“COVID Knocked me Straight Into the Dirt”: Perspectives from People Experiencing Homelessness on the Impacts of the COVID-19 Pandemic

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Abstract

Background

People experiencing homelessness (PEH) are uniquely susceptible and disproportionately affected by the impacts of the COVID-19 pandemic. Understanding context-specific challenges, responses, and perspectives of PEH is essential to improving pandemic response and mitigating the long-term consequences of the pandemic on this vulnerable population.

Methods

As part of an ongoing community-based participatory research study in partnership with a homeless service organization in Indiana, semi-structured interviews were conducted with a total of 34 individuals experiencing homelessness between January and July 2021. Guided by the NIMHD Health Disparities Research Framework, which builds on the socio-ecological model, data was thematically coded using Nvivo12 qualitative coding software and themes were organized by levels of influence (individual, interpersonal, community, societal) and domains of influence (biological, behavioral, physical/built environment, sociocultural environment, health care system).

Results

PEH narratives revealed numerous and compounding factors affecting COVID-19 risks and health outcomes among PEH across all levels and domains of influence. At the individual level, PEH experience unique challenges that heightened their susceptibility to COVID-19, including pre-existing physical and mental health conditions, substance use and behavioral health risks, socioeconomic precarity, and low health literacy and COVID-related knowledge. At the interpersonal level, poor communication between PEH and homelessness service providers led to limited understanding of and poor compliance with COVID safety measures. At the community level, closures and service disruptions restricted PEH access to usual spaces and resources to meet basic needs. At a policy level, PEH were disregarded in ways that made pandemic relief resources largely inaccessible to them.

Conclusions

Our findings reveal important and mitigable issues with ongoing pandemic response efforts in homeless populations through direct, first-hand accounts of PEH experiences during COVID-19. These insights offer opportunities for multilevel interventions to improve outreach, communication, and impact mitigation strategies for PEH. This study highlights the importance of centering the voices of vulnerable communities to inform future pandemic response for homeless and other underserved and marginalized populations.

1. Background

The COVID-19 pandemic has disproportionately impacted vulnerable communities across the country, highlighting existing social inequities further exacerbated by the pandemic. People experiencing homelessness (PEH) face increased risk and susceptibility to COVID-19 infection and adverse outcomes due to pre-existing comorbidities, barriers to healthcare, socioeconomic precarity, and limited ability to social distance in congregate shelter settings.[1,2] As a result, heightened risk of transmission and outbreaks in shelters persisted despite decreases in cases among the general population.[3] Shelters and other homeless service providers have taken numerous approaches to mitigate risks, control transmission, and limit outbreaks to minimize adverse outcomes.[1,4,5]

Our previous research on COVID-19 responses from the perspective of homeless service organizations in Indiana found that service providers experienced multilevel challenges during the pandemic but also showed innovative responses with systems and staffing in place, along with the support of community and government partners.[6] The COVID-19 response in homeless populations led to improvements in crisis execution and public health protocols such as hand hygiene, social distancing, and quarantine and isolation protocols, and also created initiatives to sustain these programs.[6–8] However, limited adaptable guidance and policies for PEH and services providers have severely strained their response and resources.[6] Others have also discussed COVID-related responses and challenges from the perspective of homeless service providers, including limited availability of testing resources which severely hindered the ability of shelter staff to adequately screen PEH and prevent shelter outbreaks.[9] Furthermore, the economic consequences of the pandemic intensified the strain on low-income populations and evictions disproportionately put those most socially disadvantaged at risk for COVID-19.[10]

While a significant number of studies report trends in coronavirus cases, hospitalizations, and deaths,[11] few consider the other numerous impacts of COVID-19 on PEH and scant have explored the impact from the perspective of PEH directly. Among the few studies that have qualitatively explored PEH perspectives, most have been conducted outside the United States.[12–14] Findings from our previous work in Indiana[6] highlighted the need to hear and learn from PEH perspectives directly, in order to holistically understand the impact of the pandemic and to better inform responses that address the specific needs of this uniquely vulnerable population.

Thus, guided by the Socio-Ecological Model[15] which recognizes the interrelatedness of person-environment, this study sought to understand 1) PEH experiences throughout the COVID-19 pandemic and 2) PEH perspectives on homeless service organizations' responses to the pandemic and the impacts of those responses. Awareness of this vulnerable population's multidirectional needs creates an opportunity to discover motivations, hesitations, and challenges contributing to increased risk, susceptibility, and adverse health outcomes. Understanding these critical factors can better inform future pandemic response as well as interventions to mitigate the long-term impacts of COVID-19 for homeless populations.

2. Methods

After exploring local homeless service providers' and community-based organizations' responses during COVID-19, we turned to learn from PEH themselves in order to understand how they have personally experienced the pandemic, the challenges they have faced, and the unmet needs that persist. As part of an ongoing community-based participatory research (CBPR) project, [6] this study's recruitment and data collection activities took place at our community partner site, a transitional housing center in Indiana that serves as the coordinated point of entry for all people experiencing homelessness in the county. Recruitment involved passive outreach including center community health workers (CHWs) posting flyers and making general announcements about the study during public service announcements. At no time were PEH approached directly, and CHWs received extensive training to ensure that PEH understood that participation was voluntary and that involvement, or lack thereof, would not interfere with PEH's access to center services. To be eligible participants had to be age 18 or older, currently experiencing homelessness, and receiving services from the transitional housing center. Participants received a $25 giftcard to a local grocery store in compensation for their time providing an interview. All study activities took place at the transitional housing center from January through July, 2021.

An interview guide was developed to understand unique challenges, responses, and experiences PEH faced during the COVID-19 pandemic. Development of the interview guide was guided by: (1) the Socio-Ecological Model; (2) a review of academic and grey literature conducted to gain insights into COVID-19 responses taken by entities working with PEH, and to identify knowledge gaps that could be informed through PEH interviews; and (3) preliminary findings from our previous research with community-based organizations.[6]

Interviews were conducted in-person, in private rooms at the center, by CHWs who live in the community and work as health education specialists in the center. CHWs have relationships, knowledge, and trust with the community they serve and are increasingly being brought into research to better understand the health needs of marginalized populations.[16–19] The CHWs were trained on research ethics and data collection by study principal investigators (authors NMR and YR) who have extensive experience conducting CBPR and CHW training interventions. Interviews were recorded and transcribed by Otter.ai, a digital scribing platform. Transcriptions were quality checked for accuracy by the research team who also led the analysis. Multiple coders coded each interview independently and discussed the interviews as a group to ensure intercoder consistency.[20] Disagreements were resolved via consensus. Utilizing a combination of deductive and inductive coding based on the interview guides, using Nvivo12, a qualitative coding software.[22]

Guided by National Institute of Minority Health and Health Disparities (NIMHD) research framework,[23] which builds on the Socio-Ecological Model, data was thematically analyzed, [21] and themes were organized by levels of influence and domains of influence (Fig. 1). Preliminary findings that highlighted strengths, opportunities, and the challenges of the responses to COVID-19 as experienced by PEH were shared with the study's community partner as well as other community-agencies that serve this

population. This study was approved by the University's Institutional Review Board (protocol IRB-2020-1488).

3. Results

In total 34 PEH (M_{age} = 46 years [range 22 to 63]; 65% male; M = 3.5 years spent experiencing homelessness [range from 6 months to over 10 years]) participated in semi-structured interviews. Most identified as White (79%) with 6% as Black/African American, 9% American Indiana or Alaska Native, and 3% as multiracial. Most (59%) reported having high school or equivalent education and over half (53%) reported no monthly income (6% < than $500, 24% between $500–999, and 18% having ≥ $1000; see Table 1 for additional demographic information).

Table 1
People Experiencing Homelessness: Participant Characteristics

		Participants (*N* = 34)	
		n	(%)
Age			
	18–24 years	1	3%
	25–39 years	7	21%
	40–49 years	11	32%
	≥ 50 years	15	44%
Sex			
	Male	22	65%
	Female	12	35%
Marital status			
	Single/never married	14	41%
	Divorced/separated	13	38%
	Married/partnered	4	12%
	Widowed	3	9%
Race/ethnicity			
	White	27	79%
	Black or African American	2	6%
	American Indian or Alaska Native	3	9%
	More than one	1	3%
	Did not respond	1	3%
Ethnicity			
	Hispanic	1	3%
	Non-Hispanic	31	91%
	Refused	1	3%
	Unsure	1	3%
Education			

		Participants (*N* = 34)	
	Some high school or less	9	26%
	High school or equivalent	20	59%
	Vocational training, college	5	15%
Income per month			
	$0	18	53%
	<$500	2	6%
	$500–999	8	24%
	≥$1000	6	18%
Lifetime years of homelessness			
	< 1 year	10	30%
	1–3 years	13	38%
	4–9 years	8	24%
	≥ 10 years	3	9%
Vaccination status / willingness			
	vaccinated	7	21%
	unvaccinated; willing	8	24%
	unvaccinated; unwilling	7	21%
	unvaccinated; undecided	11	32%
	did not respond	1	3%
Willing to be tested for COVID-19			
	yes	27	79%
	no	3	9%
	undecided	2	6%
	did not respond	2	6%
Believe at risk for COVID			
	yes	17	50%
	no	16	47%
	did not respond	1	3%

		Participants (*N* = 34)	
Experienced COVID-19 (Self-report)			
	yes	5	15%
	no	16	47%
	did not respond	13	38%

Qualitative content analysis and resulting themes were organized by level of influence: individual, interpersonal, community, and societal (Fig. 1).

3.1 At the individual level, across all domains of influence, PEH experience unique challenges that heightened their vulnerability during the COVID-19 pandemic.

Participants spoke of concerns about their biological risk of severe COVID-19 due to their pre-existing health conditions. One participant shared: *"I know it, if I get it I'm dead, because the way my lungs and my health and stuff are—it's killing athletes, why wouldn't it kill me? I don't eat right, I smoke cigarettes, I've been a drug addict my whole life. If it's killing athletes, it's definitely going to kill me."* Others shared how the pandemic amplified existing mental health disorders: *"Just being depressed… there's nothing to do, and people aren't meeting and this just like sucks."* Others shared fears that their behaviors such as substance use would increase their COVID susceptibility and their risk for adverse COVID-19 outcomes. Several noted an increase in smoking, *"I did pick up cigarettes again since I've been here [shelter], and I had stopped for six months, and now I'm smoking again about a half a pack a day…"* While others shared how the pandemic led some to battle with their substance abuse, *"the urge to want to use went up."*

By contrast, some participants expressed hope that the pandemic could offer them a chance to start over and because the pandemic forced many people to lose their jobs it could create opportunities for them to find work, "*In a sense, COVID may have actually helped some of us homeless, because it kind of ground to a halt, something that is that we've been missing when it's been flying by us, we haven't been able to put the pieces together and actually get on and get in the grind. And so in that sense it's helped because it's, it's helped is to put a lot of people in the industry as well. So in that respect, it can help because everybody has to start over and look at that job again. I had, I'm starting over*." A few participants also saw themselves as survivors with determination of overcoming challenges, *"My mental attitude hasn't changed... even when I had COVID, I wasn't like sad or angry or anything… I know I'm going to get through this, I know I'm going to survive."*

Reflecting on the physical/built environment, specifically the impracticality of social distancing in the shelter a participant shared: "*I don't think the six feet social distancing applies here in the homeless community, because people are within two feet when we eat 3 times a day, or when they go outside and smoke cigarettes, they're within four feet, or when they sleep inside the shelter, they're within four feet*."

Indeed some felt that the shelter's congregate living conditions increased their risk of infection, *"this [shelter] would be the best place to catch COVID."* As many lost employment due to COVID-19, this increased socioeconomic precarity which forced many into homelessness. *"It affected our household heavily, we lost a lot of money because of it, and not having that income, having employment shutdown forced her to lose her job, and then find another job, only to have somebody in her department that she was working at test positive for COVID, and then have everybody from that entire department quarantined for two weeks which stopped more income. It's ultimately led to a really negative downward spiral… Even emergency savings that we had set up to prevent any sort of homelessness in the first place. I don't think that the relief packages that they've sent out have offset the sheer cost to the lower class or working class American to stop most of these financial emergencies from happening."* Furthermore, several participants noted how increasingly difficult it was to find employment during the pandemic, *"with this stuff going around, it's hard. People don't want to hire nobody."*

Evidence of low COVID-19 health literacy and knowledge gaps emerged with only 50% of all participants believing they were at risk for COVID-19 (Table 1) and through PEH narratives, some sharing, *"I don't know anything about COVID…"* and *"I was in prison, so I don't know too much."* This lack of knowledge affected COVID risk perceptions among PEH with some expressing fear: *"I'm scared to death, about getting this COVID, it really, really makes me paranoid"*, some feeling hopelessness, *"… even if I did get it, I wouldn't care. I mean…my life, besides, the quality of it is not good, so…it doesn't matter*", and others sharing feelings of indifference and disbelief: "*I don't know anyone who has died from it. My girlfriend doesn't know anyone who has died from it. So, I don't trust the media…I think that maybe this whole thing was blown out of proportion. But I know that it made my homeless crisis that much more difficult."*

Poor COVID knowledge also affected willingness by PEH to adopt COVID prevention measures like vaccination and testing. At the time of the study, most participants (79%) shared that they were willing to be tested for COVID-19, however only 21% of participants were vaccinated, 24% were unvaccinated but expressed a willingness to be vaccinated, 21% were unvaccinated and unwilling, and 32% were undecided (Table 1). Faith followed by fear were among the most common reasons for their unwillingness to be vaccinated, as one participant noted, *"I'm dead set in not getting it cause I trust in God. I mean, if, if I want to say I trust in God and then turn around and.. wouldn't that be taking my faith away? Wouldn't that be destroying my own faith?"* Some shared being fearful that the vaccine would make them sick, *"I've had, like, the flu vaccine and I…I don't like it because it'll actually make you sick. It's the actual flu itself that they're injecting you with… I don't want to take no shot"*, and others feared that the swabbing procedure would be painful, "*I will not take a giant Q-tip up on my nose. Everybody else says it's painful and very uncomfortable."* Moreover, some shared being unwilling because they feared being quarantined if they tested positive.

3.2 At the interpersonal level, poor communication and discrimination led to misunderstandings and tension between PEH and homelessness service providers.

Some participants acknowledged that the pandemic made the work of shelter staff, given all the uncertainty and limited resources, quite difficult: "*they're [staff] doing the best they can with what they have.*" Others expressed appreciation towards staff who enforced mask wearing, *"Every time they turn around, they're telling somebody 'put your mask on, if you're not eating put your mask on'…Yeah, they take it very serious, it's a good thing."* In fact, one newly homeless individual described how quickly staff alerted him of the already in place COVID-19 policies of mask wearing, sanitizing, and social distancing: "*I was pretty much baptized right into what was already going on…Wearing masks. Social distancing. The hand sanitizers*."

In contrast, many participants described how authoritative power dynamics and poor staff-to-client communication led to misunderstandings and tension between PEH and service providers that often resulted in poor compliance of COVID safety policies. One PEH shared feeling frustrated by staff who instead of explaining the rationale behind mask-wearing simply threaten to remove PEH from shelter premises for non-compliance: *"If we don't have this [mask] on, they say 'get your mask up or you're kicked out,' Now see that's wrong. To me, that's wrong. They need to be more specific and explain why we need to be wearing a mask rather than just saying 'put your mask up' and [if you] don't…you get kicked out. Where you going? To sleep outside. It's cold and if you don't have adequate clothing, you're screwed…I see a lot of injustice in this system now*." Interestingly, when asked about their sources for COVID-19 information, most PEH noted learning from social media, *"Mostly through Facebook… I don't watch the news. Obviously we don't have TVs here,"* from other PEH, *"Word of mouth. A homeless guys word is bond and I met some of the most loyal people in this world on the street,"* various news outlets, and CDC YouTube updates, however none of the participants indicated garnering COVID-19 information from shelter staff.

Adding to the tension between PEH and service providers was a sense that staff often did not follow the rules themselves, "*I don't think they know how to handle this virus situation, you know? When we go to lunch, they say 'six feet apart'. You're not six feet apart behind that thing [plexiglass] back there. You know, that's what we're seeing. You know you guys aren't no better than us…I mean instead of yelling at us homeless people. You know, we know what's going on. We know the risk. We're around each other every day, you know… Quit saying "stay six feet apart," you know. I mean you're not six feet apart behind that cubicle, you know. I mean it's like they're contradicting themselves*." Another PEH shared, ""*I wish this virus stuff would come to an end or come to a conclusion, you know? It's like every day, they yell and scream at us, 'six feet apart'*." Moreover, some felt that the staff's non-compliance was putting them at risk for COVID, *"…how are they [the staff] not spreading the virus? You know what I'm saying? …you guys supposedly better than us? And you guys are dealing with the same thing [pandemic] every day, other than being homeless…We know to stay six feet apart, you know, but it doesn't matter. We're here every day with each other, interact every day. You know, save your breath, quit bitching… I mean if that's the case, they're not doing anything themselves to help… if we're supposed to be ten…six feet apart, so should they…who's going to yell and scream at them?"* Others shared that the tension between staff and PEH was affecting their mental health "*Just probably my aggravation levels have gone up, because I just feel like somebody is trying to control me and tell me what to do, what I can't do."*

In addition to concerns related to how staff handled COVID safety practices, participants expressed skepticism and concern towards the ways staff handled shelter closures when clients tested positive for COVID-19, *"… they put the building on lockdown stopping new people from coming in... And I noticed that the health department was quick to lock down the buildings, but they weren't quick to lift the lock down with a false positive happening and being reported, which makes me question both the response and the direction that they're taking with the lockdown. As I'm already noticing people coming in looking for services and being turned away as a result of a false positive*." Similarly, another shared, *"what upsets me is like for instance, if you've not been here since [start of lockdown]… you will not receive services. So, what are you supposed to do? You're out on the street."* One participant went on to share how a lockdown further exacerbated his homelessness status, *"when the building was closed down and [they were] not accepting new clients because of COVID, it forced us to use the last bit of our savings on a hotel… putting us in a really, really bad financial spot."*

Tensions between PEH themselves were also reported. The congregate shelter setting and limited personal space led to tension between some PEH, exacerbated by interpersonal discrimination where some participants described other PEH as *"a stubborn bunch"*, stating that *"some people just do not care at all about other people and they just cough right in their face and wipe their snot everywhere… sometimes you have people basically touching you, or touching your backpack or whatever clothes. Maybe it's an accident maybe they're doing it on purpose, who knows."*

3.3 At the community level, closures and service disruptions restricted PEH access to usual spaces, routines, and ability to meet basic needs.

All participants spoke in detail about how COVID-related closures in the community had affected their ability to meet basic needs on a daily basis. Some had great difficulty finding spaces to shelter or even just to be. *"Because of COVID there's a lot of smaller restaurants that people would be able to go to get coffee, utilize WiFi, and have a place to stay warm. So you either have to stay at [shelter] for several hours, and do nothing. Or find somewhere warm to wait until the shelter opens up. Covid has kind of messed a lot of things up."* Participants discussed difficulty finding spaces or resources for personal hygiene. *"I couldn't find a bathroom anywhere. There was no access. No public access bathrooms anywhere. I couldn't shower, bathe, take care of myself because they shut all the water down in the public parks. I mean, it's just, it's been difficult in that regard."* Others described challenges they faced in finding places to relax or destress away from the shelter. *"When the pandemic hit, it's like everything shut down. So, it was very hard for me to find stuff, find places to go where if my senses are overstimulated, it is very hard for me to find a place to where I, you know, I could get myself de-stressed."* Another shared, *"Well, a lot of times, when I go to the library, I like to spend a lot of time in the library and it helps me to… because if I'm, if my autism is really flaring and I'm overstimulated, going to the library helps me to kind of de-stimulate basically... [now] they only let you be in there for 30 minutes."* One individual explained how the closures caused changes in their routine, *"Especially during the pandemic, it's been, it's been a bit of a challenge for me. You know I'm used to being able to go you know here, there, everywhere, you know, and such, you know, without any issue. But the pandemic is, you know, kind of caused us, maybe a little*

hamper and whatnot you know, but I'm learning how to adapt around it." Others shared that COVID was one more challenge on top of everything else they faced on a daily basis. For example, a formerly-incarcerated participant shared, *"I caught COVID. When I was laying on the floor in the shelter after trying to do everything right to get parole, which I did…"*

Regarding shelter-specific organizational responses to the pandemic, some participants expressed a positive reaction to the accessibility of sanitizing products along with more frequent bathroom cleaning in the shelter, stating, "*I feel like the like hand sanitizer everywhere. That's awesome. I think that helps.*" Another stating, "*I like how [the shelter] nightly have cleaners to go clean the bathroom, like it's never been cleaned before*..." Others commented on the lack of consistent resource availability available in restrooms such as soap, toilet paper, and paper towels, *"…the people taking all the paper towels or soap dispensers being empty…generally you can't get in the bathroom in here anyway, so I just mostly use the hand sanitizer... they don't always have toilet paper, they don't always have paper towels. It seems like the soap dispensers aren't being filled*." The increase in shelter demands because of the pandemic further strained the already limited resources leading to longer wait times for restrooms, one PEH stating, "*It's so bad here in the morning with these bathrooms that I got to take the number seven out to Walmart and use the bathroom out there. I don't even bother trying to come here*."

A few participants felt that during the pandemic, relief resources allowed for continued or even increased accessibility to services. One stating that services *"Became easier to get. Felt it."*, and another sharing, *"I actually got housed within like a couple weeks."* However, the majority of participants described how COVID-related service disruptions severely restricted or delayed access to key services. *"I had to continue to live on the streets, even though it was four-degree weather out because of the fact that the [shelter], had a case of COVID...."* One participant shared, *"[behavioral health providers] used to come, but they don't no more because of the COVID thing."* One participant described the delays he experienced in accessing necessary paperwork, "[*I was] referred to [homeless service organization] to get my green card and [organization] was shut down… somebody COVID in there so nothing happened until January… that I finally was able to get in there into the zoom thing, meeting with them got, you know the application kind of filled out and everything…"*

In addition to service disruptions, participants also described the notable decrease in community support from volunteers, *"And with the virus and all, what it did, it brought the families closer together at their homes. It makes some of the [people] or the churches or some that used to help nonexistent. They just don't want to take the time to do it or take the time to help."* In contrast, some participants spoke of increased visibility of homelessness as a silver linings for PEH communities resulting from the pandemic, *"How is [covid] affecting me? it's affecting everyone in the whole country but even more so is the homelessness. I think COVID has actually helped empower some homeless communities because of the fact that some of the commercials are put out by the big conglomerate businesses that are really enlightening and really heartfelt and very spot on."*

3.4 At a policy level, PEH continue to be neglected in ways that made pandemic relief resources largely inaccessible.

Participants described how unclear guidance on COVID policies and stimulus funding led to overwhelming confusion and inability to access relief resources. *“I didn't get my last year's tax returns, or my stimulus check, so I have to go to the IRS… Because you can't call them nobody answers the phone there either… The system has become so inadequate [for] people like us, the homeless. They don't care. The government does not care…the ones that are getting income, the ones that are on unemployment, they’re getting the stimulus checks. But true people that are homeless ain’t getting shit. No address…well I mean they can use this [shelter’s] address, because this [is] where we have our mail sent. But I don't know. It's just…overwhelming."* Those who lost jobs expressed difficulty accessing unemployment benefits. *"...Even to hop online and do my unemployment stuff is just, it was just so difficult for me."* Individuals also noted a lack of understanding regarding unemployment resources. *"I believe that's where the Cares Act comes in. A lot of people don't understand the care's act. It's unemployment insurance that is not just for people that were employed at that time, but it was people that for myself, they couldn't get employment because everything shut down...."* Participants also expressed confusion surrounding COVID-19 policies and procedures related to healthcare and insurance, *“I didn't even know it was still valid [health insurance] or I would have went to the frickin hospital. So I didn't get any kind of testing I didn't get any kind of treatment."* Furthermore, despite the federal moratorium on evictions, several participants shared how they became homeless during the pandemic, *"…Even though was a moratorium on evictions for nonpayment, [landlord] evicted me for having somebody else living there which is against the lease. So, I became homeless again."*

Local COVID-related policies, including “stay-at-home” orders, mask mandates that meant PEH were never able to be without a mask indoors, and transit rules were not clearly communicated to PEH and often disregarded their specific needs and context. One participant shared, *“We were riding the buses for free because they didn't want to handle the change… Alright. Nothing has changed. The virus is still there. So it's like, why we ain’t riding the buses for free now?...Yeah, you know and they’re making us pay now, and it's like, the virus hasn't changed."*

4. Discussion

This study explored the impacts of the COVID-19 pandemic on homeless populations in the US through first-hand accounts from PEH. Across all domains of influence (biological, behavioral, physical environment, sociocultural environment, health care system), interviews with PEH revealed multilevel factors affecting their susceptibility to COVID-19 and other adverse outcomes of the pandemic. While existing research has surveyed PEH to understand specific COVID-related issues such as loneliness and isolation,[13,14] mental health and substance use,[24] and attitudes towards vaccinations and testing,[8,25,26] there have been limited efforts to provide accounts from PEH themselves, in a way that centers the voices of the most affected to understand direct impacts of the pandemic on this vulnerable population. This community-based, qualitative study explored PEH narratives of lived experiences and perspectives about

being homeless during the pandemic. To date, several studies have garnered perspectives from homelessness service providers and reported on numerous challenges these frontline workers faced throughout the pandemic as well as the complex and innovative ways they navigated and responded to these challenges.[6,27] Of note, is that in many aspects, PEH narratives supported provider accounts, particularly around this population's pre-existing physical, mental, and behavioral health conditions that were exacerbated by COVID-related service disruptions and multilevel challenges that made safety measures like social distancing difficult and often impossible.

The absence of the voices of PEH in research, can miss a more direct and nuanced understanding of motivations, knowledge, attitudes, and beliefs that contribute to challenges. Indeed, our findings highlighted several important and mitigable issues that had not come up in our previous work which focused solely on provider perspectives. For instance, many PEH spoke of communication issues between shelter staff and guests that led to poor understanding and low compliance of COVID-related safety measures. Specifically, PEH felt that little to no effort had gone into informing or educating them about COVID-19 and they were rarely offered rationale for new shelter rules such as mask-wearing and social distancing. Moreover, they shared that staff neither explained nor modeled expected behavior, but instead "contradicting themselves", communicated by "yelling", "trying to control", or "threatening to kick out" shelter guests. Interviews with PEH also revealed important knowledge gaps and misinformation surrounding COVID-19 that were made worse by a lack of reliable information sources. Important to note that not a single participant mentioned shelter staff as a source of COVID-related information, instead indicating that sources were often word-of-mouth and social media. Furthermore, PEH interviews emphasized key policy failures that made state and federal pandemic responses especially neglectful of and even harmful to homeless communities including mask mandates, stay-at-home orders, and closures of public spaces and transportation, which in essence disregarded the context and unique needs of PEH. Other policies such as eviction moratoriums contained loopholes and exceptions that failed to protect this vulnerable population. Lack of tailored guidance also led to PEH confusion surrounding COVID healthcare-related policies and procedures and created substantial barriers to acquiring relief resources and stimulus benefits.

Our findings reveal numerous opportunities for multilevel interventions and improved disaster response for homeless populations. At the individual level, this work highlights the imperative for outreach, education, and navigation of PEH through healthcare and social welfare systems. Community health workers and other types of outreach workers have served as essential links between underserved populations and health and social services both during and long before the pandemic.[17,18,28] Hiring and deploying trusted individuals with lived experience or knowledge of the community could be the key to pandemic response in homeless populations by providing education, testing, access to vaccines, and navigation of relief programs, stimulus checks, etc. At the organizational level, training interventions for shelter staff and other homelessness service providers could allow for better communication skills and strategies and improved ability to meet PEH needs. At the societal and policy level, federal and state guidance and policy must be inclusive of our most vulnerable populations and tailored to their local

contexts, which can only be achieved through meaningful engagement of members of these vulnerable communities. PEH must be engaged, listened to, and counted in a meaningful and participatory way. The majority of federally reported COVID-19 outcomes in homeless populations focused on numbers of cases and deaths, and disregarded both the complexities that made those counts inaccurate, as well as the enormous range of other impacts these communities faced.[29] PEH must also be protected from policy loopholes and other exceptions that exacerbate inequities and perpetuate a vicious cycle of falling through cracks.

Despite the overwhelming challenges faced by homeless populations, the PEH participants' also described numerous elements that helped them cope, overcome, and even grow despite the traumas and significant stressors, with some indicating being hopeful that the pandemic might offer them an opportunity for a fresh start. There is increasing evidence that demonstrates that supportive programs can assist people to exit homelessness,[30–32] yet without centering these efforts on the voices of those most affected these efforts will continue to fall short. Further research is needed to enable the U.S. to create a system that is person-centered. These efforts must provide not only a better understanding of the unique and multidirectional needs of PEH, but also move beyond a deficit model towards one that identifies supportive protective factors so programs and policies can not only help individuals exit homelessness but also strive to reduce risk of homelessness.

List Of Abbreviations

CARES: Coronavirus Aid, Relief, and Economic Security

CBPR: community-based participatory research

CHW: Community Health Worker

NIMHD: National Institute of Minority Health and Health Disparities

PEH: people experiencing homelessness

Declarations

Ethics approval and consent to participate: This study was approved by Purdue University's Institutional Review Board (protocol IRB-2020-1488). Informed consent was obtained verbally by all participants prior to commencing research activities as approved by Purdue University's Institutional Review Board. All methods were performed in accordance with the Declaration of Helsinki on ethical principles for research involving human subjects.

Consent for publication: Not applicable

Availability of data and materials: The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests: NMR is a member of the board of directors of a non-profit homeless service organization in Indiana. RGM, RZ, CT, HY, and YR declare no competing interests.

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Authors' contributions: NMR conceived and designed the study, secured funding, and led the data analysis and writing of the manuscript. RGM led project management and contributed to study design, analysis, and writing of the manuscript. RZ led data collection and contributed to writing of the manuscript. CT and HY contributed to data analysis and writing of the manuscript. YR contributed to study design, data analysis, and writing of the manuscript.

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References

1. Baggett TP, Keyes H, Sporn N, Gaeta JM. Prevalence of SARS-CoV-2 Infection in Residents of a Large Homeless Shelter in Boston. JAMA. 2020;323(21):2191. doi:10.1001/jama.2020.6887
2. Hsu HE, Ashe EM, Silverstein M, et al. Race/Ethnicity, Underlying Medical Conditions, Homelessness, and Hospitalization Status of Adult Patients with COVID-19 at an Urban Safety-Net Medical Center — Boston, Massachusetts, 2020. MMWR Morb Mortal Wkly Rep. 2020;69(27):864–869. doi:10.15585/mmwr.mm6927a3
3. Lewer D, Braithwaite I, Bullock M, et al. COVID-19 among people experiencing homelessness in England: a modelling study. *Lancet Respir Med*. Published online September 23, 2020. doi:10.1016/S2213-2600(20)30396-9
4. Kelly D, Murphy H, Vadlamudi R, et al. Successful public health measures preventing coronavirus disease 2019 (COVID-19) at a Michigan homeless shelter. Infect Control Hosp Epidemiol. Published online August 26, 2020:1–2. doi:10.1017/ice.2020.439
5. Baggett TP, Racine MW, Lewis E, et al. Addressing COVID-19 Among People Experiencing Homelessness: Description, Adaptation, and Early Findings of a Multiagency Response in Boston. Public Health Rep. 2020;135(4):435–441. doi:10.1177/0033354920936227
6. Rodriguez NM, Lahey AM, MacNeill JJ, Martinez RG, Teo NE, Ruiz Y. Homelessness during COVID-19: challenges, responses, and lessons learned from homeless service providers in Tippecanoe County, Indiana. BMC Public Health. 2021;21(1):1657. doi:10.1186/s12889-021-11687-8
7. Aitken E. COVID-19: opportunity to improve crisis responses to homelessness? J R Coll Physicians Edinb. 2021;51(S1):S53-S62. doi:10.4997/JRCPE.2021.242

8. Kuhn R, Henwood B, Lawton A, et al. COVID-19 vaccine access and attitudes among people experiencing homelessness from pilot mobile phone survey in Los Angeles, CA. PLOS ONE. 2021;16(7):e0255246. doi:10.1371/journal.pone.0255246
9. Moses J, Janosko J, Treglia D, Rice E, Culhane D. *Surveying Local Homeless Service Providers (Part 2): Responses from July 2020*. National Alliance to End Homelessness; 2020:23.
10. Benfer EA, Vlahov D, Long MY, et al. Eviction, Health Inequity, and the Spread of COVID-19: Housing Policy as a Primary Pandemic Mitigation Strategy. J Urban Health. 2021;98(1):1–12. doi:10.1007/s11524-020-00502-1
11. *12 Month Update as of December 31, 2020 USICH, SARS-CoV-2 and COVID191: The Federal Response for Families and Individuals Experiencing Homelessness*. United States Interagency Council on Homelessness; 2020:21.
12. Allaria C, Loubière S, Mosnier E, Monfardini E, Auquier P, Tinland A. "Locked down outside": Perception of hazard and health resources in COVID-19 epidemic context among homeless people. SSM - Population Health. 2021;15:100829. doi:10.1016/j.ssmph.2021.100829
13. Bertram F, Heinrich F, Fröb D, et al. Loneliness among Homeless Individuals during the First Wave of the COVID-19 Pandemic. IJERPH. 2021;18(6):3035. doi:10.3390/ijerph18063035
14. Hajek A, Bertram F, van Rüth V, et al. Prevalence and Factors Associated with Fear of COVID-19 Among Homeless Individuals During the COVID-19 Pandemic: Evidence from the Hamburg Survey of Homeless Individuals. Risk Manag Health Policy. 2021;14:2689–2695. doi:10.2147/RMHP.S317039
15. McLeroy KR, Bibeau D, Steckler A, Glanz K. An Ecological Perspective on Health Promotion Programs. Health Education Quarterly. 1988;15(4):351–377. doi:10.1177/109019818801500401
16. Stewart MK, Felix HC, Olson M, et al. Community Engagement in Health-Related Research: A Case Study of a Community-Linked Research Infrastructure, Jefferson County, Arkansas, 2011–2013. Prev Chronic Dis. 2015;12:E115. doi:10.5888/pcd12.140564
17. American Public Health Association. *Recognition and Support for Community Health Workers' Contributions to Meeting Our Nation's Health Care Needs*.; 2001.
18. Center for Disease Control and Prevention. *CDC's Division of Diabetes Translation Community Health Workers/Promotores de Salud: Critical Connection in Communities*.; 2003:10.
19. Ruiz Y, Matos S, Kapadia S, et al. Lessons Learned From a Community–Academic Initiative: The Development of a Core Competency–Based Training for Community–Academic Initiative Community Health Workers. Am J Public Health. 2012;102(12):2372–2379. doi:10.2105/AJPH.2011.300429
20. O'Connor C, Joffe H. Intercoder Reliability in Qualitative Research: Debates and Practical Guidelines. International Journal of Qualitative Methods. 2020;19:1609406919899220. doi:10.1177/1609406919899220
21. Fereday J, Muir-Cochrane E. Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development. International Journal of Qualitative Methods. 2006;5(1):80–92. doi:10.1177/160940690600500107

22. AlYahmady HH, Al Abri SS. Using Nvivo for Data Analysis in Qualitative Research. IIJE. 2013;2(2):181–186. doi:10.12816/0002914
23. NIMHD Research Framework. NIMHD. Accessed November 4, 2021. https://www.nimhd.nih.gov/about/overview/research-framework/research-framework.html
24. Tucker JS, D'Amico EJ, Pedersen ER, Garvey R, Rodriguez A, Klein DJ. Behavioral Health and Service Usage During the COVID-19 Pandemic Among Emerging Adults Currently or Recently Experiencing Homelessness. J Adolesc Health. 2020;67(4):603–605. doi:10.1016/j.jadohealth.2020.07.013
25. Bell C, Bosi T, Gracious BL. Informing Strategy to Ensure Detection: Perceptions of Coronavirus Testing in a Southeastern U.S. Urban Homeless Population. HCA Healthcare Journal of Medicine. 2020;1(0). doi:10.36518/2689-0216.1178
26. Iacoella C, Ralli M, Maggiolini A, Arcangeli A, Ercoli L. Acceptance of COVID-19 vaccine among persons experiencing homelessness in the City of Rome, Italy. European Review for Medical and Pharmacological Sciences. 2021;25:4.
27. Aronowitz SV, Engel-Rebitzer E, Lowenstein M, Meisel Z, Anderson E, South E. "We have to be uncomfortable and creative": Reflections on the impacts of the COVID-19 pandemic on overdose prevention, harm reduction & homelessness advocacy in Philadelphia. SSM - Qualitative Research in Health. 2021;1:100013. doi:10.1016/j.ssmqr.2021.100013
28. Balcazar H, Rosenthal EL, Brownstein JN, Rush CH, Matos S, Hernandez L. Community health workers can be a public health force for change in the United States: three actions for a new paradigm. Am J Public Health. 2011;101(12):2199–2203. doi:10.2105/AJPH.2011.300386
29. Rodriguez NM, Cromer R, Martinez RG, Ruiz Y. Impact of COVID-19 on People Experiencing Homelessness: A Call for Critical Accountability. Am J Public Health. (In press).
30. Tsemberis S, Gulcur L, Nakae M. Housing First, Consumer Choice, and Harm Reduction for Homeless Individuals With a Dual Diagnosis. Am J Public Health. 2004;94(4):651–656. doi:10.2105/AJPH.94.4.651
31. Mares AS, Rosenheck RA. Twelve-month client outcomes and service use in a multisite project for chronically homelessness adults. The Journal of Behavioral Health Services & Research. 2010;37(2):167–183.
32. Mares AS, Greenberg GA, Rosenheck RA. HUD/HHS/VA Collaborative Initiative to Help End Chronic Homelessness, National Performance Outcomes Assessment: Is System Integration Associated with Client Outcomes. *West Haven, CT: Northeast Program Evaluation Center*. Published online 2007.

Figures

		Levels of Influence			
		Individual	**Interpersonal**	**Community**	**Societal**
Domains of Influence	**Biological**	Pre-existing physical and mental health conditions	Increased risk of COVID exposure / community transmission		
	Behavioral	Substance use; Compliance with COVID safety measures; **Hope and determination**	**Communication** (or lack thereof) between shelter staff and PEH; power dynamics and tension	Organizational COVID policy enforcement and communication issues	Difficulty acquiring COVID relief benefits
	Physical/Built Environment	Limited personal space; inadequate living/sleeping conditions	Congregate shelter settings and lack of social distancing	Limited access to personal hygiene resources and spaces; Reduced capacity in shelters	Reduced access to public spaces and transportation; Eviction moratorium 'exceptions'
	Sociocultural Environment	Socioeconomic precarity; Loss of employment/ income	Interpersonal discrimination and tension; Isolation	Less volunteers and community support; Discrimination	Limited guidance that disregarded context; **Increased visibility of homelessness**
	Health Care System	Low health literacy; knowledge gaps; barriers to vaccination and testing	Provider mistrust; Poor provider-PEH communication	Disruptions and delays in services; Decreased access to mental health resources	Confusion surrounding COVID healthcare-related policies and procedures
Health Outcomes		**Individual Health**	**Organizational Health**	**Community Health**	**Population Health**

Figure 1

Positive (**bold**) and negative factors affecting COVID-19 risks and outcomes among PEH. Based on the NIMHD Health Disparities Research Framework.