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COVID-19 and mental health of food retail, food service, and hospitality workers

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Abstract

The coronavirus pandemic has taken a detrimental toll on the lives of individuals globally. In addition to the direct effect (e.g., being infected with the virus), this pandemic has negatively ravaged many industries, particularly food retail, food services, and hospitality. Given the novelty of the disease, the true impact of COVID-19 remains to be determined. Because of the nature of their work, and the characteristics of the workers, individuals in the food retail, food service, and hospitality industries are a group whose vulnerability is at its most fragile state during this pandemic. Through this qualitative study, we explored workers' perspectives on the impact of COVID-19 on their mental health and coping, including screening for post-traumatic stress disorder (PTSD) and alcohol use disorder symptoms. Twenty-seven individual interviews were conducted, audio-recorded, transcribed, and analyzed using qualitative content analysis. Four key themes emerged: being infected and infecting others, the unknown, isolation, and work and customer demands. Considering the many uncertainties of COVID-19, workers in these three industries were experiencing heightened levels of mental distress because of where they worked and the already existing disparities they faced on a daily basis before the pandemic started. Yet they remained hopeful for a better future. More studies are needed to fully understand the magnitude, short-term, and long-term effects of COVID-19. Based on this study's findings, programs are critically needed to promote positive coping behaviors among at-risk and distressed workers. Recommendations for employers, occupational health and safety professionals, and policy stakeholders to further support these service workers are discussed.

Keywords

Coping; coronavirus; essential workers; frontline workers; low-wage workers; service workers; vulnerable workers

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Introduction

The coronavirus (COVID-19) pandemic has claimed thousands of lives and its devastating toll continues to increase as shown by the growth from 8,752,794 total cases and 225,985 deaths in October 2020 to 26,277,125 total cases and 445,246 deaths in February 2021 (Centers for Disease Control and Prevention (CDC) 2020a). The death toll and other societal effects of this pandemic are manifested disproportionately across racial/ethnic minority and immigrant groups, a majority of whom are over-represented in low-wage and service occupations (Clark et al. 2020; Tai et al. 2020). Undoubtedly, all industries across the nation have been affected by the pandemic with an estimated 20 million jobs lost in early April of 2020 (Coibion et al. 2020) and a September unemployment rate of 7.9% (Bureau of Labor Statistics 2020). In February 2020, the unemployment rate was under 4% and peaked at approximately 15% in April 2020 (Bureau of Labor Statistics 2020). COVID-19 has significantly impacted particular industries, such as food retail, food service, and hospitality industries (Davahli et al. 2020; Goddard 2020). Contrary to other industries that allow for remote workspaces, individuals working in these industries—many of whom are essential workers who provide services that are vital to maintain critical infrastructures such as food and lodging—face less flexible work arrangements (National Conference of State Legislatures (NCSL) 2021). These service workers face a push-pull dilemma where they must weigh the risks of going to work (e.g., increased exposure to COVID-19, discrimination or violence by going to work) against the repercussion associated with job loss (e.g., medical benefit loss, and financial strain) (Demirovi Bajrami et al. 2020). Given that these workers were already a vulnerable worker group, the heightened stress brought on by COVID-19 can only exacerbate mental distress.

COVID-19 is a form of trauma

The pandemic and subsequent socio-political and economic aftereffects are forms of collective trauma that paradoxically provide shared experiences and at the same time yield a physical and a sense of mental isolation due to social distancing measures (Watson et al. 2020). Collective trauma is defined as a “blow to the basic tissues of social life that damages the bonds of attaching people together and impairs the prevailing sense of community” (Erikson 1991, p. 460). Examples of instances of collective trauma include the Holocaust, Boston Marathon bombing, natural disasters, and terrorist attacks (Holman and Silver 2011; Furman et al. 2016; Holman et al. 2020). This type of trauma is felt by a group and therefore encompasses the psychological, behavioral, and physiological responses of that group (Watson et al. 2020). Collective trauma increases the risk of mental health issues, such as acute stress, adjustment disorder, and post-traumatic stress disorder (PTSD) (Furman et al. 2016; Holman et al. 2020).

Mental health among workers during COVID-19

Since the outbreak of COVID-19, some studies have detailed the mental toll of the pandemic on the general population. Hologue et al. (2020) explored mental distress among 9,687 individuals in the U.S. with no prior history of a mental health condition. They found that 15% and 13% experienced two and three or more psychological distress symptoms,

respectively. Wilson and colleagues (Wilson et al. 2020) surveyed 474 U.S. workers. They found that job insecurity due to COVID-19 was correlated with high depressive symptoms, and financial concern was associated with high anxiety symptoms.

Scholars are beginning to raise awareness about the potential effects of COVID-19 forecasting difficulties (e.g., mental health issues due to uncertainty, financial strain, fear), and offering pathways for alleviation (e.g., changing norms, promoting safer workplaces, increasing tele-mental health) (Cubrich 2020; Jain 2020; Khan et al. 2020; Prakash et al. 2020; Rosemberg 2020). For example, Chen (2020) found that 69% of their tourism and hospitality worker participants rated the pandemic's impact severe enough to suggest the participants could be suffering from symptoms of PTSD (Chen 2020). Lan et al. (2020) found that grocery store workers were over five times more likely to test positive for COVID-19, and have significantly higher rates of anxiety and depression if they had direct contact with customers, compared to grocery workers that were able to consistently maintain social distancing measures (Lan et al. 2020). Others have highlighted the negative mental health impact of COVID-19 on healthcare workers (Shechter et al. 2020; Spoorthy et al. 2020). To date, we lack an understanding of the mental health toll COVID-19 has taken on U.S. service industry workers, such as food retail, food service, and hospitality workers. Considering that those who have faced or are facing adversity tend to be in lower-paying jobs and have physical, mental, and behavioral vulnerabilities to coping with the severe stress of the pandemic, it is critically important to understand their experience so they can be better supported. To address this gap, we qualitatively explored the mental health impact of COVID-19 among workers in the food retail, food service, and hospitality industries.

Methods

This study received exemption approval from an Institutional Review Board (IRB) of the Principal Investigator's affiliated university. The study is aligned with the Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines (Tong et al. 2007). Participants were recruited between May and June 2020, primarily using approved Facebook ads. The ads were targeted based on location (10 U.S. states described below) and age (18 years or older). The ad included a headline, primary text, six rotating images, and a link to the online screening survey on Qualtrics. Eligibility criteria for this study included being: (1) 18 years or older; (2) English-speaking; (3) employed in the food retail, food service, or hospitality industries; and (4) reside in one of the 10 states pre-selected (Arkansas, Florida, Iowa, Louisiana, Michigan, Nebraska, Nevada, New York, South Dakota, and Washington) based on the diversity of coronavirus case counts per 100,000 residents as of April 2020 (cases ranged between 52 per 100,000 residents in Nebraska to 1,133 per 100,000 residents in New York). We categorized these states into three groups based on COVID-19 case counts as of April 2020 (low = less than 150 cases, medium = 150–300 cases, and high = greater than 300 cases per 100,000 residents). The Qualtrics survey screened for eligibility and asked interested participants to provide their telephone number and preferred time of day for contact. In addition to the Facebook ads, we recruited two additional participants through snowball technique. Research staff called and texted participants to schedule the interviews.

Verbal consent to participate in the study and to be audio-recorded was obtained over the telephone before conducting the interview. Interviews lasted between 15 and 30 min (median = 18 min, mean = 20 min). Participants received a \$5 electronic gift card for their time. Audio-recorded interviews were transcribed verbatim. Two interviews were not audio-recorded; the extensive interview notes were taken and then formatted to a question-and-answer transcript form.

Measures

We asked participants about their age, relationship status, education level, country of birth, industry type, current job title, duration in the current job, hourly wage, and work-provided benefits. The interview guide included open-ended questions about experiences and coping mechanisms during the COVID-19 pandemic and had PTSD and alcohol use disorder screening tools.

The Primary Care-PTSD Screen (PC-PTSD-5) (Prins, 2016) was used to assess the incidence of PTSD symptoms attributed to COVID-19. The PC-PTSD-5 is updated from the four-item PC-PTSD (Prins et al. 2004, 2016) to include a fifth question to reflect the diagnostic criteria in the DSM-5. Thus, the five items correspond to (1) intrusion, (2) avoidance, (3) hyperarousal, (4) numbness or detachment, and (5) guilt or distorted sense of blame. Participants responded yes (positive) or no (negative) to the following questions about the COVID-19 pandemic: (1) “in the past month, you have had nightmares about it or thought about it when you did not want to?”; (2) “tried hard not to think about it or went out of your way to avoid situations that reminded you of it?”; (3) “were constantly on guard, watchful, or easily startled?”; (4) “felt numb or detached from others, activities, or your surroundings?”; and (5) “felt guilty or unable to stop blaming yourself or others for it or any problems it may have caused?”. A positive score of three or more (out of five) indicates probable PTSD (Prins et al. 2016). The PC-PTSD-5 has acceptable sensitivity (85%) and specificity (82%) in the primary care setting (Freedy et al. 2010).

The CAGE questionnaire (Ewing 1984) was used to screen for alcohol problems among participants who indicated changes in alcohol consumption since the start of the COVID-19 pandemic. The four-item instrument was modified to assess alcohol use because of COVID-19, with participants answering yes (positive) or no (negative) to each question. For example, participants were asked: “since the pandemic began, have you felt you needed to cut down on your drinking?” A positive score of two or more indicates an alcohol dependence, with a sensitivity of 75–95% and a specificity of 84–97% (Cherpitel 1995). This instrument has an acceptable test-retest reliability of $r = 0.80–0.95$ (Dhalla and Kopec 2007).

Data analysis

Descriptive statistics (e.g., frequencies, means) were calculated for sample demographics, positive screens (three or more positive responses) on the PC-PTSD-5, and positive screens (two or more positive responses) on the CAGE questionnaire. Data analysis was performed using SPSS v27 (IBM 2020). Qualitative content analysis guided the analysis of the interview transcripts. This approach allowed for the description of interview concepts

and associated meaning interpretations (Graneheim and Lundman 2004). First, two coders independently read the transcripts to have a general understanding of participants' narratives. Second, each coder re-read the transcripts and highlighted key passages. Third, the coders used a table to separately import the passages they highlighted and detailed the interpretative unit and meaning unit. Fourth, both coders and the Principal Investigator met to discuss any discrepancies that arose between the coders' findings, and together the team finalized the study themes. Lastly, a final document was created with the final themes and associated quotes.

Rigor

Several steps were taken to address study rigor (Krefting 1991; Tuckett 2005; Morse 2015). The interviews were audio-recorded, which allowed for the opportunity to revisit the interviews and ensure accuracy. The process proposed by Oliver and colleagues (Oliver et al. 2005) was used to guide the transcription of the interviews so we ensured that participants' statements were clearly captured. An audit trail was maintained as the interviewers used an excel sheet to reflect and make comments after they completed each interview (Tuckett 2005). The research team met weekly to reflect on the interviews and interview process. Member checking—a key aspect of rigor in qualitative studies for validity and liability (Guba 1981; Morse 2015)—took place as the interviewers were able to check the data between participants by asking probing questions based on the information they learned during previous interviews. Also, a third research team member met with the two coders during analysis to address discordance in the interpretation of the key passages.

Results

Participant characteristics

Twenty-seven individuals participated in the study (Table 1). Participants were primarily women (n = 20) and U.S.-born (n = 24) with a mean age of 37 years. The majority of the participants were single (n = 15) and had some college education (n = 10). Participants worked in the food services (n = 11), food retail (n = 12), and hospitality (n = 4) industries. Years working at their current job ranged from less than a year to 25 years. Work status included 12 full-time and 15 part-time workers, with an hourly wage average of \$16.1 and median of \$13.6 (range=\$8-\$52).

Despite social media recruitment extending to 10 states, only five states were represented in our sample (see Table 2). Nine participants resided in states with low COVID-19 case counts (Florida and Nevada), 10 resided in states with medium COVID-19 case counts (Michigan and Washington), and eight resided in a state with high COVID-19 case counts (New York). All five states had stay-at-home orders in place at the time of the study was conducted.

PTSD symptoms and reported feelings

Ten of the 27 participants reported that they experienced three to five PTSD symptoms. Women in our sample were more likely to experience symptoms of PTSD, with eight out of 20 reporting three to five symptoms compared to two out of the seven men. There was no notable difference in reported PTSD symptoms across industries. Participants residing

in states with low COVID-19 case counts (per 100,000 residents) reported fewer PTSD symptoms compared to states with medium and high case counts; the 10 participants reporting at least three symptoms lived in states with medium or high case counts. Most commonly experienced symptoms included trying hard to not think about/avoid situations that reminded them of COVID-19 (n = 12), being constantly on guard, watchful, or easily startled (n = 13), and feeling numb or detached from people, activities, or surroundings (n = 13).

COVID-19 effects on workers' mental health

When asked to describe how participants were currently feeling during the pandemic in one or two words, common replies included “concerned,” “anxious,” “stressed,” and “disappointed.” Rationale or meaning behind word choice were related to concerns about job security and workload, health of self and others, negative impact on social well-being, and overall perceived direction of the pandemic. That said, positive words such as “hopeful” and “optimistic” were also used in relation to how participants perceived life would be when the pandemic is over.

Workers' accounts on how COVID-19 affected their mental health were categorized into four main themes: (1) being infected & infecting others, (2) the unknown, (3) isolation, and (4) work and customer demands. Each of the categories are described below.

Being infected and infecting others

Participants were aware that because they had to report to work, they were at higher risk for contracting the virus (n = 22). Many reported being on high alert, especially when people around them were not taking precautionary measures. Participant 8 (age 52, female, food retail, MI) noted, “Well, it’s scary when people come in and don’t wear masks and they cough and stuff and you’re right in the line of fire.” Participant 23 (age 33, male, hospitality, NY) stated:

It’s more like just about coworkers and kind of etiquette. You know, everybody has to do their part. So, I’m kind of a bit concerned about how laid back people have been lately.

This same participant also expressed concern about contracting the virus while taking public transportation to and from work.

Those with preexisting conditions were especially concerned about being exposed and their increased vulnerability to the virus. For example, Participant 27 (age 57, female, food retail, NY) stated, “The main concern is for my health, certainly. I have high blood pressure and diabetes.”

In addition to worrying about contracting the disease themselves, workers were concerned that they could carry the virus and infect their family members and other members in their community. Notably, a higher proportion of women (55%) in our sample expressed such worry compared to men (17%). Participant 2 (age 50, female, food retail, MI) stated below.

I know I'm doing everything to protect myself, I just, you know because I know my responsibility ... I may have it and not even know it and I don't want to be the person that passes that on to somebody that may die from it.

Participant 21 (age 32, female, food services, NV) also shared her concerns about infecting her family members, as seen in her statement below:

I'm terrified to get it, to bring it home to my son ... I'm not sure ... how easily it's spread, I mean I know it spreads easily but ... I mean ... does it spread so easily that we shouldn't even be open at all? You know, regardless of the temperature checks and all that.

This participant underscored that her lack of knowledge of how the virus spreads and lack of confidence in the effectiveness of measures increased her worry about being a potential vector for the virus. Participant 9 (age 20, female, food retail, MI) shared similar concerns with her statement below:

Spreading it to other people without knowing. Especially things opening up more I could, you know, I'm young, I'm healthy, I could very well have it and not know it and infect other people without knowing it because I'm asymptomatic myself potentially.

The unknown

Participants were concerned about the uncertainties of the virus (n = 18). Participants in food retail were less worried about the unknown compared to workers in the two other industries. Participant 22 (age 32, female, hospitality, NY) stated: "Yeah, frustrating because of the whole situation that's going on and [the] whole uncertainty surrounding the coronavirus." This statement echoes those of other participants. The concerns were not only focused on the detrimental health effects of the virus but also the secondary effects of the virus relating to their jobs. These secondary effects included job insecurity, financial insecurity, and also the lack of knowledge about rights and benefits.

Many of the participants, especially from the hospitality and food service industries, expressed concern about losing their jobs. They witnessed their coworkers being furloughed or permanently losing their jobs. For example, Participant 22 highlighted that "Hospitality is really suffering. It's not that easy to find a job and if you find something it isn't that easy to get it." This participant was aware of the industry's job shortage and shared her concern about losing her job. Participant 21 (age 32, female, NV) who worked part-time in food services at a casino hotel shared the same concern of job insecurity as seen by her statement below:

Oh, [I am] very worried just because we got that letter saying everybody's job is up in the air and, you know, the ones that have been there the longest that have seniority, they're the ones that are going to stay because that's how it goes. It goes by ranking.

Participant 13 (age 26, male, food services, NY) worried about his job security too. He shared that their restaurant had very few customers, and there were changes in the menu that

influenced the item prices. This change yielding revenue loss for the restaurant could only be offset by increased sales, which was not possible given the decrease in customers.

In addition to job security, participants expressed concern about the unknowns of financial security. Some were concerned about how they will make ends meet if they lose their jobs. Others reported not working enough hours and thus were not making enough money to pay their bills. For example, Participant 9 (age 20, female, MI), who was fairly new at a food retail store, shared her worry about what would happen if she lost her job and was unable to cover her expenses:

There's a little bit more stress involved financially with losing a job and not knowing what I was going to be doing next ... I think the biggest stressor for me was the financial element of what's next.

Isolation

Participants (n = 8) reported feeling isolated, especially when they are not at work. For example, Participant 11 (age 25, male, food services, NY) explained, "because of social distancing I couldn't see my friends who don't live in the same household anymore, so I was stuck at home for almost two months ... I feel like it's kinda hard to be home by yourself for that long." This participant reflected on the difficulty of social distancing and safety measures that reduced social connection. Overall, participants living in the state with high COVID-19 case counts reported more feelings of isolation compared to participants living in states with low or medium case counts (e.g., 62.5% of participants from the high case count location, compared to 20% in the low case-count locations). Participants expressed a need for social and emotional connection, with Participant 9 (age 20, female, food retail, MI) saying, "just seeing other people, communicating with people that I care about seems to be one thing that I'd really love and need more than other things."

Work and customer demands

Participants reported that mixed messages and poor communication (n = 8) from their employers was a source of stress. In addition to the constant change in messaging, many participants described that under-staffing and lack of resources such as proper personal protection equipment (PPE) were stressful, and both increased their fear of the virus. The quote from Participant 1 (age 27, female, food retail, MI) illustrated the problem with mixed messages:

Before they weren't providing any masks because they didn't think it was necessary and they were thinking...we didn't need them but then the CDC said that they had to so now we're allowed to wear masks.

Eight participants expressed worry over enforcing safety measures due to unpredictable responses from customers. They also expressed uncertainty regarding their own ability to enforce store policies. Participant 2 (age 50, female, food retail, MI), for instance, feared aggressive responses from customers who disregarded mask-wearing measures:

So, anybody that sells food, they really can't enforce it. And considering what has happened recently with people getting shot, they don't want to push people over the

edge. They want to make sure that somebody's not gonna come into the store with a gun because we said that "you can't come in [without a mask]."

Coping mechanisms

Common coping strategies used by participants included exercising more ($n = 20$), especially in the form of walking. Participant 5 (age 52, female, food retail, FL) described the benefits of exercise as "before my kids even get home, I'm tired, I'm so tired, and stuff like that ... And what I do is just walk for a little bit ... to keep my mind clear, fresh air." Twelve of the participants reported either returning to old hobbies or starting new ones to cope, such as cooking, reading, spending time outdoors, and talking or virtually connecting with friends and family. Further, many participants emphasized their reliance on hope or having a positive outlook: "I want to think that it's got to be better tomorrow" (Participant 5), and "I'd rather be optimistic in saying, "Hey, I'm working right now, it's good" (Participant 18, age 44, male, food retail, MI). Increased alcohol consumption was also noted in five participants, with two participants screening positive on the CAGE questionnaire for alcohol use disorder.

Discussion

The unexpected pandemic has brought on tremendous stress and forced everyone to adjust quickly to government orders made for public health and community mitigation of virus spread. Jobs in hospitality, food service, and food retail industries in the U.S. dropped significantly by April 2020 (Bureau of Labor Statistics 2021a, 2021b, 2021c; Center on Education and the Workforce 2020). This study offered insights into essential service workers' perceived experience with the COVID-19 crisis, mental health effects, and coping mechanisms.

Similar to the general populations and other essential workers in the U.S. and other countries (Holingue et al. 2020; Spoorthy et al. 2020; Xiong et al. 2020), such as healthcare workers and transportation workers who mostly cannot work from home during the pandemic, our study participants experienced acute stress, anxiety, isolation, and worries about uncertainty and personal safety and that of others with whom they interacted. Ten (37%) of the 27 study participants reported three of five PTSD symptoms after the U.S. had been in the pandemic for 2–3 months, and five of the 27 participants reported an increase in alcohol consumption. Lee and colleagues (Lee et al. 2020) also reported an increase in alcohol consumption as a coping mechanism among 398 Amazon MTurk U.S. workers.

Unlike at the early point of the pandemic (World Health Organization 2020), we have begun to see increasing attention and calls for actions from researchers, public health professionals, and mental health professionals to address the mental health effects of this pandemic (Centers for Disease Control and Prevention (CDC) 2020b; Horesh and Brown 2020; Pfefferbaum and North 2020). Nonetheless, the research and discourses about COVID-19-related trauma among workers remain markedly limited, mostly focused on healthcare workers (Carmassi et al. 2020). Our study findings warrant further research in this area, especially focusing on workers in service occupations with poor working conditions (e.g., lack of job control, lack of protective equipment for workplace hazards) or poor

employment quality (e.g., lack of flexibility in work arrangement, low wage, no benefits). Examples of future research questions include: What are the risks and protective factors for PTSD symptoms resulting from the COVID-19 pandemic in this worker population? What are the short-term and long-term effects of COVID-19-related trauma on service workers and their family? In addition to key questions relating to the short-term and long-term impact of COVID-19 on these workers, research is needed to address maladaptive coping behaviors among these at-risk populations.

Moreover, racial/ethnic minorities and immigrants are disproportionately represented in low-wage and service occupations in the U.S. (Clark et al. 2020; Tai et al. 2020). Although we are all in this pandemic together, racial/ethnic minority and immigrant workers have already chronically embodied institutional racism and xenophobia (Krieger 2010). Traumatic events that are caused by systemic injustice intersect with COVID-19-related trauma. Hence, to advance occupational health equity, it would be critical for occupational health scientists to work with scientists in other disciplines such as social sciences to develop a comprehensive understanding.

Job insecurity was a major source of stress reported by our study participants. Job insecurity is a well-discussed concept in occupational health literature. A meta-analysis by Sverke and colleagues (Sverke et al. 2002) found that job insecurity had a stronger association with workers' mental health than physical health. Landsbergis et al.'s comprehensive review (2011) also showed there was stronger evidence between job insecurity and psychological illnesses than job insecurity and physical health. In addition, they found that women, workers in lower socioeconomic positions, younger workers, and ethnic minority and immigrant workers experienced greater job insecurity. Other studies done prior to the COVID-19 pandemic also revealed that job and employment concern was associated with poor mental health in immigrant workers in food services, and subsequently negatively related to their work performance and injury risks (Tsai and Thompson 2015). The nature of these industries (hospitality, food services, food retail) was already anchored within volatility, insecurity, and high turn-over (e.g., Zeytinoglu et al. 2005; Hsieh et al. 2013; Harrison and Gordon 2014). COVID-19 has only further exacerbated the volatile nature of these jobs further endangering the livelihood of the workers.

Moving forward, there are systemic issues contributing to health inequity among these workers that need to be addressed: predominantly part-time employment despite "full-time" hours and no health benefits. Before the pandemic, Schneider and Harknett (2020) collected data between September 2017 and November 2019 among individuals working in food services and retail firms. They found that 55% of the individuals employed through service sectors had no paid sick leave. Job insecurity is a psychological stressor shaped by work organization (e.g., schedule factors, psychosocial job factors, social support at the workplace, effort-reward imbalance, organizational injustice, and workplace incivility) and the broad socioeconomic and political context (Landsbergis et al. 2011). To address job insecurity and mental health effects of job insecurity on service workers, we should focus on systemic factors, which already existed before the COVID-19 pandemic, and systems change.

Limitations and strengths

Limitations of this study are noted. The PC-PTSD-5 screening instrument assessed symptoms within the last month, meaning symptoms that may have been expressed at the start of the pandemic would be missed by the time of the interviews in May and June of 2020. Further, the CAGE questionnaire was restricted to participants who expressed alcohol consumption changes and thus was not presented to all participants. This study's results are limited by selection bias since the primary recruitment method was through social media, and most participants were females and English speakers. Responses may have been affected by social desirability bias, particularly for questions related to alcohol use. To mitigate this bias, the interviewers reminded participants that their answers would remain confidential. Additionally, workers across three industries were recruited for this study. More food retail and food service workers responded to our recruitment than workers in hospitality. This may be due to a large number of lay-offs within the hospitality industry early on in the pandemic. Lastly, we did not inquire about the race/ethnicity. Some of the participants may have been immigrants who are fluent in English.

Despite the limitations, this is among the first of qualitative studies to report on mental health outcomes and coping behaviors among U.S. service workers from three industries in multiple states during the COVID-19 pandemic. Through in-depth interviews, workers described COVID-19-related stressors and their impact on daily life and well-being. Despite a small sample, we applied an iterative approach and used multiple coders to establish inter-coder consistency during the analysis. We reached saturation, a well-established principle in qualitative research (Saunders et al. 2018), indicating we would not expect to identify new information or alternative codes in the data, and no further data collection and analysis was needed.

Recommendations for occupational health and safety practice

This pandemic highlights where we should prioritize our future efforts as an occupational health and safety research and practice community. Meanwhile, there are a few recommendations for employers and occupational health professionals for workplace and policy changes.

Employers

1. Given these workers' mental health needs, employers across all three of these industries may want to establish short-term and long-term mental health assistance programs (Teng et al. 2020). Specific to COVID-19, employers would benefit from following the CDC guidance for employers on best practices to protect employees (Centers for Disease Control and Prevention (CDC) 2020d). These proposed best practices go across the various levels of intervention controls, including elimination (e.g., quarantining of infected workers), administrative (e.g., sick leave, communication plans, training), and personal protective equipment (PPE [e.g., masks]) (National Institute for Occupational Safety and Health (NIOSH) 2020).

2. Employers may want to understand the risk categories within which their employees fall based on the CDC's risk categories for COVID-19 (CDC 2020c).
3. Employers affiliated with unions should leverage their relationship with the union to develop programs that best meet the workers' mental health and other needs and offer insurance that has better mental health services coverage.
4. Considering that this pandemic is not going away soon, more jobs in these three industries will be lost. Employers are strongly encouraged to think creatively to develop a concrete plan that balances business needs (e.g., revenue and decreased lost needs) and the health, well-being, and livelihood of their workers that remain.
5. Although there is much overlap in the recommendations across industries, given some of the distinctive nature of each industry, some of the recommendations may hold some special nuances. For example, hotel room cleaners in the hospitality industry would require additional training relating to linen and surface disinfectant (Rosemberg 2020) compared to a cashier in food retail who does not deal with bed linens.

Occupational health and safety professionals (OHSP)

1. OHSPs should consider or advocate for screening workers employed in these service industries for depression, anxiety, and PTSD risk, integrating strategies for improving resilience (Friedli and World Health Organization 2009).
2. OHSPs may also want to collaborate with the organizations to cultivate a workplace culture that encourages open and positive conversations about the mental health needs of each worker.

Policies stakeholders

1. Policy stakeholders need to stay on task with publishing on-time and update-to-date data as our knowledge of and approaches toward COVID-19 improves.
2. Guidelines should be provided on the considerations for employees moving forward, including transparency/open communication, PPE supplies, rationale for following safety procedures, flexibility necessary to match worker needs (hours, childcare, work tasks), and mental health benefits/access to care.
3. Policies and guidelines are needed to address inequities relating to benefits and resource access among workers. Such measures must be culturally appropriate and well-aligned with other endeavors aimed at redressing structural forces that impinge on the life, safety, health, and well-being of workers, their family members, and members of their community.

Conclusion

Service workers in food retail, food services, and hospitality face tremendous stress and mental health consequences during the COVID-19 pandemic. Worker mental health and

occupational health equity have not been major focuses in occupational health and safety training, education, research, or policies [despite occupational health equity being a core and specialty program of the U.S. National Occupational Research Agenda (NORA) (National Institute for Occupational Safety and Health; NIOSH 2019)]. COVID-19 is not likely to go anywhere anytime soon. Employers, OHSPs, and policymakers will need to have a proper plan in place to ensure the sustainability of the above mentioned measures. However, it is worth highlighting that this pandemic has brought to light the many inequities that workers face because of the specific industries in which they work and their job title and tasks. Individuals have highlighted the need to address worker health as a public health concern and the heightened vulnerability of particular worker groups (Ahonen et al. 2018; Rosemberg and Tsai 2018). This conversation has now been brought at the forefront of the public view because of the staggering rates of unemployment and economic crisis, in addition to the disparate rates of infections and fatalities relating to COVID-19 among racial/ethnic minorities and immigrants that are more likely to be employed in these industries. As Brownson and colleagues (Brownson et al. 2020) discussed a “reinvented public health”, we would urge that it is also time to discuss a “reinvented occupational health and safety”. One where policies equitably support the health and well-being of workers, employers adhere to such policies while fostering a workplace that is conducive for workers to thrive (at a professional and personal level), and workers feel valued, supported, and are not forced (directly or indirectly) to choose between the success of the company and their personal well-being.

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Table 1.

Sample characteristics.

(N = 27)	n	%	Range
Age (years) (M ± SD)	37.0 ± 14.4	–	19–65
Female	20	74.1	
Country of Birth			
US	24	88.9	
Other (Guatemala, Hong Kong (China), Russia)	3	11.1	
Relationship Status			
Single	15	55.6	
Married or Partnered	10	37	
Divorced	2	7.4	
Education Level (n = 25)			
Some High School	1	4	
High School or GED	4	16	
Some College	10	40	
Bachelor's Degree	7	28	
Master's Degree	3	12	
Years at Current Job	–	–	0–25
Full-time	12	44.4	
Hourly Wage (U.S. dollars)			
M ± SD	16.1 ± 9.5	–	8–52
Median	13.6		

Note: All five states had stay-at-home orders in place at the time of recruitment. Low cases: < 150 cases per 100,000 residents; Medium cases: 150–300 cases per 100,000 residents; High cases: > 300 cases per 100,000 residents.

Table 2.

Residence (region).

	n	%	Cases as of April 2020
Florida (Southeast)	7	25.9	111 (Low cases)
Michigan (Midwest)	9	33.3	280 (Medium cases)
Nevada (Rocky Mountain)	2	7.4	114 (Low cases)
New York (Northeast)	8	29.6	1,133 (High cases)
Washington (Pacific)	1	3.7	148 (Medium cases)

Note: All five states had stay-at-home orders in place at the time of recruitment. Low cases: < 150 cases per 100,000 residents; Medium cases: 150–300 cases per 100,000 residents; High cases: > 300 cases per 100,000 residents.

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