and anxiety by combining the 2-item measure for depression (PHQ-2) and a 2-item measure for anxiety (Generalized Anxiety Disorder [GAD]-2), both of which have independently been shown to be valid screening tools.^{37,38} To complete the PHQ-4, participants report how often they experienced the following problems over the last two weeks: *feeling nervous, anxious, or on edge; not being able to stop or control worrying; feeling down, depressed, or hopeless; and having little interest or pleasure in doing things*. Participants can respond *not at all* (score=0), *several days* (score=1), *more than half the days* (score=2), or *nearly every day* (score=3).

During each interview session for the current study, interviewers displayed the PHQ-4 questions and response options using Zoom's screenshare feature, and participants read the questions and provided verbal

responses. The authors then summed the item-level scores to compute an overall PHQ-4 score of psychological distress ranging from 0 to 12.

There are several accepted approaches for interpreting PHQ-4 scores that are recognized in the literature. Kroenke and colleagues³⁷ suggest interpreting the scores as follows:

- No psychological distress (0–2)
- Mild psychological distress (3–5)
- Moderate psychological distress (6–8)
- Severe psychological distress (9–12)

Other researchers have suggested alternative interpretations, with summed scores of 6 or more indicating yellow flags and scores of 9 or more indicating red flags that should prompt clinical evaluation.^{38,39}

For this study, participants were dichotomized into 2 groups consistent with Kroenke et al.³⁷: distressed (scores of 3 or more) and non-distressed (scores of 0–2). This choice was made for several reasons: (1) Even if participants' symptoms of distress did not reach the threshold of warranting clinical evaluation (i.e., scores of 6 or more), the authors thought they could nevertheless be related to the work-related stressors that the authors aimed to study (i.e., nonclinical levels of psychological distress can escalate to clinical levels if left unaddressed); (2) the authors administered the PHQ-4 between 1 and 2 years after the pandemic started, at which point the expected psychological distress would have declined; and (3) the small number of participants in this study prevented stratifying the sample using a greater number of categories.

Most of the interviews were conducted in English and professionally transcribed. Interpreters joined interviews conducted with Asian participants recruited by the community-based organization to translate between English and the participants' native language of Khmer as needed. For the interviews with an interpreter, the research team prepared detailed notes based on the audio recordings. Interviews typically lasted 60–90 minutes each, and participants received \$60 compensation for their time. Observers from the study funder listened in on 8 interview sessions with participants' knowledge.

Analysis

The authors used Rapid Turn-Around (RTA) qualitative data analysis⁴⁰ to identify work-related factors associated with psychological distress from all 75 interviews completed. RTA qualitative data analysis is one of several rapid methods that have grown in popularity as audiences for research studies increasingly seek more timely findings

to make decisions and inform interventions,^{40,41} particularly during health emergencies.^{42,43} As summarized by Taylor and colleagues,⁴⁴ researchers can use rapid methods to save time on various qualitative tasks: data collection,⁴¹ data management,^{45–47} data summarizing and coding,^{46,48} and distilling conclusions from the dataset.⁴⁹ RTA analysis approaches are suitable when the time available for analysis is limited to weeks or months and formal qualitative coding (e.g., using qualitative data analysis software) would be time and/or cost prohibitive.^{45,50} This study was supported using just-in-time funding, which came with the expectation of providing findings urgently to inform new communications and resources for employers and workers for the U.S. COVID-19 response. Although RTA qualitative data analysis does not provide insights as rich and nuanced as thematic analysis and may not be appropriate for some research questions, one study comparing RTA analysis with traditional thematic analysis to distill findings for a health service evaluation yielded similar findings.⁴⁴ RTA analysis has been deployed rigorously and led to high-quality influential published research.^{51–53}

Five authors of this study used RTA analysis to distill study findings. These analysts were employed by the second contractor hired to complete the study. The lead analyst who trained and coordinated the team was a PhD-level sociologist specializing in qualitative research with over ten years of experience. The remaining analysts had a minimum of 15 years of experience conducting applied public health research, with a focus on qualitative methods. All analysts were women but varied in age, race or ethnicity, and education. All had the equivalent of a master's degree or more.

The RTA analysis process for this study entailed several steps. First, interviewers created a template to condense and summarize participant responses to the interview questions. This template listed topics in the interview guide and provided space for analysts to summarize participants' responses to the interview questions in a bulleted format. Analysts could also use the space to record compelling quotes from the interview and non-verbal observations relevant for interpreting participants' responses. The template also included an "other" section to capture data that did not align well with the interview topics. The template also included a header where analysts could record key information about the interview (e.g., interviewer, interview date, and participant identifier) so that the information in the template could later be linked with a separate file containing participant characteristics obtained during screening.

Second, analysts worked independently to pilot the initial template using the same interview transcript. They reviewed the complete interview transcript, drafted

bullets for each topic, and populated the header. After piloting the template with the first transcript, they met to propose changes to make the template easier to use (e. g., renaming or reordering topics, clarifying instructions) and align on the level of detail used when summarizing participants' responses. The analysis team repeated this exercise with a second transcript, at which point they agreed that the template was final and they had reached alignment in their approach.

Analysts then independently completed templates for the remaining 73 interview transcripts. After all transcripts had been summarized using the template, they matrixed information from the completed templates using Excel.⁵⁴ Whereas the completed templates summarized all interview responses from a single participant, the matrices allowed the analysts to quickly and systematically investigate similarities and differences in responses across participants.^{55,56} The Excel file contained summarized data from each interview in the rows and participant characteristics (gender, age group, race/ethnicity, and COVID vaccination status) and PHQ-4 scores in the columns. This matrix format allowed the authors to filter the data by distress level and identify the patterns reported here.

Analysts independently reviewed the Excel matrices to identify initial themes, met to discuss and organize the themes, and then expanded upon and finalized the themes by going back-and-forth between the matrices and original transcripts. Themes are generally introduced based on the approximate number of participants to which they apply: a few participants (less than 25%), some participants (25%–75%), or many participants (over 75%). Although quantifying qualitative findings is a contested practice that some qualitative researchers regard as universally inappropriate, numbers can be helpful for understanding patterns within a sample, characterizing diversity, revealing new insights, and providing evidence for findings, particularly with relatively large samples like in this study (see Maxwell⁵⁷; Neale et al.⁵⁸ for helpful summaries). Readers should nevertheless approach numbers with caution, as the interviewers did not phrase questions the exact same way with each participant, qualitative research like this study is not intended to be generalizable, and some responses can be difficult to classify as consistent or inconsistent with any given theme because of the unstructured nature of this data.

RESULTS

Table 1 shows distress levels, as indicated by the PHQ-4, by participant characteristics. Because the study sample was not chosen to be representative, subgroup

differences in PHQ-4 scores reported here should not be generalized to all grocery workers. Overall, 36% ($n=27$) of participants experienced mild to severe psychological distress at the time of the interview. The average PHQ-4 score observed among individuals who were mildly to severely distressed was 6.48. PHQ-4 scores varied across data collection phases, with mean scores of 2.63 (mild distress) during the first phase of data collection coinciding with the rollout of COVID-19 vaccines, 3.16 (mild distress) during the second phase of data collection coinciding with the Delta variant, and 1.83 (no distress) during the final stage of data collection occurring about 9 months after the Delta variant first emerged. A greater proportion of younger participants (ages 18–34) reported mild to severe distress (57%, $n=16$) than older participants (25%, $n=5$ for ages 34–49 and 22%, $n=6$ for ages 50 and over). More than twice as many female participants reported mild to severe distress (49%, $n=19$) compared with male participants (22%, $n=8$). Forty-one percent ($n=9$) of White participants, 38% ($n=8$) of Hispanic participants, 32% ($n=6$) of Black participants, and 31% ($n=5$) of Asian participants reported mild to severe distress. Participants' distress levels in the sample were nearly the same regardless of vaccination status or if the participant had SARS-CoV-2 infection before the interview. Although 64% ($n=47$) of the sample were assessed as having no distress at the time of the interview, even non-distressed participants explained to the research team that they had been diagnosed with and treated for mental health problems during the pandemic.

Table 2 lists 5 work-related factors associated with psychological distress, described further in the following subsections.

Many participants in both the distressed and non-distressed groups expressed concerns, anxiety, and stress relating to fear of exposure to SARS-CoV-2 at work (Table 2). However, a greater proportion of distressed participants commented on fear of exposure to SARS-CoV-2 than non-distressed participants. Participants in both groups relayed fear of exposure in terms of their own well-being and also that of their loved ones, especially if someone they cared for was particularly vulnerable to the effects of the virus because of age or health status. One participant presenting as negative for distress at the time of the interview nevertheless explained that she took time off in April and May of 2020 because of stress: *“And just coming to work every day, being around the public not knowing... I mean, we had to wear masks and gloves and we sanitized everything, but still, it was just like you don't know who has it. So... it just kind of freaked me out, I think.”*

Participants in both groups generally described their fear of exposure to SARS-CoV-2 at work as greatest early

Table 1. Participant Characteristics and Psychological Distress (N=75)

| Characteristic | Total N (Column %) | No distress (n=47) | | Mild to severe distress (n=27) | |
|------------------------|--------------------|--------------------|-------|--------------------------------|-------|
| | | N | Row % | N | Row % |
| Age range | | | | | |
| 18–34 years | 28 (37%) | 11 | 39% | 16 | 57% |
| 35–49 years | 20 (27%) | 15 | 75% | 5 | 25% |
| 50+ years | 27 (36%) | 21 | 78% | 6 | 22% |
| Sex | | | | | |
| Male | 36 (48%) | 28 | 78% | 8 | 22% |
| Female | 39 (52%) | 19 | 49% | 19 | 49% |
| Race/ethnicity | | | | | |
| Asian | 16 (21%) | 10 | 63% | 5 | 31% |
| Black/African American | 19 (25%) | 13 | 68% | 6 | 32% |
| Hispanic/Latinx | 16 (21%) | 10 | 63% | 6 | 38% |
| Mixed race/ethnicity | 2 (3%) | 1 | 50% | 1 | 50% |
| White/Caucasian | 22 (29%) | 13 | 59% | 9 | 41% |
| Union status | | | | | |
| Member | 23 (31%) | 16 | 70% | 7 | 30% |
| Nonmember | 52 (69%) | 31 | 60% | 20 | 38% |
| Vaccination status | | | | | |
| Yes | 59 (79%) | 37 | 63% | 21 | 36% |
| No | 16 (21%) | 10 | 63% | 6 | 38% |
| Had COVID-19 | | | | | |
| Yes | 21 (28%) | 13 | 62% | 8 | 38% |
| No | 52 (69%) | 32 | 62% | 19 | 37% |
| Unknown | 2 (3%) | 2 | 100% | 0 | 0% |

Note: One participant did not provide responses to the PHQ-4 and is not included in the columns stratified by distress level. PHQ-4, Patient Health Questionnaire 4.

in the pandemic—when the least was known about the virus and how it spreads, and public health guidance was still evolving. Participants in the distressed group commented on how much the uncertainty of the pandemic—with respect to the science of how SARS-CoV-2 spreads and affects health and store operations—affected them more frequently than participants in the non-distressed group. One distressed participant explained:

It was just stressful because you didn't know what you were about to walk into that day. You didn't know if there were going to be like a hundred call outs, you didn't know who was going to be staffed. You didn't know the latest news on who was being quarantined, who caught it; you didn't know what the situation was going to be with the customer that day, and maybe we got a customer that was an anti-masker and the situation that was going to arise from that. It was all very unpredictable.

Fear of the health consequences of SARS-CoV-2 exposures was compounded by participants' concerns regarding the financial hardship they risked if diagnosed

with COVID-19. Some distressed participants and a few non-distressed participants stated their employers did not provide any paid sick leave or offered it only on a limited basis (e.g., for employees who could provide proof of a positive SARS-CoV-2 infection). Interviewers heard that participants and their coworkers lied about their COVID-19 symptoms being fully resolved so they could quickly return to work. One participant candidly shared, “*We had several people who were sick and lost their taste and smell and all that stuff, but they still worked because they couldn't take off because they couldn't afford to go to the doctor to get a doctor's note.*”

Findings revealed differences between distressed and non-distressed participants regarding the public health measures adopted by their stores to stop the spread of SARS-CoV-2, such as thorough store cleaning, use of hand sanitizer, sanitization of shopping carts and counters, and social distancing and masking. Nearly all participants endorsed these public health measures, but distressed participants more frequently cited interest in employers providing COVID-related information (e.g., on the virus and its spread, on vaccination) and training (e.g., on public health measures in general, on cleaning

Table 2. Work-Related Factors Associated With Psychological Distress

| Work-related factor and description | Commonality among participants (N=75) | | Exemplary quote |
|--|---------------------------------------|-----------------------|--|
| | Distressed (n=27) | Non-distressed (n=47) | |
| Fear of exposure to SARS-CoV-2 Concern about being exposed to SARS-CoV-2, whether because of risk to oneself (e.g., health outcomes, lack of paid sick leave) and/or loved ones | Many | Some | ... Just being out there in that sea of people, and everyone around you all the time, and you're just really worried about getting your family members sick. |
| Conflict with customers Conflict with and mistreatment by customers, often in relation to workers enforcing public health measures required by employers | Some | A few | Sometimes I needed a moment and just take a breather outside because getting yelled at by customers when I don't really have much control over it was definitely a bit stressful. And I'd come home, and I'd just be exhausted, and I was like, "I got to do this again tomorrow." |
| Discrimination Being treated badly at work because of race, culture, gender, origin, or anything else about workers' identities | Some | A few | It just feels like my race is just something that just bothers people. I don't know why, but it just does so that just ends up having some guests disagree with me sometimes, even when I don't even talk to them. |
| Increased workload Increased volume and pace of work resulting from workforce shortages, new infection control responsibilities, and scheduling disruptions | Many | Some | ... And there are times I had to do every department in one day, because some people wouldn't be able to do it, some people would call out and again, [it was] very stressful. |
| Designation as an essential worker Labeling as an "essential worker," the obligations and risks implied, and the feeling of diminished meaning of the title | Some | Some | The emotional and the mental part of it [being declared "essential"] really took such a toll on everyone, especially in the beginning, you literally felt like you were going into the war zone every day. . . |

Note: Themes are reported based on approximations of the number of participants to which they apply: a few participants (less than 25% of the group), some participants (25%–75% of the group), or many participants (over 75% of the group). Any one interview could provide evidence to support multiple themes. One participant did not complete the PHQ-4. PHQ-4, Patient Health Questionnaire 4.

and disinfecting) than non-distressed participants. Consistent with Bakker and Demerouti's notion that resilience and sense of control may be personal resources,¹⁰ the authors found non-distressed participants seemed to accept more the notion that, if they followed public health precautions, they had done all they could to avoid infecting themselves and others. One non-distressed participant explained, "I don't want to live in fear, so I try to console myself that you just do what you can, social distance, keep your hands clean, mask, all that, whatever protection needs to be done. So, I did all that."

Participants in both the distressed and non-distressed groups expressed concerns about their interactions with customers during the pandemic, but distressed participants commented on conflict with customers more frequently than those assessed as having no distress (Table 2).

Customers who disregarded stores' mask requirements and were noncompliant with social distancing

signage contributed to participant distress. As customer-facing employees, participants were often responsible for enforcing mask mandates and social distancing protocols, regardless of their personal feelings about the public health measures. Some customers did not want to comply with store policies and other public health measures, which put them in conflict with study participants:

Sometimes I needed a moment to just take a breather outside because getting yelled at by customers when I don't really have much control over [public health protocols] was definitely a bit stressful. And I'd come home, and I'd just be exhausted, and I was like, "I got to do this again tomorrow."

Some customers reportedly rebuked public health measures in verbally abusive ways. If participants or their coworkers tried to enforce policies (such as mask mandates), customers occasionally pushed back. Other

than refusing customers service, participants and their coworkers often had little recourse to address customer abuse. One participant explained:

I had a cashier who was ringing [a female customer] up and the cashier didn't feel comfortable ringing her up with her mask down. So, she said, "You got to keep your mask on if you want me to ring you up." And the lady [customer] refused. So, after some push-back or whatever, she finally put it on. And when the cashier finally finished up her transaction, [and] gave her her bags and stuff, [the customer] pulled [her mask] down and called the cashier the B-word and pretty much cursed her out on the way out the door.

Conflict with customers occasionally became so intense that participants feared they would become victims of physical violence. Although only one participant in the distressed group reported experiencing physical violence with a customer, other participants described verbal conflicts as escalating to the point where the police were called and intervened:

There's been some customers that have refused to wear masks, and I've offered to give them a mask and they don't want it. And then I told them that, "It's necessary, you have to have it to shop in our store or we can't help you." And sometimes people have gotten really belligerent and upset and yelled at the manager. Sometimes we've had to call the police.

Conflict with customers also arose from pandemic-related disruptions in supply chains that affected product availability, product prices, and the quantities of high-demand products available for purchase. Although participants had no control over supply chains, they often bore the burden of customer frustration with limited supplies and purchase quotas:

We were also running out of everything at the beginning [of the pandemic] because everyone was just stockpiling and we had to put limits on a lot of our supplies like toilet paper, paper towels, cleaning supplies, and milk and eggs. And so, we got yelled at. I had at least five people threatening me because I wouldn't give them more than two cases of eggs.

Grocery stores and supervisors occasionally took action to help reduce participants' conflict with customers. For example, some stores hired security guards to manage difficult customers or positioned staff at doors to limit customer volume and communicate public

health measures before shoppers entered the store. About one third of participants in the sample nevertheless expressed a desire for additional training and information about how to get customers to social distance or de-escalate conflict with customers. One participant who reported being distressed at the time of the interview commented:

It would have helped to have training on how to deal with hostile customers, because when [stores] enforced the social distancing and everything, a lot of customers were yelling at you, getting closer to us. They were trying to defy the rules. It would have been nice to have training on how to deal with those situations instead of having to call for someone else because sometimes security wasn't available to help us. I think training for that would have helped a lot.

As expected, regardless of race/ethnicity, a greater proportion of participants in the distressed group told interviewers that they had experienced or witnessed violence or discrimination than those in the non-distressed group (Table 2). Also as expected, white participants reported less violence and discrimination than their Black, Asian, and Hispanic counterparts. The most common form of violence for both the distressed and non-distressed groups was verbal abuse by unruly customers, which is consistent with the findings already reported regarding conflict with customers. However, for Black, Asian, and Hispanic participants, this conflict sometimes manifested in both perceived and overt discrimination towards specific racial and ethnic groups with which they were associated. Although discrimination was occasionally evident to participants through explicitly racist remarks, it was more often subtle and described by participants as a feeling or microaggression. One participant explained:

I know the people that have made [racist] comments, and I totally don't make eye contact with them, customer or not. And I avoid them. But no, nobody just came and stopped me and called me the N word or said anything like that. I avoid it and they don't bring it to me because I don't allow them to or give them an opportunity. But it's there. They're there.

In many instances, participants who experienced discrimination reported that they were unable or unwilling to speak up and defend themselves. Participants viewed confronting racism as increasing the risk that conflict may escalate. Absent this confrontation, however, participants who experienced discrimination had to act as

though they accepted treatment that actually upset them. As one Asian participant remembered:

...that would definitely affect my stress level too, because I'd be like, "I don't want to come to work just to get hazed or just get made fun of." I want to go in just to make money, not start any drama. And there's nothing I could do [to fight] back either, because I didn't feel comfortable with yelling back at them or making fun of them, because that's not really the right thing to do and I have no reason to. So, I would really just take it or just force a smile and laugh at them, which was... pretty brutal.

Some participants who experienced discrimination believed that larger societal issues co-occurring with the pandemic fueled verbal abuse towards them. Factors such as the killing of George Floyd and subsequent Black Lives Matters protests, the polarized political environment, and the potential origin of SARS-CoV-2 in China resulted in certain groups being targeted for racial slurs and microaggressions. One Black participant recalled how some customers told her that it was her fault that the pandemic happened and that the Black Lives Matter "thing" would not have happened if there were fewer people like her. In the following passage, an Asian participant recalled a customer standing within earshot, telling another customer that she refused to wear a mask made in China. These references to the broader social and political context within which the COVID-19 pandemic occurred led to heightened distress among workers.

[She] didn't talk to me, but I [was] standing beside her. Another [worker] told [the customer and her companion] to wear masks. The customer said, "I'm not going to wear that mask, because that mask - take a look. It will come from China. The viruses come from China."

Unlike racial discrimination, gender discrimination was mentioned only by a few participants in the distressed group and non-distressed groups. All but one of the participants who experienced gender discrimination were women who felt they were not taken seriously because of their position as a manager or someone doing a stereotypical man's job (e.g., unloading the truck, stocking shelves, or working in the meat market section). It was unclear whether such discrimination was associated with pandemic-related staffing changes or sexist attitudes that predated the pandemic.

The authors did not observe patterns in psychological distress by job title. However, a greater proportion of

participants who were distressed at the time of the interview said that their overall workload increased during the pandemic compared with participants in the non-distressed group (Table 2). Increased workload during the pandemic resulted from two factors: new COVID-related responsibilities and staffing shortages.

For a few participants in both the distressed and non-distressed groups, the demands of their existing roles increased during the pandemic. Demands increased most dramatically in the first few months of the pandemic. For example, participants whose job duties included fulfilling online shopping orders described demand "exploding" during the pandemic, making their work more stressful; one stated that her store received 300–400 online orders per day when the pandemic began, compared with 40–50 per day at the time of the interview (June 2021). A participant who worked in her store's pharmacy reported feeling overworked after starting to administer COVID-19 vaccines during the day in addition to filling prescriptions. Other participants described increased stress associated with enforcing social distancing protocols and mask requirements. One participant shared, *"During the pandemic... we would be outside managing [customer] lines. I'm 4'10, and after a while, did not feel safe out there. So, I asked to be taken off that. I was like, I'm not a bouncer at a nightclub."* Participants generally characterized new work demands as abating, as employers adapted to public health measures and vaccination rates increased.

Having fewer staff at work also increased participants' workload, resulting in more stress in both groups. Many participants in the distressed group and some in the non-distressed group reported some level of distress from having to pick up shifts and responsibilities from sick or quarantined coworkers. Dealing with staff who were out unexpectedly because of COVID-19 also led to participants having less control over their schedules because they needed to come in early, stay late, or work on their day off to assist with coverage. Staffing shortages were not only attributed to employees out sick; some stores intentionally reduced staffing during the pandemic to facilitate social distancing between employees. One participant who worked for a store that implemented this measure said that having fewer people to meet the higher demand in grocery store services created *"a lot of added stress."*

Participants in both the distressed and the non-distressed groups described mixed feelings about being designated as essential workers (Table 2). Participants collectively described feeling fearful, resentful, appreciated, and disillusioned. Often, their responses changed over the course of the pandemic in relation to how they were treated by customers and their employers.

A larger proportion of participants in the distressed group in the sample described being declared essential as "scary," owing to the risk of becoming personally infected or infecting a family member with COVID-19. This fear of infection was fueled by seeing customers shopping who were symptomatic, unmasked, not adhering to social distancing guidelines, or whose households were known to have COVID-19. One participant recalled, "*The emotional and the mental part of it really took such a toll on everyone, especially in the beginning, you literally felt like you were going into the war zone every day.*"

Some participants from both the distressed and non-distressed groups also described feeling resentment after being declared essential. One participant said that she was frustrated "*the whole time*" because people were thanking her for being at work and she was thinking, "*I have no choice but to be here.*" Another participant said that the added responsibility of having the public rely on her caused her to feel overworked, overwhelmed, and stressed, consistent with the previous theme related to increased workload. Several participants expressed frustration that they were required to work without additional compensation, while non-essential workers could stay home and collect unemployment. One distressed participant described the designation of essential worker as misleading after considering the other categories of workers who remained on-the-job throughout the pandemic:

I wasn't essential, I was expendable. I mean, that was pretty much an eye-opener...we're irrelevant and expendable. "Essential" doesn't mean [anything] because we're not essential. Liquor stores aren't essential and that kind of stuff, but they were open. Gun stores aren't essential. Yeah, it's been a very disheartening experience.

In contrast, many participants in the distressed and non-distressed groups described feeling "*appreciated*," "*honored*," and a sense of service to their community after being declared essential, especially early in the pandemic. One participant explained, "*It was nice because people don't [normally] really think of retail workers as important people.*" However, for many participants in both the distressed and non-distressed groups, the increased feelings of importance and appreciation for being essential workers waned over time and ended in disillusionment. One participant summarized that, at the beginning of the pandemic, the customers expressed their gratitude to grocery workers, but now "*it's back to 'you're here to serve me.'*" Several participants stated that the removal of

COVID-19 safety protocols in stores and the availability of vaccines made it feel like things had shifted back to pre-COVID times.

Another contributing factor to the perceived diminishing significance of the essential worker title was the loss of hazard pay (also referred to as thank you pay, hero pay, and appreciation pay) over time. Hazard-pay took the form of hourly rate increases, bonus pay, and store gift cards that employers offered participants in recognition of their service during the pandemic. A larger proportion of distressed participants experienced a discontinuation of hazard pay than non-distressed participants and had stronger reactions to the termination of these payments. One distressed participant reflected, "*I thought we were going to get more money, and it was going to last, but after they took that \$2.00 [per hour] away I was like, 'This is ridiculous.' It wasn't cool being an essential worker... I don't feel like it matters anymore, that title ['essential worker'].*" Pay increases were also described by distressed participants as "*pitiful*" and "*insulting*." One participant said that after the increased pay was issued, many of his fellow employees quit "*because they could see how little they were worth to the company.*" Another distressed participant said that her store provided \$2/hour in hazard pay, then increased it to \$4/hour, and then discontinued the hazard pay once the vaccine became available. At the same time, the store delayed raise schedules and did not pay year-end bonuses. She reflected:

So those sorts of things made it seem like they were supporting us, but then they would offset it by taking away other things that normally would've existed...not really hazard pay if you're just going to take away certain things that we're supposed to have...it felt very sleazy towards the end.

Some participants in this study said that their stores provided resources to help them manage their mental health, including employee assistance programs, brochures, signage, access to counselors for free or at a reduced cost, and additional time off. A couple of participants also said their employers offered support in less formal ways—for example, by encouraging them to get rest and take time off or by offering verbal reassurance. Other workers said that their stores did not provide any support to help them cope with stress and anxiety. Among participants who said their employers had not provided mental health support, participants in the distressed group more commonly expressed frustration regarding employers' inaction than participants in the non-distressed group. One such participant remarked,

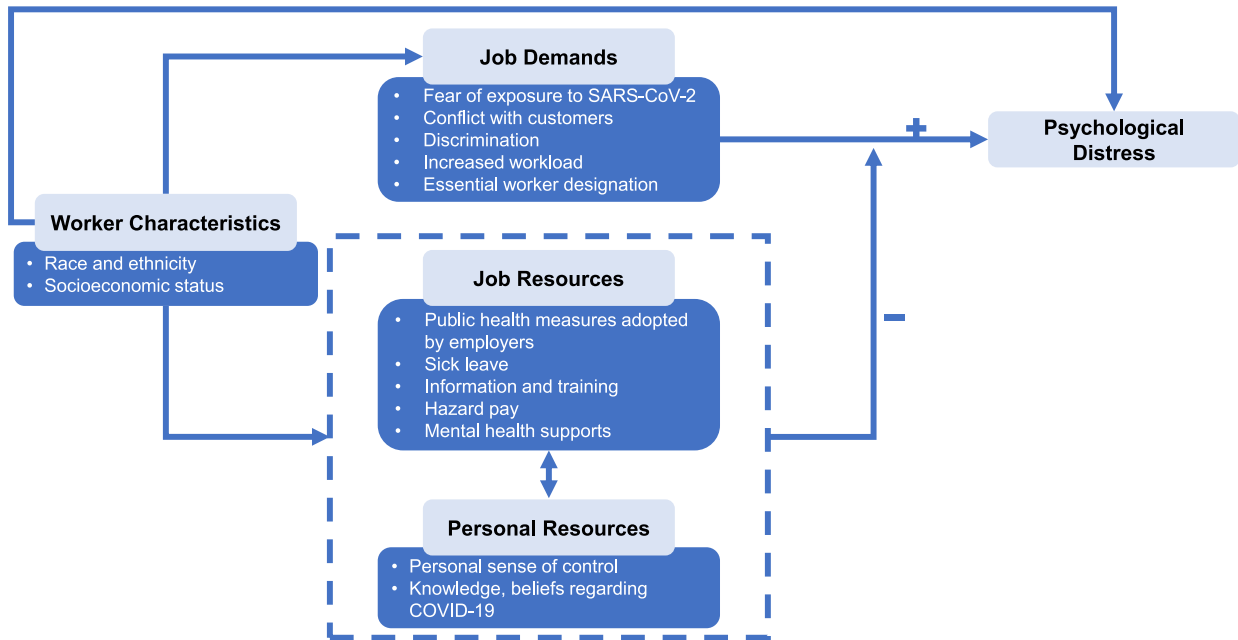


Figure 2.

“They didn’t do anything to support the staff. They just tried to make it look like they were safe for the public.” Another participant shared, *“They never helped... That’s the thing. They didn’t help us in no way, they just added onto the load [stress].”*

When participants did have access to mental health support from their employers, they did not seem to regard the support as particularly helpful. When asked how they managed their anxiety, stress, and concerns, participants commonly described adopting personal self-care strategies (e.g., praying, meditating, distraction, physical activity) rather than using employer-provided services and support.

DISCUSSION

In this paper, the authors analyzed data from 75 interviews with grocery workers to identify work-related factors associated with psychological distress during the second year of the COVID-19 pandemic. Overall, 36% of the 75 study participants exhibited mild to severe psychological distress at the time of the interview, and qualitative data suggest that the prevalence of psychological distress was likely much higher earlier in the pandemic than at the time of the interviews. Participants identified several work-related factors that contributed to their distress, including fear of exposure to SARS-CoV-2, conflict with customers, discrimination, increased workload, and designation as an essential worker. Employer actions and resources and personal attributes and behaviors

helped but did not fully mitigate the negative consequences of these factors. As Figure 2 reflects, this study used Bakker and Demerouti’s job-demand model¹³ to guide the authors’ thinking about grocery worker distress and the observed relationships.

The findings replicate many of the job demands identified by other researchers and offer evidence of additional stressors. Specifically, the interviews indicate that workload, fear of exposure to SARS-CoV-2, and conflict with customers contributed to poor mental health among grocery workers¹⁵ (see also Mayer and colleagues 2022; Mayer et al. 2022). This study also offers evidence that workers experienced anti-Asian discrimination in ways that other scholars have predicted but available evidence did not yet support.⁵⁹ To the authors’ knowledge, this is the first study documenting that grocery workers’ designation as essential was largely experienced as an independent job demand that contributed to their distress, as public appreciation for workers and employer remuneration for workers’ efforts declined over time. The psychological toll of feeling unappreciated compounded the real infection risks that grocery workers and other essential workers faced.¹⁹

The findings reflect that job resources, including public health measures adopted by employers, sick leave, SARS-CoV-2- and COVID-19-related information and training, and hazard pay, were appreciated by participants who could access these resources and these may have attenuated the negative effects of job demands on grocery workers’ distress. Consistent with prior research,

the authors found that employer adoption of public health measures was associated with more favorable grocery worker perceptions and feelings of safety.²¹ In addition to improving worker attitudes, employers' commitment to worker health and safety can affect workers' willingness to align their personal behaviors with public health guidance.⁶⁰ However, participants in this study generally called for these resources to be increased and offered on a sustained basis. Contrasting workers who evidenced mild to severe distress at the time of the interview with those who did not, the authors found that participants in the distressed group tended to express a greater desire for employers to provide additional support in the form of information, training, and hazard pay than participants in the non-distressed groups. Because distressed and non-distressed workers reported similar job resources overall, the difference in preferences across groups cannot be explained by employers' actions. Another reason for this dissimilarity may be differences in personal resources across the groups. Although the authors did not ask questions explicitly designed to solicit information on personal resources, nondistressed participants in this study generally commented that once they had acted in accordance with the available information on how to protect themselves from infection (i.e., follow public health measures, including vaccination), there was little reason for them to focus on the risk and fear. Their responses struck as reflective of a broader worldview that mitigated distress by focusing on behaviors within their locus of control, supporting Bakker and Demerouti's¹⁰ proposition that personal resources reduce the effect of job demands on psychological outcomes.

Of note, several job resources that were expected to reduce psychological distress did not seem to do so. Employer-mandated vaccine policies received mixed support from participants, even among those who were vaccinated.²³ The authors suspect that participants did not feel reduced distress in response to stores' mandating employee vaccines because many participants who described fearing exposure to SARS-CoV-2 identified customers as their primary exposure risk. Even though many participants knew at least one coworker who had become sick from SARS-CoV-2, participants were less concerned about exposure from their peers than from customers, perhaps because of knowing which workers had become sick and/or where they worked, which allowed participants to exercise special caution to avoid their ill peers. In some cases, stores provided this information to participants.

Employer support to prevent and treat mental health problems, similarly, seemed to have little effect on

participants' psychological distress, regardless of the type and amount of support employers provided. Consistent with earlier research, participants said that their employers provided enhanced mental health support during the pandemic, including employee assistance programs, free or reduced cost counseling, signage, brochures, and additional time off to mitigate psychological distress.²⁷ Previous research by the American Psychological Association⁶¹ suggests that workers generally want and expect employers to provide mental health support, yet the participants in the study sample who had access to such support did not seem especially enthusiastic about them. It is unclear whether workers' underwhelmed response to mental health support resulted from barriers cited in other research, such as a lack of information regarding the resources, a lack of supervisory support, stigma, or some other factor.^{28,62} Consistent with Bakker and Demerouti's notion of personal resources,¹³ many participants cited their own ways of coping with distress, which could imply that employer support was inadequate and/or that some participants prefer self-care strategies. Regardless, participants who lacked mental health support and were distressed at the time of the interview were more critical of their employers than those who were not distressed.

Finally, these results contribute to the literature by suggesting a possible connection between worker characteristics and job demands-resources theory (Figure 2). Specifically, Black, Asian, and Hispanic participants described to us how larger societal contexts of racism and xenophobia associated with George Floyd's murder and the suspected Chinese origins of SARS-CoV-2 caused them distress and shaped how they experienced a key job demand: conflict with customers. Participants' low socioeconomic status also affected how they experienced job demands (i.e., intensifying fear of exposure that could result in lost wages, their resentment and disillusionment with being declared essential) and job resources (i.e., their dissatisfaction with the loss of hazard pay). Future work might use larger, representative datasets to explore whether and how worker characteristics fit into job demands-resources theory and which characteristics matter most in different contexts.

The results presented here suggest opportunities for employers to improve grocery workers' mental health. In addition to adopting prescribed public health measures, employers can share trustworthy information about future health risks. Although employers may not be able to completely control customers, they can use customer-facing signage and other communications to explain their public health measures, establish customer conduct policies to protect workers, increase staffing and security during emergency events, and

provide training on conflict de-escalation. For the greatest impact, they can combine efforts to address these hazards by enhancing job support, particularly long-term sick leave, hazard pay, higher wages, and training and resources on self-care and mental health treatment. This study's use of RTA qualitative data analysis enabled the authors to quickly distill these practical implications of the study findings and share them with the U.S. government to inform the COVID-19 pandemic response.

Limitations

This study has several key limitations and lessons learned, which could themselves provide content for an entire manuscript focusing on applied research during a public health emergency. One of the study inclusion criteria was that individuals were working early in the pandemic—during lockdown—and at the time of recruitment. It is possible that workers who met these criteria had better mental health than workers who were not employed during both of these times (i.e., the healthy worker effect). The healthy worker effect could have introduced a bias that underestimated the occupational health risks that grocery workers faced during the pandemic.

Another limitation is that interviews were conducted over the span of 1 year, during 3 different phases of the COVID-19 pandemic: shortly after vaccines became available (May 2021–August 2021), during the Delta variant wave and before boosters were available (August 2021–December 2021), and after the Delta and Omicron variant waves (June 2022). The findings suggest that stressors and psychological distress varied across these phases, and likely even before data collection began. For example, fear of exposure to SARS-CoV-2 seemed highest early in the pandemic, when the vaccine was not yet available, scientific understanding of the virus was limited, and it was unknown how to treat the disease effectively. The authors also learned that public appreciation for grocery workers and other essential workers waned over time. The authors relied on the interview participants to share their experiences throughout the pandemic, which may have introduced recall bias among participants interviewed later in the data collection period.

A third limitation is that bias may have been introduced by using different recruitment strategies. For example, individuals identified from a professional recruitment panel may have been more forthcoming in their responses than were workers who were recruited using other approaches. In addition, relying on existing networks may have limited the study's reach, potentially excluded eligible individuals and leading to greater

homogeneity in responses. Similarly, snowball recruitment could have skewed representation towards characteristics of individuals already represented in the study. The study did not systematically investigate whether there were differences in the themes observed according to recruitment approach.

A fourth limitation of this study was the approach to identifying factors associated with psychological distress. Although the sample was stratified to identify themes separately for distressed and non-distressed participants using conservative PHQ-4 score interpretations, distress was assessed only at the time of the interview, and many non-distressed participants described poor mental health, professional mental health diagnosis, and treatment for mental health problems before the interviews occurred. For this reason, the authors felt it was important to present qualitative evidence from participants from both the distressed and non-distressed groups when describing factors associated with work-related distress, so long as participants themselves connected distress to the factors in question. Ideally, measures of psychological distress from all participants at the same point in time to draw clearer contrasts between the distressed and non-distressed groups would have been available.

Recruitment of and data collection from Hispanic and Asian participants was a fifth limitation of this study. Consistent with the purposive sampling design, the authors initially intended to recruit equal proportions of Black, White, Hispanic, and Asian participants to investigate differences in workers' experiences by race/ethnicity. However, it was particularly difficult to recruit Hispanic and Asian participants to take part in the study. Although the authors pursued extra recruitment efforts to reach Asians, who were most difficult to reach, the authors did not achieve the original recruitment goals. These difficulties can be attributed to the relatively small proportion of Asian grocery workers⁶³ and language barriers. Relatedly, interpreters were used in the few instances where the participants were not proficient in English. Interpreters may have influenced how participants understood and responded to the questions and in the understanding of their responses.

Sixth, this study has not fully investigated whether and how heterogeneity in the types of participants and stores recruited relates to the findings presented. Project resources did not allow for systematic assessments of the differences between stores of various types (e.g., based on ownership or products sold), locations, and sizes. Although the authors did look for differences in participants' experiences according to job title, job titles may have masked differences in participants' responsibilities that could relate to distress. Future research based on

larger, nationally representative study samples may allow other investigators to better assess differences in grocery workers' experiences and outcomes according to store and worker attributes.

Finally, some participants in this study may have been reluctant to report psychological distress that they experienced during or before the interviews. The stigma associated with poor mental health is pervasive and affects certain age, ethnic, and racial groups more than others.⁶⁴ In this study, the authors observed that it was particularly difficult to discuss psychological distress with Asian participants, and especially participants who spoke English as a second language. The community-based organization that helped recruit Asians for this study noted that they had found stigma to be prevalent throughout the communities they serve. Censorship of mental health concerns may have been especially likely during interview sessions that included a larger number of individuals—those with an interpreter and with observers from the study sponsor listening in.

CONCLUSIONS

This paper documents that fear of exposure to SARS-CoV-2, conflict with customers, discrimination, increased workload, and designation as an essential worker were job demands that contributed to grocery worker distress during the COVID-19 pandemic. During future public health emergencies, the authors recommend that employers and policymakers continue to reduce hazards to grocery workers' mental health by implementing prescribed public health measures, providing reliable health information to workers, and reevaluating the mental health support they provide. They should also consider whether future public health emergencies may invite conflict with customers and teach workers to prevent and de-escalate such conflicts and manage racism and discrimination—strategies unlikely to fully resolve stressors, but that may help. Employers and policymakers can strengthen these protections from job demands by offering health-supporting job resources, including long-term sick leave and hazard pay, living wages, and training and resources on self-care and mental health treatment.

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DECLARATIONS OF INTEREST

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SUPPLEMENTARY MATERIALS

Supplementary material associated with this article can be found in the online version at [doi:10.1016/j.focus.2024.100272](https://doi.org/10.1016/j.focus.2024.100272).

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