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The Psychosocial, Organizational, and Environmental Stressors Experienced by Food Service Workers in a Hospital Setting during the COVID-19 Pandemic

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Abstract

Objective: To identify stressors faced by hospital food service workers amid the COVID-19 pandemic and effective interventions mitigating these stressors.

Methods: In this cross-sectional study, we conducted surveys (n=305) and interviews (n=9) in the summer and fall of 2022 with employees in hospital settings to determine the psychosocial,

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Ron Z. Goetzel, PhD, contributed to the study design and methodology; collection and analysis of data; interpretation of the results; and provided critical feedback and revisions.

This study adhered to the STROBE Guidelines.

The authors confirm that the data supporting the findings of this study are available within the article [and/or] its supplementary materials.

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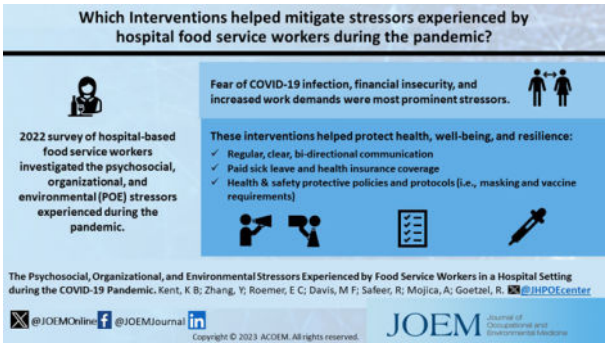
organizational, and environmental stressors they faced during the COVID-19 pandemic and interventions that improved health and well-being.

Findings: The main stressors reported were fear of infection, increased work demands and schedule unpredictability, and financial insecurity. Employee well-being was bolstered by regular, clear, bidirectional communication; a sense of community and purpose; benefits like paid sick leave and health insurance coverage; and organizational policies that included masking and vaccine requirements demonstrating commitment to protecting worker health.

Conclusion: Organizations can play a critical role in guarding the health, well-being, and resilience of frontline workers.

Graphical Abstract



Keywords

Workplace health promotion; employee health and well-being; wellness; COVID-19; stressors; essential workers; frontline workers; hospital; food service workers; interventions; psychosocial; organizational; environmental programs; policies; supports

INTRODUCTION

In the early weeks and months of the COVID-19 pandemic, before vaccines were readily available, much of the United States economy ground to a halt because of mandatory stay-at-home orders, school closures, telework requirements, and sudden layoffs.[1] Yet, about 30 million frontline workers continued showing up to work onsite, leaving their families and homes to maintain their livelihoods.[2]

For these essential workers on the frontlines of industries such as healthcare, food service, public transportation, and critical infrastructure, working from home was not an option. Making a living required higher risks of exposure to the COVID-19 virus, compared to those who had the option to work from home. These circumstances made frontline workers vulnerable to stressors that can lead to physical illness, anxiety, depression, burnout, and other significant physical and mental health impacts.[3–7]

In this study, we applied a psychosocial, organizational, and environmental (POE) framework[7] to explore stressors experienced by a group of essential workers employed as food service staff at five hospital sites in a large Mid-Atlantic healthcare system during the

COVID-19 pandemic. This project also evaluated potential impacts of these stressors and explored the strategies that were most effective in mitigating those impacts.

This study specifically examined the experience of food service workers in hospital settings. A literature review revealed extensive research related to clinical workers in healthcare, who experienced significant difficulties and were publicly hailed as pandemic heroes.[3,4,6–10] Yet, there were many other essential workers who worked in the background in similar settings, bearing significant risk without much recognition. A disproportionate share of these workers were people of color who have historically faced disadvantages from socio-economic determinants of health, and who experienced disproportionate rates of virus exposure, infection, and mortality during the COVID-19 pandemic.[11–15]

From studies and gray literature focused on the experiences of non-clinical essential workers in the early years of the COVID-19 pandemic, we gleaned some important background information and hypotheses. First, some studies, including work by *Rotenstein et al.* and *Garfin et al.*, suggested that the negative psychological impacts of the pandemic (e.g., anxiety, depression, burnout) were experienced by non-clinical healthcare staff at about the same rates as clinical staff.[16,17] However, it was not yet clear from the literature whether similar stressors lead to poor outcomes, or whether certain mitigating factors were applicable. For example, *Zerden at al.* interviewed 20 workers in hospital support roles and found that the factors contributing most to psychological distress were changes in duties and staff shortages; fear of COVID-19 infection and transmission to others; a desire for recognition of their job-related risks; and a lack of clarity about available resources and eligibility for those resources. On the other hand, protective factors included paid time-off, mental health supports, a sense of workplace pride, and self-coping strategies.[14]

This study contributes to our understanding of the experiences and perspectives of non-clinical essential workers in healthcare settings with an emphasis of what hospital systems can do to mitigate the inevitable stressors associated with caring for people who fall ill due to large-scale pandemic.

METHODS

This was a mixed-methods study employing a primary quantitative survey of 305 frontline workers augmented with follow-up in-depth interviews of nine of the survey participants. The study population consisted of food service workers at five hospitals in an academic, private, mid-Atlantic healthcare system. These individuals were chosen as a sample of essential workers who played a vital role on the frontline during the pandemic.

Background Literature Review

As part of our formative research in this study, we conducted a literature review to identify: (1) the psychosocial, organizational, and environmental *stressors* emerging from the COVID-19 pandemic; (2) the *impacts* of these stressors on essential workers' health and well-being; and (3) effective *strategies* in the workplace for addressing these stressors to minimize negative impacts. Findings from that literature review (reported elsewhere) informed the development of the data collection materials as described below.[3,7]

Survey Administration

A customized survey was developed for the study with input from subject matter experts, findings from our literature review, and input from the director of food services of the hospitals. The survey included 34 questions that probed on food service workers' physical and mental health; perceived safety and support experienced at the workplace; perceived stressors across psychosocial, organizational, and environmental factors; and awareness of and satisfaction with existing workplace health and well-being programs.

In the summer and fall of 2022, study participants were recruited from the ranks of Food and Culinary Services at five hospitals in the Mid-Atlantic region. Flyers announcing the opportunity to participate in the survey were distributed to food service staff at regularly scheduled meetings ("huddles") and posted on bulletin boards. Food service workers were also introduced to the survey through the study team's site visits. Paper copies of the survey were distributed during site visits. Electronic versions of the survey using Qualtrics were available via a QR code displayed on recruitment flyers. A financial incentive ($20 e-gift card) was provided to individuals completing the survey.

Follow-Up Interviews

At the end of the survey, participants were asked whether they would be willing to participate in a follow-up interview. Contact information was collected through a separate process to maintain the anonymity of survey respondents.

A random sample of nine volunteers was selected from four hospitals for a 30–45-minute, semi-structured follow-up interview to probe employees' perceptions of both successful and unsuccessful responses and adaptations to the pandemic. Two study team members attended each interview; one served as the lead interviewer, and the second took structured notes to capture key themes and important details from the interviews. Interviewees received an additional $20 e-gift card for their participation in the interviews.

All study procedures were approved by the Internal Review Board of the hospital system.

Data Analysis

Descriptive studies were conducted on the survey data, summarizing respondent demographics, self-reported physical and mental health, stressors experienced while working during the various stages of the pandemic, and the use of hospital-provided programs and support services. Missing data were excluded from the denominators, and we only reported on valid and complete responses for each item. Open-ended responses and interview data were summarized according to key recurring themes. The primary outcomes of interest included self-rated mental health, self-rated physical health, how safe and supported employees felt at work during the pandemic, and employees' job morale and commitment to work. In both the survey and interview data, we assessed the key modifiers that may have impacted these outcomes. The study adhered to the STROBE guidelines; see Supplemental Materials checklist.

RESULTS

Survey Sample

The survey garnered a total of 338 responses (see Table 1). Of these responses, eight surveys were excluded from the analytic dataset because they did not explicitly indicate consent to participate, and an additional 24 were excluded because respondents completed fewer than half of the core questions. One additional survey was excluded because the respondent did not affiliate with one of the five sites. The final study sample included 305 respondents from the five hospital sites, which represented 50% of the eligible study population. Response rates for the individual sites ranged from 42% to 66% of eligible employees.

Table 1 shows the distribution of the survey respondents across the five sites. Table 2 highlights key demographic variables for survey respondents.

In the analytic sample, the mean age was 40.6 years old, and the median age was 40.0. Most of the sample (58.5%) indicated being single/never married. 44.9% of respondents identified as food service workers,[a] 16.1% as cooks, 12.3% as managers/supervisors, and 4.3% as cashiers.

Interview Sample

We interviewed nine workers in food services across four hospitals. The interviewees included both full-time and part-time workers in food preparation, service, nutrition, and management, with years on the job ranging from less than one to ten.

Self-Rated Health

Self-rated health status is often the single most informative question on any health assessment. It has been shown in many studies to be valid and reliable, and highly predictive of a wide range of health outcomes.[18,19] Our survey separately assessed self-rated *physical* health and self-rated *mental* health. About four out of five survey respondents (81.3%) reported being in “good” or “very good” physical health. By comparison, 2022 OECD data show that 88% of people across the United States report good or very good health, and on average of 68% of people across OECD countries report good or very good health.[20] About three-fourths of our sample (74.8%) reported being in “good” or “very good” mental health, as compared to 75% across the United States who rated their health excellent or good in a 2022 Gallup survey.[21] A very small proportion of respondents indicated “poor” or “very poor” health in each domain. Notably though, significantly more respondents indicated “poor” or “very poor” *mental health* (4.0%) than those who reported “poor” or “very poor” *physical health* (0.7%) ($p<0.000$). Figure 1 displays the distribution of responses for self-rated physical and mental health for the full survey sample.

[a]In our interviews, we learned that most employees cross-trained for different roles, which may explain why many identified generically as “food service workers.”

Perceived Support for Health and Well-being

A high percentage (87.2%) of respondents indicated they agreed or strongly agreed with the statement, “Supporting employee health and well-being is a top priority of this hospital.” Similarly, on a scale of 0 to 10, where 0= not at all and 10= extremely safe and supported, respondents averaged higher than the midpoint for ratings of how safe and supported they felt at work during the pandemic, by co-workers (7.0), by their supervisor/manager (6.9), and by the hospital overall (6.8).

Pandemic Impacts

Survey respondents were asked to compare elements of their health and well-being during the pandemic to before the pandemic. Overall, a surprisingly small proportion of the sample reported being worse off during the pandemic period, as compared to before the start of the pandemic. The areas of greatest concern (with the highest proportion indicating that they were worse off during the pandemic than before) were mental health, financial security, and work-life balance (See Figure 2).

Most of the interviewees reported being in good health and noted the pandemic had not significantly affected their physical health. Some even reported that the pandemic had *improved* their physical health. For instance, one employee pointed out that the mask mandate protected healthy workers from others’ sneezes and coughs, and others reported becoming more fit because of a reduction in dining out and an increase in healthy home cooking.

When asked about the pandemic’s impact on *work life*, 44.2% of survey respondents indicated no significant changes. About a fifth of respondents reported increased concern about job security (21.9%), an increase in viral exposure (20.3%), and increased hours (19.3%).

Similarly, 43.2% of respondents indicated no significant changes in their *home life*, while 26.6% reported increased time with family/friends, 25.6% indicated increased isolation, and 16.9% indicated increased home life responsibilities.

On a scale of 0 to 10, where 0= not concerned at all and 10= extremely concerned, respondents indicated an average rating of 7.4 for how concerned they were about exposure to COVID-19 while at work, more than two years into the pandemic. More than a third of respondents indicated they were often concerned about their own health and the health of loved ones. Survey and interview comments revealed, unsurprisingly, that this was a much more prominent concern in the first year of the pandemic.

Almost all interviewees reported that either they themselves or their coworkers had contracted the virus during the pandemic. Most reported mild symptoms, which allowed them to return to work within a week. Even though COVID-19 infection was prevalent in the workplace during the pandemic, workers were generally satisfied with their hospitals’ proactive response in providing testing, contact tracing, and paid sick leave.

Sources of Stress

Overall, the main sources of stress reported by this sample were: the health of workers and their loved ones (34.6% indicated this is “often” a stressor for them); financial concerns such as monthly bills and lack of savings (32.4%); and increased work demands (25.3%). (See Figure 3)

Key Themes

The following themes were widely reported in survey and interview comments.

1. **Fear of COVID-19 infection—**Contracting COVID-19 was the greatest fear reported by many of the workers surveyed and interviewed. Workers expressed worry about the health and economic consequences of being exposed to COVID-19 or of transmitting the virus to others in their household. Nearly three-quarters (72.4%) of the sample indicated that their health and the health of their loved ones was sometimes or often a stressor for them since the start of the pandemic.

The fear was especially pronounced in the early stages of the pandemic, particularly during the height of lockdowns and before vaccines were available. Employees were worried about exposure to the virus given their proximity to co-workers, patients, and others at their worksites. This anxiety was challenging for workers whose jobs required them to serve food trays to patients, even if those patients did not have a current COVID-19 diagnosis, because the status of patient rooms changed constantly. One interviewee commented, *“You don’t know what you are walking into…and even if you do, … the patient room identified as not infectious when I walked in could quickly change to infectious a couple of hours later”* (i.e., if the patient later tested positive for COVID-19). Another interviewee expressed frustration over the scant physical protection that food service workers received, as compared to healthcare workers, *“At times tray passers were expected to go into patient rooms wearing only a mask, and then when that job was given over to nurses, the nurses would go in with full head-to-toe PPE [personal protective equipment].”*

Workers were also concerned about infecting family members. To protect themselves and their loved ones, some workers started wearing full PPE at work; removing their work clothes immediately after returning home before spending time with loved ones; isolating themselves from vulnerable family members; and cutting out social activities.

Due to staffing shortages, workers who had recently had COVID-19 were at times required to return to work before full recovery, which caused other workers to worry about getting sick and added more stress and anxiety surrounding infection.

2. **Increased work demands and workload unpredictability—**A majority (62.8%) of the survey sample indicated that an increase in work demands was sometimes or often a stressor for them since the start of the pandemic. Interviewees reported that competing childcare obligations made this increase in work demands even more stressful for female workers with young children.

Interviewees reported that work hours increased significantly for both workers and managers. One part-time worker reported that she started to work 40 to 50 hours per week during the pandemic compared to 20 to 30 hours pre-pandemic. Another worker shared that she had just worked 12-hour shifts, from 5 AM to 5 PM, every day for the previous two weeks.

In addition to increased hours, there was increased *unpredictability*, as workers were also required to cover other positions (e.g., a line cook may be called to cover as a cashier). According to a worker who was exhausted from doing other jobs during the pandemic, "*We come in and we don't even know what we are going to do because at any moment there may be callouts. They're always short.*"

Respondents noted in their open-ended comments that there were organizational factors aggravating the staffing shortages, which added more stress to the workforce. For example, a strict attendance policy drove out some workers. One worker mentioned that one coworker quit because of the inflexible sick-leave policy that did not allow her to meet her domestic caregiving responsibilities. A manager noted, "*We definitely have lost some good people over the years because their attendance has been less than stellar*." A slow hiring process, moreover, impeded new hires from joining the workforce quickly enough to assist the overworked staff.

3. **Financial Insecurity—**Financial insecurity was cited as a significant stressor for respondents. Having insufficient funds to pay monthly bills like rent, childcare, utilities, coupled with low savings, limited individuals' ability to weather upsets like illness or job loss. The pandemic uncertainty exacerbated this worry for many in our sample, with 67.1% of workers indicating that this was sometimes or often a stressor for them since the start of the pandemic.

Recovery & Resilience

Respondents were also asked to compare elements of their health and well-being at the time of the survey (Summer and Fall 2022) to their state during the early stages of the pandemic. In general, we found a consistent pattern suggestive of significant resilience, with most respondents indicating no change, about a third indicating improvement, and the smallest proportion indicating a deterioration in well-being (that is, they felt worse off *in the later stages of the pandemic* compared to the early months *of the pandemic*). The areas of greatest concern (with the highest proportion indicating that they were worse off later in the pandemic), were likely due to cumulative or progressively weathering impacts on mental health (16.4%), financial security (14.6%), and work-life balance (11.5%) (See Figure 4).

Overall, respondents reported coping well with the stress of working through the pandemic, with an average rating of 7.0 on a scale of zero to ten, where 0= terribly and 10= extremely well. About three quarters of workers indicated that they were often or nearly always able to adapt to change, and that they often or nearly always tended to bounce back after illness or hardship.

What Helped Food Service Workers Cope with the Pandemic?

Most of our sample reported feeling that their health and well-being was a priority for their employer. From survey and interview comments, we noted a combination of six psychosocial, organizational, and environmental factors bolstered workers' feelings of resilience and well-being.

1. **Benefits such as paid sick leave and childcare assistance—**Most of our interviewees noted the important impact of hospital provided benefits such as health insurance and paid sick leave. These benefits were extended to categories of employees who might ordinarily be ineligible (i.e., new hires and part-time workers). Paid sick leave lessened the pressure to work when sick and therefore ensured a work environment with fewer infectious agents. It also reduced the stress of financial insecurity, as hourly workers did not have to worry as much about the financial impact of getting sick.

   As the pandemic eased and the hospitals reverted to their regular sick leave policy, some workers reported discontent regarding the shortened sick leave allowance for COVID-19 infections.

2. **Protective organizational policies and protocols—**One theme that emerged throughout the study was the value of organizational policies and protocols supporting employee health and well-being. Most workers in the survey and interviews reported their hospital was intentional in keeping them safe by, for example:

   - Requiring masking;
   - Supplying PPE to employees;
   - Encouraging employees to follow strict cleaning and handwashing protocols;
   - Providing free COVID-19 testing;
   - Limiting workers' contact with patients and visitors;
   - Providing free on-site COVID-19 vaccination; and
   - Requiring documentation of COVID-19 vaccination.

   However, in some cases, nonadherence to the protocol, or loose enforcement, caused some workers to be concerned about their safety. Further, given that this study was conducted in 2022 (near the end of the official pandemic), it is possible that employees who strongly disagreed with these organizational policies (such as the vaccine requirement) may have left employment prior to the study and therefore their perspectives would not have been captured.

3. **Communication and community—**Though the adequacy of organizational communication appeared to vary over time and across hospitals, with a few workers reporting negative experiences (especially at the very beginning of the pandemic), most workers agreed that overall COVID-related communication was handled well and that this made them feel more supported. Many reported that a combination of face-to-face and online communications, including team huddles (quick and informal daily team meetings),

manager check-ins, bulletin board notices, texts, and email, was used to provide regular updates and information. Workers also received reassuring messages through these channels, such as verbal messages that encouraged taking paid time off. Many of these communication channels (e.g., huddles) were open, informal, and bidirectional, allowing workers to regularly voice their needs and concerns.

In addition, basic communication routines, most notably daily huddles, had the effect of building community within work units. Some workers mentioned they became closer and felt more connected to their coworkers as they went through pandemic challenges together.

Clear and consistent communications were also associated with positive mental health. We found that survey respondents who agreed or strongly agreed that *"communications about safety protocols related to COVID-19 were clear"* were significantly more likely to rate their mental health as good or very good (p=<0.001). Those who agreed or strongly agreed with the above statement were also significantly less likely to report that their mental health declined during the pandemic compared to before the pandemic (p=0.002).

4. Personal coping strategies—To cope with stress, workers adopted a wide array of strategies on a personal or psychosocial level. Many workers reported individual coping strategies such as exercise (e.g., going on outdoor walks), engaging in hobbies, meditation, religion and spirituality, and spending time with family and friends were important in promoting their mental health and well-being throughout the pandemic.

A few workers noted that they stopped consuming negative news to protect their mental health. Despite reduced social activities, workers acknowledged the importance of human connection in hard times. According to a manager who had a series of life-changing events occur in 2020, *"meeting new people and building relationships"* helped manage stress during the pandemic. Religion and spirituality also played a significant role for some coping with stress. A few workers mentioned that praying helped them navigate the fear and uncertainty at work.

5. Health and well-being programs—In general, we found that participation in health and well-being programs was high in our sample. About three quarters of the sample (73.5%) reported participating in at least one hospital-sponsored health and well-being program. Participation in specific program offerings ranged from 15.4% to 48.0%. Programs with the highest participation rates included a rewards program and step challenge. Of respondents who participated in programs, 89.9% reported that they were somewhat or very satisfied with the programs.

For non-participants, lack of awareness was most often cited as the main barrier to participation (59.2%). Not having time was the second most cited barrier (32.7%).

In open-ended comments, respondents shared that health and well-being programs improved their physical and mental health by helping them adopt healthy behaviors, keep track of habits, and practice mindfulness. Many respondents reported improved diet, exercise, and stress management because of participation in the programs or using the hospital-provided

resources. Simply *"seeing the steps"* in the program motivated some workers to live a healthy life even when they *"didn't have the energy to do so."*

For some workers, the programs enabled them to engage more with coworkers, which strengthened a sense of community and support. Workers noted that by participating in the programs, they felt *"more connected with colleagues,"* and a sense of belongingness was established by *"interacting with others, especially when we are here for the same reasons."* In addition, programs provided an opportunity to connect with managers. One worker said, *"I like how in these events the managers listen to what the employees have to say."*

Programs were also helpful in communicating health resources, increasing workers' knowledge of healthy lifestyles, raising health awareness, and keeping workers informed. One worker said, *"They helped a lot. They helped me to stay afloat in all the madness."*

Some of our interviewees reported they had heard about the health and well-being programs but had not participated in them because they found programs unnecessary or too restrictive. For example, one worker was interested in the step challenge but did not participate because the program encouraged team formation, which was difficult for part-time workers. For those who did participate, many indicated that they did so because of coworker recommendations.

6. **A sense of pride and purpose – organizational commitment—**Finally, some respondents noted a sense of pride and belief in the value of how they contributed to keeping the hospital running as motivating for them during the pandemic. Notably, one worker, who had been laid off from a fast-food restaurant at the beginning of the pandemic before finding a job at the hospital, highlighted that while she felt more exposed to the virus at the hospital, she also felt a greater sense of commitment to keeping patients fed and the hospital functional.

DISCUSSION

This study evaluated responses from a sample of essential workers in food services at five hospitals during a high stress-inducing period caused by the pandemic. While the inquiry and findings from this study have been tailored to provide specific feedback and guidance on pandemic response for a specific hospital system, they encompass broader themes that hold relevance and applicability across diverse workplace settings and in non-pandemic times.[9–15]

The Context of Inequity

The experience of food service workers at the study locations can be viewed within the context of inequity among working populations in the United States that respond differentially to workplace stressors and crisis situations. This study focused on essential workers in health care, a primarily low-wage sector. This less-recognized sector of frontline workers tends to be dominated by women, people of color, and those in lower income brackets.[2,22]

In our sample, we found a notable overrepresentation of non-Whites and women. Overall, 78% of our study sample identified as Black/African American, and 63% as female. These study demographics are set in a larger context of inequity that has been shown to be associated with higher levels of baseline stress, both generally and as related to the pandemic.[12,15,23] For example, many studies have shown that the pandemic disproportionately affected the African American community with complications and deaths from the virus at rates almost three times greater than that of Whites.[10,11,12]

Within this backdrop of inequity, employers must strive to meet the needs of essential employee populations that, as a result of a broad range of systemic factors, may experience greater stress, higher rates of health risk factors, and greater vulnerability to disease.

Stressors and Supports

Consistent with *Zerden et al.* and other studies of frontline workers, we found that the main stressors that employees experienced were related to the fear of COVID-19 infection, increased work demands and unpredictability, and financial insecurity.[16,26,27,24,28,14] These stressors were notably intertwined. In comments and interviews, many study participants revealed that the fear of being infected by COVID-19, for example, was underlaid by concerns about not being able to pay bills because of the immediate economic consequences that families might face if they became infected. Also, many employees reported that one of the greatest changes and stressors since the start of the pandemic was the increase in workload and unpredictability due to staffing shortages. Some part-time workers were working full-time hours without the predictability or financial security that might allow them to, for instance, plan stable childcare.

Despite these formidable challenges, the workers in our case study fared quite well, with employees reporting good physical and mental health and considerable appreciation for the organizational and environmental supports provided in their workplace. These supports included increasing or extending pay and benefits to categories of employees who might not ordinarily be eligible (i.e., new hires and part-time workers); and implementing organizational policies and protocols such as providing COVID-19 testing, limiting workers' contact with patients and visitors; and requiring COVID-19 vaccination. In addition to the physical impact of these measures on employee's health, these measures also made a difference to employees' stress and morale because they tangibly communicated that the employer valued their well-being.

Another important best practice that came up regularly in this study, consistent with the findings in previous studies, was communication. Communication is an enduringly important facet of employee health promotion, and when mismanaged it can be a major source of stress and frustration for workers, impacting not only their experience of an event, but also their general regard for their organization.[8–10,27,29–32] Part of this has to do with the way that communication impacts connectedness and morale. Most workers in our study agreed that overall COVID-related communication was handled well and that this made them feel more supported. Health and safety information, as well as reassuring messages, were delivered face-to-face and online. This multiple-channel and often bi-directional approach of communication was noted to be very important in a workplace where not

every worker had regular access to digital communication. Our study found that clear communication about safety protocols related to COVID-19 was associated with good mental health during the pandemic.

Health and well-being programs were also highlighted as a notable support for workers' health and well-being while they worked through the pandemic, though the impact of traditional programs seemed secondary to supportive polices and communications.

Finally, there are many psychosocial elements that impact workers well-being. Workers reported that they benefited from a variety of personal coping strategies such as engaging in hobbies, meditation, religion and spirituality, and spending time with family and friends. It was also noted that a sense of pride and purpose was important in mitigating the stress these essential workers faced while working through the pandemic.

LIMITATIONS

The findings from this study may not be generalizable to all essential worker populations, given the sample size, types of workers, geographic location, and demographics. Our study intentionally examined a specific worker population that has received little focus in the media and research literature.

Though the study sample included workers whose first language was not English, the sample did not include workers who were not able to read English or participate in an English-language interview. While we did not see any indication of employees declining participation for this reason, it is possible that some may have discreetly excluded themselves from the study because of language limitations. Future work should make provisions to elicit these perspectives.

Our study sample only included those who were part of the workforce two years into the pandemic. Therefore, our sample did not capture workers who left their jobs voluntarily or involuntarily and may not fully reflect the range or intensity of challenges experienced by such workers.

Finally, our research was limited in that data were only gathered at one point in time. We believe that future research on this subject may benefit from multiple prospective data collections, perhaps with an identified cohort, to assess changes in well-being and perceptions over time.

CONCLUSION

The pandemic has highlighted both the unique vulnerability and necessity of non-clinical workers in healthcare settings. These workers are essential, exposed, and relatively ill-equipped to manage the disproportionate health and economic stressors they face. Indeed, some studies have suggested that these non-clinical workers in healthcare settings faced equal or greater threats to their wellbeing during the early stages of the COVID-19 pandemic than did clinical workers.[16,33]

This study highlighted the stressors experienced by this group, and factors that helped alleviate and protect employees from those stressors. We found that a combination of psychosocial, organizational, and environmental programs, policies, and supports were important. These included increased pay, paid sick leave, health insurance coverage and regular, clear bi-directional communication.

Now that we have closed a chapter on the COVID-19 pandemic, it is essential that we examine the strategies and supports that have been most effective at protecting the health and wellbeing of our most vulnerable workers and build these features into the everyday structures of our organizations in order to guard the resilience of essential industries and essential workers.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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LEARNING OUTCOMES

- Readers will list three psychosocial, organizational, and environmental (POE) *stressors* faced by food service essential workers during the COVID-19 pandemic.
- Readers will list three psychosocial, organizational, and environmental (POE) *interventions* available to employers to address mental health and well-being challenges faced by essential workers as a consequence of the COVID-19 pandemic.

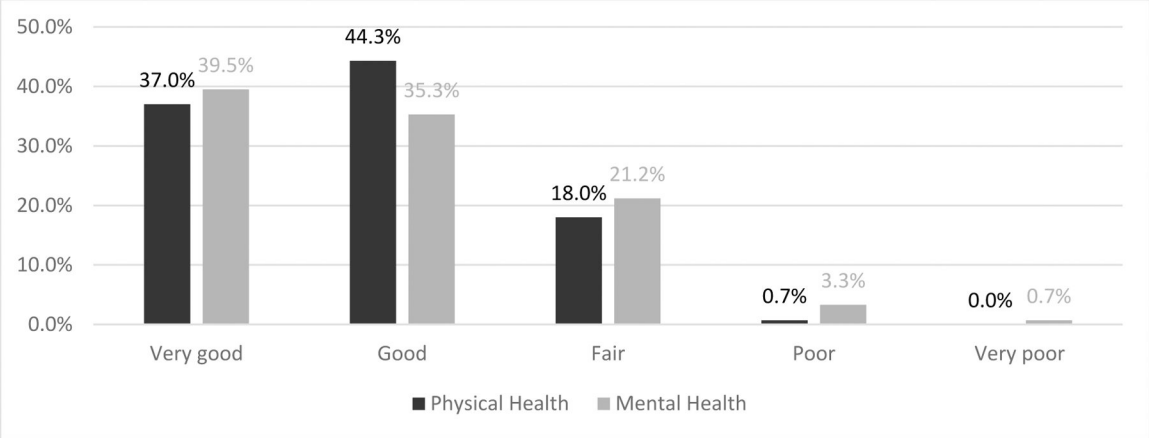

FIGURE 1. Self-Rated Physical and Mental Health, Overall Survey Sample (n=305)
a clustered bar chart, shows the distribution of survey responses for self-rated physical health and self-rated mental health.

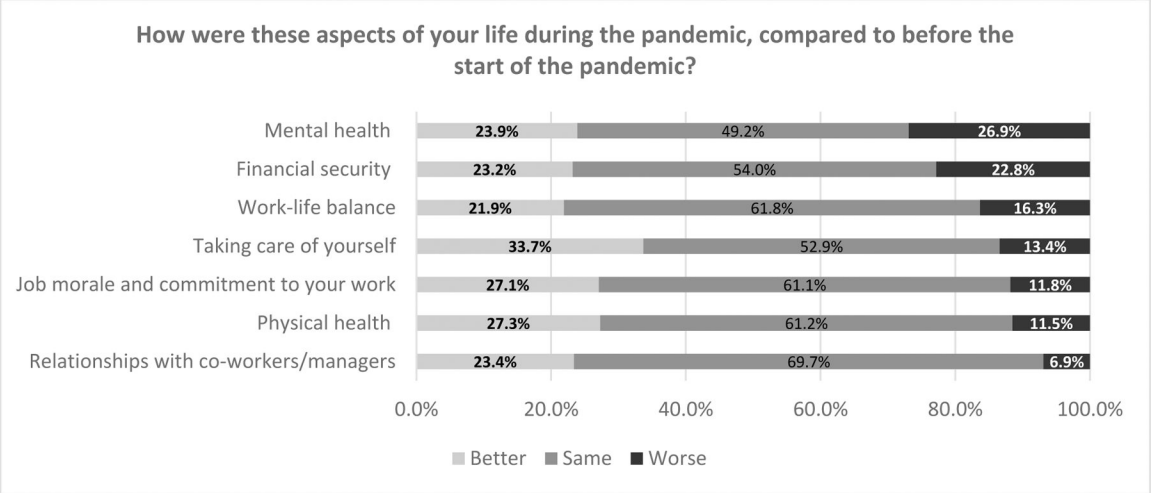

FIGURE 2. Health and Wellbeing During the Pandemic, as Compared to Before

a 100% stacked bar chart, shows across seven different domains, the proportion of survey respondents who rated their wellbeing during the pandemic as *better*, *worse*, or *the same* as their wellbeing before the start of the pandemic.

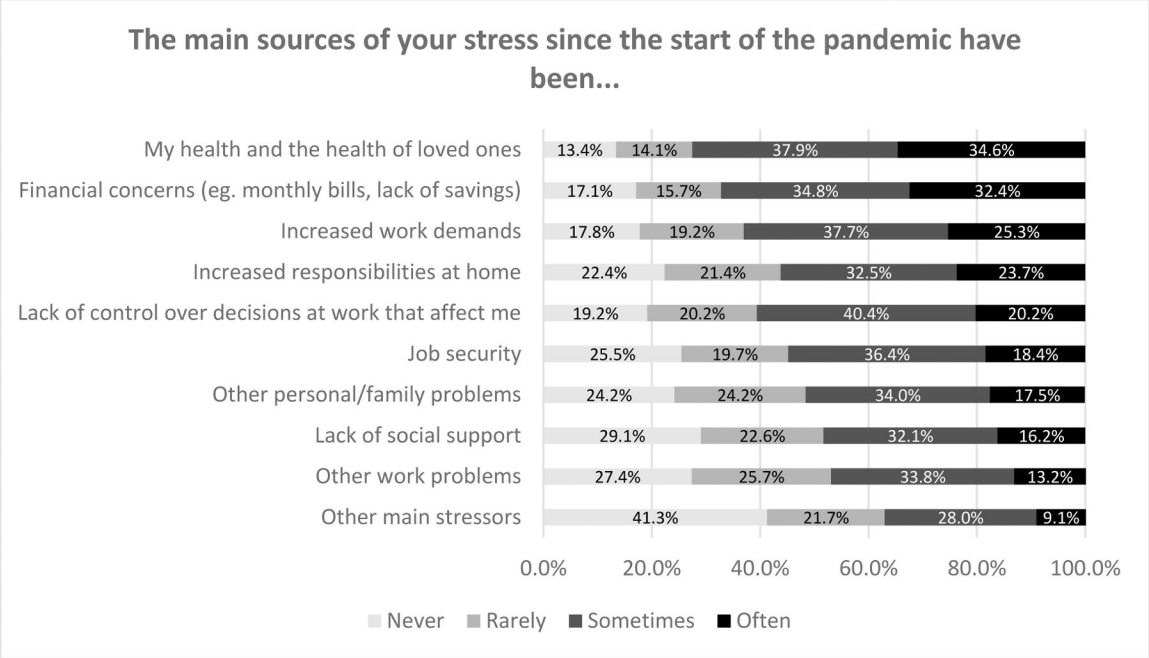

FIGURE 3. Sources of Stress During the Pandemic

a 100% stacked bar chart, shows how survey respondents rated various sources of stress since the start of the pandemic.

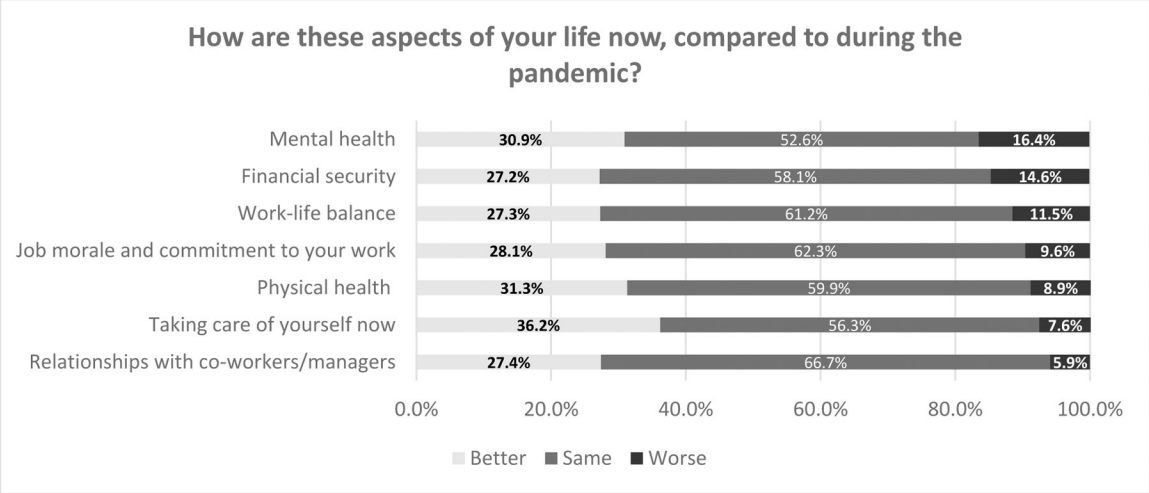

FIGURE 4. Health and Wellbeing Now, as Compared to During the Early Stages of the Pandemic

a 100% stacked bar chart, shows across seven different domains, the proportion of survey respondents who rated their wellbeing at the time of the survey as *better*, *worse*, or *the same* as their wellbeing during the early stages of the pandemic.

TABLE 1.

Distribution of Survey Respondents Across the Five Sites

Site	Valid Responses	Eligible employees	Response rate	Percent of sample
Hospital A	36	55	65.5%	11.8%
Hospital B	82	130	63.1%	26.9%
Hospital C	118	277	42.6%	38.7%
Hospital D	33	79	41.8%	10.8%
Hospital E	36	72	50.0%	11.8%
Total	**305**	**613**	**49.8%**	**100.0%**

TABLE 2.

Demographic Distribution of Study Sample

	Overall	Hospital A	Hospital B	Hospital C	Hospital D	Hospital E
	n=305	*n=36*	*n=82*	*n=118*	*n=33*	*n=36*
AGE						
Mean age	**40.6**	46.3	40.5	38.8	41.9	39.5
GENDER						
Female	**63.3%**	69.4%	58.5%	70.3%	45.8%	55.6%
RACE/ETHNICITY						
Black/African American	**78.0%**	52.8%	84.1%	91.5%	68.8%	55.6%
Hispanic	**5.9%**	5.6%	1.2%	2.5%	4.2%	22.2%
White	**7.9%**	8.3%	7.3%	4.2%	12.5%	13.9%
Other	**8.2%**	33.3%	7.4%	6.0%	14.5%	8.3%
MARITAL STATUS						
Committed Relationship/Married	**33.3%**	44.4%	35.4%	21.2%	51.5%	38.9%
Single/Never Married	**58.5%**	41.7%	53.7%	72.0%	42.4%	58.3%
Other	**8.2%**	13.9%	10.9%	78.8%	6.1%	2.8%