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Exploring the types of stress public health staff experienced during the COVID-19 pandemic in California's San Joaquin Valley

A Thesis submitted in partial satisfaction of the requirements for the degree of Master of Science

in

Public Health

by

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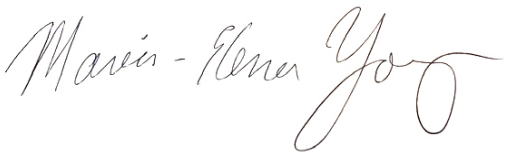

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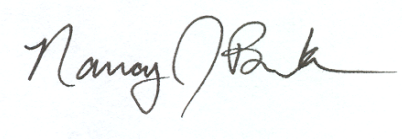

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ABSTRACT

Exploring the types of stress public health staff experienced during the COVID-19 pandemic in California's San Joaquin Valley

A thesis submitted in partial satisfaction of the requirements for the degree of Master of Science in Public Health at the University of California, Merced in 2022.

Nhi Khanh Le

Dr. Nancy J. Burke, Committee Chair

This study examines the types of stress public health staff experienced while working during the global COVID-19 pandemic and how they handled these experiences of stress. We aim to explore the stress and mental health implications of public health staff working in the health sector during the pandemic. This study focuses on the essential public health workforce located in California's San Joaquin Valley, where consistently under-funded and under resourced local health departments operate in politically conservative rural communities. Data for this qualitative study were collected between November 2020 to February 2021 using semi-structured interviews with a purposive sample of public health practitioners. Interviews sought to learn about how the COVID-19 pandemic impacted public health staff in the San Joaquin Valley. Analysis of interviews identified three major sources of stress related to public health staff's roles and work environment in the San Joaquin Valley during the COVID-19 pandemic. These included (1) sources of stress in the workplace; (2) sources of stress beyond the workplace; and (3) how public health staff coped with experiences of stress. Sub-themes address shifts in job responsibilities, occupational safety concerns, and the effects of financial vulnerability from COVID-19 as sources of stress; experiences of stress that transcended beyond the workplace included navigating relationships among family and friends who do not support public health mandates and receiving criticism from the community and general public for public health's role during the pandemic; and resources provided through work or support from interpersonal relationships as essential to their ability to cope with the stress. Mental health outcomes were a major concern among frontline essential workers during the COVID-19 pandemic. Public health staff, despite their essential role in pandemic response, have been largely invisible in media depictions of "front-line" workers. Our research highlights the conditions of stress experienced by public health staff who worked in rural local health departments in California's San Joaquin Valley, and the resources utilized to address this stress.

Introduction

This study explores the stress and mental health implications of public health staff working in the health sector in the United States during the COVID-19 pandemic. We focus on the experiences of public health staff located in California's San Joaquin Valley as there is a dearth of research that highlights the unique challenges of working in rural health departments, specifically during times of public health emergencies. These findings are particularly important because news reports have described public health staff were conditioned to work in chronically underfunded, under-resourced, and highly politicized public health departments during the COVID-19 pandemic [36].

Essential Workers

Essential workers were overworked and were particularly at risk for burnout and poor mental health outcomes during the COVID-19 pandemic [1]. There are various categories of essential workers that are important in maintaining critical services in the U.S. These include essential healthcare workers and essential non-healthcare workers [45]. **Essential healthcare workers** (doctors, nurses, and medical response professionals) serve in healthcare settings that may be directly or indirectly exposed to patients or infectious agents [45]. **Essential non-healthcare workers** (public health staff and community health workers) provide support and integral services such as compiling, modeling, analyzing, and communicating public health information [45]. Public health staff and healthcare professionals are classified as non-healthcare **frontline essential workers** due to the high risk for work-related exposure to the virus [45]. Substantial attention and support have been shown for healthcare workers (doctors, nurses, and emergency response providers) for their role during the pandemic, while largely ignoring the public health workforce. Healthcare workers were hailed as "heroes" while public health officials experienced widespread harassment at work and in their communities [3].

Impacts of COVID-19 Response on Public Health

Pandemic-related psychological and occupational distress experienced by and healthcare workers has been documented in news reports and research studies[4]. Factors such as the rapid transmission of COVID-19 along with the possibility of contracting the virus led to greater awareness of the occupational health risks among healthcare workers [47]. This awareness may have negatively impacted healthcare workers' mental health [47]. Stress among public health staff, however, remains under-explored. There has been little research that specifically documents the mental health of public health staff during the COVID-19 pandemic. Yet, numerous reports describe the high levels of threats of violence and harassment experienced by public health staff delivered via social media and at work [48]. These reports documented pandemic-related workplace violence that included doxing (publicly identifying and publishing public health staff's private information) and social media backlash [48]. These experiences ultimately resulted in reduced job satisfaction and burnout among public health staff [48]. While these reports provide insight into the violence and harassment directed towards public health staff, these forms of harassment are through media content and do not capture the impact of stress public health staff felt at work, at home, and in their communities.

Research Objectives

To highlight the conditions of stress public health staff worked in, we document the mental health impacts that affected non-healthcare frontline essential workers and describe the U.S public health system and the structural and political context of the system leading up to the pandemic. We will discuss the history of systemic resource shortages and governance challenges that ultimately established a poorly structured and unsupported public health system even before the start of the COVID-19 pandemic. Since the study is situated in California's San Joaquin Valley, we describe the impacts of rurality and highlight the economic and health barriers seen in region. Defining the structural and political context of the public health system and the local public health ecosystem will provide insight on the experiences of stress that public health officials in these rural communities dealt with and contextualizes the various ways in which they were able to cope with these stressors.

Mental health Impacts

One of the biggest concerns that emerged during the COVID-19 pandemic was the impact on frontline essential worker's mental health [33]. Vujanovic and colleagues found that COVID-19-related worry and medical vulnerability were associated with symptoms of anxiety and depression among first responders [34]. Among healthcare workers, studies have shown this group exhibits high rates of pre-existing mental health disorders [35]. Sahebi and colleagues found in the context of viral outbreaks, healthcare workers self-reported mental health symptoms coupled with their history of pre-existing mental health disorders (post-traumatic stress, burnout, depression, and anxiety) persisted for years after the outbreaks [49]. While these findings point to mental health concerns among frontline essential workers, only one study has examined self-reported mental health symptoms among public health workers.

During prolonged public health emergencies it is important to maintain and safeguard the health of healthcare and public health workers , especially their mental wellbeing. Chatzittofis and colleagues found nurses to have reported high rates of depressive and trauma-like symptoms associated with the COVID-19 pandemic [35]. During the pandemic WHO (World Health Organization) pointed out the heavy burden placed on healthcare workers and stressed the importance of understanding the risks and mental health impacts experienced by this group in order to identify effective interventions to address this stress. As mentioned previously, only one study has examined self-reported mental health symptoms among public health workers. In this study, Genevier and colleagues found the overall prevalence of mental health symptoms among public health staff was higher than the general population during March through April of 2021 almost a year after the pandemic[50]. To examine mental health conditions among public health staff an online survey was conducted between March 29th- April 16th, 2021 to assess symptoms of depression, anxiety, post-traumatic stress disorder (PTSD), and suicidal ideation among public health workers in state, tribal, local, and territorial public health departments [50]. The results of the study found that among 26,174 respondents, more than half (53%) reported symptoms of at least one mental health condition in the preceding two weeks (depression, anxiety, PTSD, and suicidal ideation). Among the results, severity of symptoms increased among public health staff who

reported being unable to take time off work or increased working hours dedicated to COVID-19 response activities [50].

Public Health in the San Joaquin Valley (SJV)

Public health is defined as "the art and science of preventing disease, prolonging life and promoting health through the organized efforts of society" [5]. Public health is a field that seeks to improve the lives and health of communities through prevention and treatment efforts, while simultaneously promoting healthy behaviors [6]. There are four common public health governance structures (centralized, local or decentralized, mixed or hybrid system, and shared system)[8]. In a shared system all local health departments are governed by both state and local authorities [8]. Public health departments in the San Joaquin Valley operate as decentralized/local where all local health departments are led by local governments which make most fiscal decisions. [8]

The San Joaquin Valley region (SJV) consists of 13 counties (San Joaquin, Fresno, Kern, Tulare, Merced, Stanislaus, King, and Madera, Calaveras, Tuolumne, Mono, Mariposa, and Inyo) with the three largest racial/ethnic groups comprising of non-Hispanic Whites (66.1%), Hispanics or Latinos (42%), and Asians (17.4%) [21]. The Valley is made up of rural agricultural communities as agriculture is the driving industry for the region's economy [22]. The Valley is characterized as geographically and economically diverse with a rich agricultural industry estimated to be worth $2.6 billion [22] . However, the San Joaquin region also deals with economic constraints and continues to face problems with access to care, particularly having struggled to recruit health care professionals and physicians to the region [22]. The poverty rates of each county are higher than the state wide average poverty level [22]

Local health departments in the SJV operate with little financial support or departmental resources. [2] Due to its unique location, local health departments in rural communities vary in their daily operations, which means certain departments followed their own protocols in response to public health emergencies [9]. For example, some local health departments may offer remote working while others may not. This difference could produce different mental health outcomes for public health staff with or without the option to work remotely.

Individuals residing in rural parts of the U.S have poorer access to essential public health services compared to individuals who live in urban regions [17]. Rurality in California is immensely diverse and has many definitions. Rurality can suggest "pastoral landscapes, unique demographic structures and settlement patterns, isolation, low population density, extractive economic activities, and distinct sociocultural milieus" . The lucrative agricultural sector largely overshadows issues such as concentrated poverty, low health care access, and high rates of pediatric asthma in the region [20]. Local health departments accordingly respond to the needs of their communities. However, rural regions tend to have lower county tax bases and federal funding needed to fund and staff local public health departments [20]. As a result, rural public health departments are commonly understaffed, under-resourced, and tend to employ staff with little formal public health training (less staff members with formal graduate or limited professional training) [17].

The public health system in the United States has been highly politicized during the pandemic [41]. The current political climate has led to the critique of science, specifically public health science, where public health recommendations and decisions derived from state and local health officials are met with scrutiny by the general public [41]. Specifically, during the COVID-19 pandemic, public opinion has been known to play a role in how politicians respond to public health emergencies and policies coming from the state level [42]. Pew Research Center reported by late March and early April of the pandemic that around two thirds of Americans viewed COVID-19 as a serious health emergency [42]. A separate survey from Pew revealed that approximately 8 in 10 (83%) Republicans said that President Trump was doing an excellent or good job. Similarly, the survey found around 81% of Democrats surveyed rated his response as only fair or poor [42]. Since public health officials serve communities under elected officials, public opinion and the local political environment can ultimately influence public health recommendations and decisions [42].

Misinformation and conspiracy theories emerged as the COVID-19 pandemic began to attract media attention due to the rapid on-set of the cases in the U.S [30] In addition, conflicting information surrounding COVID-19 from the medical community and politicians (disagreement over effectiveness of face masks, social distancing, and modes of viral transmission) generated confusion and insecurity among the general public [31]. Recent studies exploring the role of misinformation and media backlash towards public health during the pandemic found misinformation and denial of scientific literature has influenced individual's perception of risk to COVID-19 and reduced the trust of individuals and institutions responsible for protecting the public's health (Ex. CDC, public health officials, politicians) [32]. Tagliabue and colleagues found poor perceptions of COVID-19 related risks resulted in individuals resisting public health orders and challenging the science behind public health mandates (wearing masks and practicing social distancing) [32].

Impact of COVID-19 in SJV

The COVID-19 pandemic has been characterized as one of the greatest public health crises in global history [25]. According Koh and colleagues, COVID-19 was the third leading cause of death in 2020 with U.S deaths estimated to be around 1 million deaths [26]. Individuals with the highest risk for COVID-19 are the elderly, those with existing co-morbidities, and those who are immunocompromised [26].

The region was especially negatively impacted by the COVID-19 pandemic, where the Latino population comprised 35.7% of all deaths in the county while comprising 41.1% of the population, Whites comprised 31.6% of all deaths while comprising 32.7% of the population, Asians comprised 17.3% of all deaths while comprising 14.9% of the population, Black/African Americans comprised 9.2% of all deaths while comprising 6.6% of the population [27] . As mentioned previously, the San Joaquin Valley mainly suffers from shortages of physicians and health care professionals [22]. Additionally, there is a lack of data sharing among providers even with the existence of health information exchange programs in the region [22]. The COVID-19 pandemic further compounded these issues and health departments in the local counties were tasked with managing and containing the virus in their communities.

In the current study, we used a qualitative approach with semi-structured interviews to explore the stress public health staff experienced, specifically related to their work in rural health departments, and how they were able to cope with these experiences of stress. Our aim of the study was to understand the stress and mental health implications of public health staff working in the health sector during the pandemic.

Methods

Data for this qualitative study were collected between November 2020 to February 2021 using individual semi-structured interviews with a purposive sample of public health staff, including public health nurses, directors, health education specialists, program managers, and administrative assistants. Interviews were conducted over a HIPPA compliant Zoom account and lasted between 40 to 60 minutes.

To be eligible for the study, participants must have worked at a health department in the San Joaquin Valley before or during the COVID-19 pandemic and be at least 18 years old. Participants were recruited through referrals and outreach to public health professionals in the San Joaquin Valley. Public health employee's contact information were obtained from directories from local health department websites across the Central Valley.

A purposive sample of 16 female and 7 male public health staff were recruited for participation in individual semi-structured interviews. 30% of the respondents identified as Hispanic or Latino, 30% identified as White, 17% identified as Black, and 22% identified as Asian/Pacific Islander. 43% of the respondents held bachelors degrees, 43% held masters degrees, and 14% held other formal degrees (associates degree, registered nurse degree) The average age of respondents was 36 years and the average years worked at a local health department in the San Joaquin Valley was 4 years.

The interview guide was semi-structured and covered participants' daily work responsibilities, the pandemic's impact on their personal life, and explored the types of stress they experienced. The main focus of the interview centered around the pandemic's impact on public health staffs' work and personal life. For example, participants were asked "***Can you describe if there are any changes in your relationships and the ways in which you communicate with each other?***" to understand if there were any changes in professional, family, and or community-based relationships and if those changes had been positive or negative experiences. Participants where asked "***How has the pandemic impacted your relationship with family and/or friends?***" to understand how the pandemic had affected personal relationships and if those changes had been positive or negative experiences. We also asked participants "***What supports do you have at work, at home, or in the community***?" "***How have they helped you?"*** to understand the types of support that were offered or resources participants found to help cope with stressors of working during the pandemic.

The Informed Consent form was read to participants prior to the start the interview. Participants were compensated with $50 electronic gift cards following the interview via email. At the end of the interview, participants were asked a series of demographic questions. All research activity were reviewed and approved by the Institutional Review Board at the University of California, Merced.

Data from the interviews were transcribed and stored through Dedoose. Transcripts from the interviews were analyzed by a team of researchers via standard qualitative analysis techniques including iterative data review, "member checking", and having multiple coders. Each member of the research team reviewed the transcripts highlighting concepts and salient themes. A code book was created based on the themes (matching certain excerpts that corresponded to a code). Themes were derived from respondents experiences of stress from their interactions with co-workers, family/friends, and community members. Codes included; shifts in responsibility, burnout, supportive co-workers, mental health resources, supportive friends/family, community backlash, and public health under-valued. Inductive analysis, a qualitative method used to produce theory found through empirical observations, was used to identity themes related to stress experienced by respondents [55].

Findings

Inductive analysis identified three major themes: 1) sources of stress in the workplace; (2) sources of stress beyond the workplace; and (3) how public health staff coped with experiences of stress.

Sources of stress in the workplace

Shifts in job responsibilities and increased work hours

Part of the public health response to the COVID-19 pandemic included shifts in priorities and resource distribution from pre-existing programs (e.g., HIV prevention, WIC program, etc.) towards COVID-19 related activities. These shifts included participating in COVID-19 related trainings on how to administer rapid tests or vaccinations, extending working hours, adjusting to remote work, and attending numerous scheduled and unscheduled Zoom meetings. Respondents reported having virtually no time to adjust to the shifts in job responsibilities as the COVID-19 cases surged in their counties and they were offered limited training in their transition. Respondents also reported being expected to work longer hours, being available to come in on the weekends, and being able to handle shifts from in-person to remote working.

"I feel like now that I'm working from home, it's nice to be able to be here with my kids. But I feel like I'm always working at my computer even at night. Like last week, ***I think I may have clocked like 60 or 65 hours or something like that****. So, yeah, it's just been, my poor kids. If they see me, and then when they see me, like I'm tired and so they don't get my full attention."*- Department of Public Health Staff 15

Those who worked in public health departments that offered remote work reported feeling overwhelmed from having to adjust their work schedules as remote working had translated in to working longer hours since the start of the COVID-19 pandemic. Respondents who did not have the option to work from home had to stay later in the office and reported having to come in during the weekends as well. As a result, respondents described feeling overwhelmed and unable to balance their personal and work life as their work demanded more time and energy out of them. The sudden shifts in

job responsibilities and increased work hours were sources of stress reported by public health staff as they described feelings of guilt and burn-out from taking on multiple COVID-19 responsibilities, including spending more time at work instead of with their loved ones.

As a result, many active public health programs were temporarily halted or managed in addition to the COVID-19 activities. The shift in focus from vital public health programs to COVID-19 related activities left public health staff feeling guilty and worried about the communities that would be affected by the absence of these programs.

"It's just been chaos, honestly. I think that... We know that our main priority right now is COVID and responding to all of the needs. But we know in the back of our mind, we have these programs that still need to operate, that still serve a purpose as well. ***So it's not a good feeling, because you start to think like, "What's falling through the cracks? Are we missing anything****?"* – Department of Public Health Staff 1

Respondents reporting feeling conflicted knowing that underserved and hard to reach populations were missing out on vital public health services. Staff members understood the importance of maintaining regular contact with their community members to ensure they were receiving the appropriate services to meet their needs. The majority of respondents interviewed lived in the rural communities that they served, which were predominantly Latinx. About 30% of the staff interviewed were Latinx and described the challenge of observing their community members go without vital public health services in addition to the lack of COVID-19 financial support. This is important to note as the Latinx population had the highest number of COVID-19 cases in the San Joaquin region [27].

Occupational safety concerns in the office

Respondents whose department did not have the option to work remotely expressed concerns about having to share office space with co-workers who chose not to follow public health guidelines in the office and did not disclose their COVID-19 test results to their peers.

For example, one public health staff described how her human resources department instructed staff members to not ask any questions if they saw other staff not wearing a mask in the office and many workers did not want to follow the public health guideline. As a result, a number of staff members reported feeling fearful and unprotected in the office. This source of stress was especially frightening for workers who lived with elderly and/or immunocompromised loved ones.

"I haven't experienced that (fear of contracting covid in the office*) because I was more than willing to wear my mask. But I know a lot of employees who didn't want to wear it.* ***And we were given instruction by our human resources department that if we saw an employee that didn't have a mask on, that we were not supposed to ask them why or give them any problems about why they weren't wearing their mask, and just to stay six feet apart.*** *And a lot of employees were not happy and didn't want to wear it."* - Department of Public Health Staff 12

Respondents expressed feelings of anger and disbelief when learning of co-workers who tested positive for COVID-19 who chose not to disclose their results to their peers in the office. As a result, mistrust developed between co-workers who worked in the same spaces. This created a source of stress for respondents who were willing to follow the mandates in the office. Respondents also reported seeing a difference in safety concerns among staff members with different roles within the department. Public health staff in higher positions had private offices, including private bathrooms so they were less exposed the health risks compared to staff members who work in more group spaces such as administrative assistants and receptionists. Respondents reported that seeing the difference in safety accommodations for different staff members felt unfair.

Respondents described feeling anxious and fearful of bringing the virus home to their loved ones and recounted that they would take extra precautions when coming home from work such as immediately changing out of their work clothes when arriving home, taking extra-long showers, staying in different parts of their home away from their family, and not physically greeting their loved ones for the first month working during the COVID-19 pandemic.

Financial insecurity from COVID-19

Another source of stress that public health staff reported were experiences of financial vulnerability, which included stemmed from departments not offering paid sick leave, workers having to use their vacation days or not being paid on days they were sick, and the overall loss of income from the COVID-19 crisis. For example, respondent staff 5 expressed concerns with not being offered paid sick leave when they were exposed to COVID-19 and described feeling distressed when they found out they did not qualify for the COVID-19 economic relief package to cover their sick time off. The department did not allow this staff member to work from home and instead resorted to taking time off from the staff's earned vacation days.

"And then I get a call from one of the HR people in my department. "Oh, you don't qualify for the COVID relief. ***So, we need you to stop working and we need to pull it from your vacation time****." I was like, "What? This is crazy. I'm able to work. This is actually keeping me from going insane. I'm in a room, I'm getting stuff done. And I feel like I'm doing something."* – Department of Public Health Staff 5

Throughout the interviews fears of financial insecurity were regularly discussed. This fear stemmed from job insecurity as unemployment rates peaked during the beginning of the pandemic. However, rural health departments hired public health workers at a rapid pace during this time to respond to the virus's threats in their communities. Respondents reported feeling disposable as their departments hired a large number of temporary contracted workers. Respondents reported state and local health departments had consistently eliminated jobs due to the lack of federal funding and as a result there was a dearth of public health job openings even before the COVID-19 pandemic.

"So with that I was I think the 40th person in the department that had been hired since COVID, so the department knew how to sort of rapidly hire people versus before it was crickets if there was any transition, although it is an extra help position, so there are no benefits except for 24 hours of sick leave, that's it. ***There's no paid time off, there's no health insurance, nothing on that side at all****."* – Department of Public Health Staff 10

Specifically in the San Joaquin Valley, respondents described how there was limited public health job openings prior to the COVID-19 pandemic due to the limited economic constraints and poorly supported infrastructure of the health departments. After the start of the pandemic local health departments started hiring temporary public health staff at a rapid pace. However, these temporary workers did not have guaranteed employee benefits. For example, one respondent reported even though they were hired at the department specifically after the start of the pandemic there were no benefits that came with the job. This meant recently hired public health workers were financially vulnerable as they were not offered paid sick leave or health benefits.

Sources of stress beyond the workplace

Family and friends not supporting public health orders

Respondents described having family and friends who did not believe that the COVID-19 virus was real or who did not believe public health guidelines were effective. As a result, respondents expressed feeling uncomfortable discussing COVID-19 or work-related information with their family or friends. It was a difficult task to dispel misinformation or myths about COVID-19, as their loved ones did not trust the information being communicated by the Centers for Disease Control (CDC) and information coming from public health officials in their communities. This mistrust stemmed from the politicization of public health systems during the COVID-19 pandemic, where respondents described community members in these rural regions fiercely opposed public health mandates and authority due to the lack of enforcement by health departments. Public health workers reported backlash from community members who opposed the business and school closures in their counties. For example, one respondent acknowledged that the COVID-19 pandemic had changed their relationship with their loved ones.

*"A couple of our best friends...believe COVID is real they just don't believe in the restrictions being imposed on them...****I just kind of listen and let it go because there's no reasoning, so that's fine. But yeah, there's definitely been some differences in family and friend relationships****."* – Department of Public Health Staff 7

Public health staff reported having family and friends who did not support public health mandates or trust the science in public health research. This was stressful for staff members as their loved ones had different opinions about the severity of the pandemic, which translated into disregarding recommendations coming from public health.

"***I have a lot of family and friends that think COVID is fake or they don't believe in masks, masks don't work****, all those kind of the regular things you might see the anti-COVIDers as we call them say, and I do have family and friends that are the same way. And so, it is difficult*."- Department of Public Health Staff 6

Respondents' experiences of backlash felt personal, as they were already receiving criticism from their communities and the general public. Respondents reported how difficult it was to have to come home to their loved ones and hear negative comments about public heath's response to the pandemic. Respondents also reported this tension was further exacerbated due to conflicting information about the COVID-19 virus being communicated from the medical community and politicians (disagreement over effectiveness of face masks, social distancing, and modes of viral transmission).

Backlash from the community

Backlash around public health authority and mandates from the general public was a source of stress for respondents. They described that working with schools and local businesses in the San Joaquin Valley proved to be a challenge during the beginning of the pandemic. Respondents reported that at their local health departments their main voicemail machines were flooded with hateful messages fiercely opposing mask mandates and school and businesses closures. Multiple respondents who were public health information officers reported their emails were flooded with angry emails from parents, local businesses, and residents. Spams of hateful messages and harassing threats were posted on their department's Facebook COVID-19 forum. Direct forms of opposition and backlash included community members not wearing masks in public spaces and local businesses and community partners refusing to cooperate with public health departments.

*"As for going out, I don't tell people that I work in the health department, and I hide my badge once I get out of the office and walk to my car. I don't really feel safe telling people that I work at the health department. If I don't know them, I won't tell them. And if they ask, I'll just say, "Oh, I work in healthcare.***" *Because for some reason healthcare workers, people who work at the hospital, they're seen as heroes, but then people who work at the health department, they're seen as like, "Oh, you're making me wear a mask*." – Department of Public Health Staff 6

Respondents responded to the backlash from their community in various ways. Some blamed themselves for the never-ending negative comments that appeared on their Facebook posts, while others did not even disclose that they worked at the public health department. They reported feeling more comfortable telling people they were healthcare workers because they realized they would be harassed for working in public health but not if they worked in healthcare.

How public health staff coped with experiences of stress

The third theme that emerged from interviews with public health staff was the ways in which they coped with the numerous sources of stress that occurred during the pandemic. Public health staff described two ways in which they coped with these experiences of stress: spending time with and receiving support from loved ones and utilizing the mental health resources offered at work and checking in with their co-workers.

Spending time with family and receiving support from loved ones

One benefit of working from home was that some participants were able to spend time with their family. As one public health staff described having the time to bond with family was not something workers previously had a chance to do, due to their busy work schedules.

"*I think being able to be home with family is something that we never really had the freedom to do as often, so we've bonded a lot more than we used to because we're all home*. ***So, I feel like we've been able to spend time together, and that's definitely a benefit because we're not always at work and coming home late and tired. So, it's really been a blessing, actually****, in that regard*." – Department of Public Health Staff 12

Working from home allowed participants to be more active and involved in their families' lives, such as hanging out with their children and attending to household duties during their breaks at home.

"*They're always making sure I'm getting some kind of sleep, that I'm eating and that I have just any support from them that I need…* ***They understand the demands of my job right now.****"*- Department of Public Health Staff 6

Respondents who did not have the option to work remotely described receiving tangible support from loved ones through acts of service such as childcare and running errands. Respondents who were parents, especially single parents, reported how difficult it was to juggle the change in work hours as they had to make adjustments to their childcare schedule. These respondents felt like they had less options for childcare as schools were held online during the beginning of the pandemic and often relied on family members or friends for support. However, most of the respondents described that they had supportive family members and friends who offered to help with childcare, grocery shopping, and preparing meals. One respondent described how encouraging it was to have their family members check up on them and offer support by offering to do their laundry and being understanding of their work schedules. This form of support was reported as having a positive effect on public health workers who were overwhelmed with the various experiences of stress in the workplace and backlash from the communities that they served.

Utilizing mental health resources offered at work and checking in with co-workers

Respondents also described utilizing mental health resources offered at work as a way to manage the stress of working during the pandemic. Some respondents reported their health departments provided mindfulness and stress management trainings. Other staff members shared that their departments offered free mental health services with professional psychologists as reassuring and expressed it felt like their mental health needs were being acknowledged at work. One respondent described how flexible their department was in encouraging their staff members to take time off if they were feeling burnt out and overwhelmed.

"*At work they did have a support line for employees where you can call in and get the mental health services that you needed or whatever*. ***Our work is super flexible. They were encouraging us to take as many days off as we needed, especially if you were feeling overworked or overwhelmed****, they were offering that as well*."- Department of Public Health Staff 21

Respondents described departments providing options to allow workers to address their mental health needs as a positive experience. Respondents noted that their departments had inadequate resources to provide mental health support for their workers when the pandemic began due to inconsistent funding but made an effort to address these needs as they saw the toll it took on their staff.

One form of support that was frequently mentioned was checking in with co-workers. Respondents described that it was easier to communicate with fellow co-workers compared to their family and friends because they were "like-minded", being in the same field. Spending so much time together during such a stressful time allowed co-workers to depend on each other as forms of emotional support. Multiple respondents expressed how nice it felt to be able to vent to their co-workers about their day and share laughs over stressful situations. Teamwork and constant communication were reported to be key factors in ensuring respondents are able to communicate efficiently when faced with unexpected challenges. Some respondents described their department offered mental health check-ins with their staff before weekly conference meetings and made sure they took their breaks. Respondents reported this type of support could only be seen in the department because their co-workers are able to understand and empathize with each other in the ways their family and the public cannot. One respondent described:

"I've made a lot of friendships through work, so that's been very nice because we can commiserate together, and we chat with each other all the time on Facebook messenger or whatever platform we're using texts and stuff. So that's been really nice to be able to have that. ***And they all work in public health so they understand the craziness****."* - Department of Public Health Staff 15

Respondents reported utilizing mental health resources offered through work and emotional support through co-workers as a positive experience amidst working through challenging conditions.

Discussion

The purpose of this study was to examine the types of stress public health staff experienced while working during the COVID-19 pandemic that occurred in the workplace, at home, and in the community and how they handled these experiences of stress. This study focused on the public health workforce located in California's San Joaquin Valley, where consistently under-funded and under-resourced local health departments operate in a politically conservative region. To our knowledge, this is the first study that focuses on the different types of stress public health workers experienced in the San Joaquin Valley.

Pandemic-related burn out is a common theme seen among frontline essential workers, especially among public health staff. Respondents reported feeling worried about burning out due to the increased work hours and commitments associated with the pandemic. Factors such as exhaustion, low self-efficacy, and stress have previously been reported to contribute to burn out and high workforce turnover among the public health workforce [51]. This finding is consistent among public health staff as reports have documented higher rates of symptoms of anxiety, depression, burnout, and poor physical mental health among this group compared to the general public [52]. Previous studies have also found prior to the pandemic the public health workforce was slowly operating at reduced capacity due to the aging workforce, limited funding, and annual layoffs [52]. Respondents reported feeling worried about the health programs that would be neglected and felt guilty in not being able to meet the needs of disadvantaged members in their communities. This finding is consistent with previous research demonstrating that inconsistent funding at the federal level has impeded the support for vital public health services, especially during times of public health emergencies [39]. In the event of future public health crises, there may be long term consequences to the continuation of the public workforce and practice due to the alarming rates burnout coupled with the aging workforce and funding constraints.

Our findings highlighted how structural and physical conditions within the public health work place can compound with one another to create feelings of mistrust, anxiety, and fear among the public health work force. Many public health staff felt that seeing the difference in safety accommodations for different staff members felt unfair. Certain staff members with private offices and bathrooms were less exposed to the health risks in the office. In the context of rural local health departments, staff members did not have an option to make decisions surrounding office safety and felt vulnerable to the health risks. Previous research has demonstrated perceived risk of being infected with COVID-19 at work is linked to emotional exhaustion [43]. Falco and colleague found safety systems, communication, decision-making, and participation in decision-making moderated the relationship between perceived risk of being infected at work and emotional exhaustion [43]. In order to address the long-term well-being of the public health force, departments must make an effort to mitigate occupation safety concerns by providing consistent communication on office safety measures. This will allow staff members to be involved in creating such protocols to and moderate any fears or safety concerns in the event of future emergencies.

Among the public health workforce, there are differences in attitudes towards public health authority. Our findings showed there are public health staff who do not

believe in or show support for public health authority, despite knowingly working in the very institutions that issue guidelines during public health emergencies. This aligns with reports of opposition towards public health authority in the San Joaquin Valley. Rural communities in the Valley fiercely opposed public health mandates and protested against public health authority when the CDC issued guidelines that recommended closing schools and businesses during the beginning of the pandemic. The majority of public health staff interviewed live in these communities and may share some of the attitudes as their community members as reports of workers not following public health mandates in the workplace are coming from public health staff.

As mentioned previously, although research has been done to examine the mental health effects of the pandemic on essential workers there is a still a dearth of research that focuses on the mental health challenges and coping mechanisms among public health staff. Reports of mental health effects among this group primarily focused on pandemic-related burn out and experiences of harassment (at work and online). There is little information on how public health staff, specifically working in rural health departments coped with these experiences of stress. However, interviews with public health staff reported various methods to cope with their stress through various interpersonal relationships: (1) spending time and receiving support from family members and friends and (2) utilizing resources offered at work. Some departments offered free mental health services and encouraged their workers to take time off, which made public health staff feel like their mental health needs were being addressed. This aligns with previous research, which has shown prioritizing the mental health of workers is a crucial determinant of their overall health [44]. This line of research highlights employee effectiveness depends on the mental and well-being of workers, which influences their health and productivity [44]. Researchers assert encouraging worker's wellbeing through mental health interventions such as supervisor-led stress and mental health interventions helps mitigate occupational stress and fosters strong employee engagement in the workplace [44].

Public health staff expressed that it was encouraging and a relief to have co-workers with whom they could rant, as they understood how stressful it was to work in public health. Although the workplace could be a major source of stress, co-workers and resources at the workplace were also a way to mitigate that stress.

Limitations

This study has several limitations. The study took place in California's San Joaquin Valley focusing on local rural health departments. These local health departments operate with limited financial funding, resources, and differ in infrastructure based on the size and location of these agencies. Each state varies in defining their public health role, so the public health infrastructure of each state is different and the dynamics described may not translate to other settings[8]. For example, local health departments in California's rural areas operate as a decentralized system opposed to health departments in a larger metropolitan area, such as the District of Columbia (centralized system) [53]. Another limitation is public health workforce in the Valley is predominantly Latinx (43%) compared to workforce of departments located in different parts of the U.S (urban or rural). The responses from the public health workforce in the Valley may not reflect

the experiences of stress felt by public health staff located in different regions in the U.S. For example, Stone and colleagues conducted a cross-sectional study during August to September of 2020 of public health staff to assess mental and physical health, risk and protective factors for burnout, and short and long-term career decisions as a result of the pandemic [56]. The majority of the sample worked in local urban health departments, were female, White-non Hispanic, and under the age of 40. The experiences of the public health staff in Stone's study may not translate to the experiences to the overall public health workforce in the U.S [56]. Regardless, all public health staff experienced the stressors of a changing work environment in the context of the COVID-19 emergency and these results give insight on the various stressors public health staff experienced that transcended beyond the workplace and how they were able to cope with the stress.

Conclusions

Overall, these experiences of stress are important to note as there have been reports of public health staff leaving the field as a result of high levels of stress, burn out, and harassments/threats from community members. This paper has focused on the experiences of public health staff in located in California's San Joaquin Valley. This paper demonstrates that public health staff who worked during the COVID-19 pandemic in these rural communities felt stressed and overwhelmed due to the structural conditions in the workplace and backlash they received from their communities; however, they were able to cope with these sources of stress through resources offered at work or support through interpersonal relationships. Our findings also highlight the lack of attention being paid to how public health staff have reacted to the challenges of the COVID-19 pandemic, particularly how they were able to cope with various experiences of occupational stress even beyond the workplace. Sources of stress reported shows how not having the adequate resources to address to the structural issues in the workplace can lead to multiple forms of mental distress among public health staff.

Investing in the U.S's public health system, such as prioritizing sustained investments in disease prevention and surveillance is essential to improving the health of individuals in the United States. Consistent investment at the federal, state, and local level will provide the public health workforce with the support to carry out critical functions and prepare for future health emergencies in their communities. More research needs to be done to identify what resources offered in the workplace can be implemented create a positive and supportive work environment for public health staff. In addition, research needs to be done to monitor and address the mental health of the public health workforce, specifically understanding the reasons for high turnovers and what motivates them to stay in public health.

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