A qualitative analysis of perceptions of and reactions to COVID-19

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Abstract

Objective: To understand communities’ perceptions, beliefs, and health-related behavior choices related to COVID-19 in order to guide public health nursing communication and interaction with patients and the community.

Design: A qualitative study, guided by the Health Belief Model (HBM), strove to comprehend the perceptions and reactions to COVID-19 among Wisconsinites.

Sample: Twenty-five diverse Wisconsin residents aged 18 or older.

Measurements: Semi-structured interviews provided information about individuals’ attitudes, perceptions, and reactions to COVID-19. Interviews were audio-recorded, transcribed, and thematic analysis was conducted to identify themes.

Results: We identified three major themes: (1) “health care starts way before you ever enter the doors of a healthcare facility”; (2) “to live in a society is to help each other”; and (3) mental health as impacted by COVID-19.

Conclusions: This study demonstrated the need for greater public health support, as well as the role of Social Determinants of Health. Understanding perceptions and reactions to COVID-19 can help public health nurses understand and better respond to future pandemics.

Keywords: COVID-19 reactions, pandemic response, public health nursing, qualitative research, Wisconsin

1 BACKGROUND

As of December 2021, over 10,000 people have died from COVID-19 in Wisconsin (COVID-19, 2021a) and over one million COVID-19 cases have been reported (COVID-19, 2021b). Early in the pandemic, Wisconsin received national attention due to the implementation and then striking down of public health orders designed to curb the spread of COVID-19. For example, the Wisconsin Supreme Court blocked an attempt by Governor Tony Evers to delay the April 2020 election and extend the absentee ballot deadline due to health and safety concerns (Liptak, 2020). Republican members of Wisconsin’s legislature also challenged the Governor’s Safer-at-Home order. The Safer-at-Home order was then ended by the Wisconsin Supreme Court in mid-May 2020, leaving Wisconsin with no unified plan for addressing the pandemic. Each of Wisconsin’s 72 counties was left to make different, independent decisions about how to curb the spread of COVID-19 (Johnson, 2020).

It is against the backdrop of this political climate in Wisconsin that we conducted our qualitative study to examine Wisconsinite’s perceptions of and reactions to the COVID-19 pandemic. Conducted early...
in the pandemic (March–June 2020), we asked participants what they thought about COVID-19, their sentiments about quarantine, and how COVID-19 was impacting them, individually and in their communities.

1.1 | The Wisconsin context

Wisconsin, a state in the upper Midwest of the United States (U.S.), is home to 5,822,434 people (U.S. Census Bureau QuickFacts, 2019). Moreover, Wisconsin is 46th out of 50 U.S. states for its public health spending (Wisconsin Department of Health Services, 2019), meaning that Wisconsin’s public health sector was strained and underfunded well before the COVID-19 pandemic. Additionally, political decisions made before the pandemic impeded Wisconsin’s COVID-19 response. Specifically, in 2018 after former Governor Scott Walker lost his reelection campaign to current Governor Tony Evers, Walker, along with the Republican-controlled legislature, passed a series of laws which were later upheld by the Wisconsin Supreme Court in 2020 (White, 2020). These laws limited some of the Governor’s power (White, 2020), and gave “lawmakers more power to intervene in lawsuits involving the state, to approve legal settlements involving the state, and to block administrative rules written by the Evers administration” (White, 2020). In essence, the lack of public health funding and such political actions meant that Wisconsin was in a precarious situation to handle any health emergency prior to COVID-19.

This lack of funding and overturning of rules meant to protect the public’s health had harsh consequences for Wisconsin residents. By October 2020, Wisconsin had one of the worst COVID-19 outbreaks in the U.S. (Burakoff, 2020; COVID-19, 2020b). During the COVID-19 pandemic, the lack of funding for public health in Wisconsin, combined with the lack of a coherent public health response due to political turmoil, meant that Wisconsinites have suffered through severe COVID-19 outbreaks, threats to their health, and confusing and fragmented COVID-19 responses.

Therefore, the experiences of Wisconsinites during the pandemic are salient both in informing an understanding of public response within this turmoil, and in terms of informing future responses by public health nurses and other healthcare professionals. Hence, this study sought to examine Wisconsinite’s perceptions of and reactions to COVID-19 at the beginning of the pandemic, amid such an environment. In order to examine the experiences of Wisconsinites within this context, not only did we interview Wisconsinites, but we also applied a theoretical framework to inform our study.

1.2 | Theoretical framework

The Health Belief Model (HBM) guided our study, as it has commonly been used to examine reluctance to participate in various public health programs or initiatives (Champion & Skinner, 2008). The HBM posits that one’s health-related behavior is largely impacted by perceived threats, benefits, and barriers to engaging in a particular behavior, as well as relevant cues to action and self-efficacy (Champion & Skinner, 2008). Perceived threats include perceptions of susceptibility to and severity of health problems. This framework provided structural direction for the development of interview questions.

2 | METHODS

IRB approval from the University of Wisconsin-Milwaukee was obtained prior to beginning our study. Participants were 18 years of age or older, Wisconsin residents, English-speaking, and provided informed consent as explained in further detail below.

2.1 | Design

We employed a single-series cross-sectional qualitative design to conduct our observational research (Salazar et al., 2015).

2.2 | Sample

Between March and June 2020, we conducted semi-structured interviews with 25 residents of Wisconsin. Purposeful snowball sampling was used to ensure a diverse sample of Wisconsinites over the age of 18, and also to ensure we reached “hard-to-reach populations and their networks” (Salazar et al., 2015, p. 168). Recruitment was a challenge due to COVID-19 and the Safer-at-Home order. As a result, many organizations were closed (Radcliffe & Caughey, 2021), and organizations that were open, such as healthcare organizations, were too busy to respond. For this reason, we contacted community stakeholders for recruitment purposes, who were identified through a discussion among the lead authors, all of whom have lived or worked in Wisconsin for a minimum of 10 years. We contacted the stakeholders and either interviewed them directly and/or asked for referrals of who to contact. A standardized referral script was emailed to organizations and individuals so that each participant received the same introductory information about the study.

Stakeholder engagement was crucial in this study to establish trust. Many of the community stakeholders were religious or non-profit leaders. This was an important step because some participants would not speak with the research team until after they had spoken with their community leader (the community stakeholder) about the trustworthiness of us and our study. The community stakeholders were thus considered community gatekeepers (Joseph et al., 2016). We sought out community stakeholders and those within their network of different ages, race/ethnicities, and occupations, to reach saturation. Hence, snowball sampling was ideal for this study due to the challenges presented by COVID-19 and because we were able to reach a broad range of people (Tolley et al., 2016). Figure one illustrates our recruitment (Figure 1). Those listed at the beginning of each web are stakeholders. However, if they are listed as participants, it means they are stakeholders who were also interviewed. If it simply says stakeholder, they referred others without being interviewed themselves.
2.3 | Consent process

We e-mailed all participants the consent form approximately 24 h ahead of time to review, and we obtained verbal consent for this study. This was to allow time for thorough review of the consent form and for answering any questions. Participants consented to the interview and its recording. All interviews were conducted over the phone, recorded, and transcribed, deidentified, and checked for accuracy. Once accuracy was confirmed, the original recording was destroyed to ensure confidentiality.

2.4 | Measures

The semi-structured interview guide was developed based on Aday and Cornelius’s (2006) and Blair et al.’s (2013) recommendations for interview guide creation. Thus, the interview guide started with more general questions and then transitioned to more specific questions. We did not ask any “double-barreled” questions (Blair et al., 2013), meaning, we asked one question about one specific issue at a time. We also avoided leading questions about COVID-19, and instead, we asked questions such as, “what are your thoughts about COVID-19?” “When did you first hear about COVID-19?” “Who did you hear this information from?”, and “What do you think of COVID-19?” Moreover, every participant was asked identical questions in the same order. While the HBM did inform our study, to avoid leading questions we did not ask any specific questions on perceived threat of susceptibility to COVID-19.

Finally, we did not ask demographic questions until the very end of the interview. These questions were: “How old are you? How do you self-identify your race or ethnicity? How do you self-identify your gender?” While asking for county of residence was not explicitly in the interview guide, it did come up in most interviews. Therefore, we were able to determine that all participants resided in southeastern Wisconsin and 76% (n = 19) of the participants resided in Milwaukee County. In total, we asked 20 questions, and the interviews took an average of 30 min to complete.

2.5 | Analytic strategy

Wisconsin’s Safer-at-Home order began on March 25, 2020, and required all residents to stay home as much as possible; all non-essential businesses and operations were stopped, drawn down to a minimum, or remote (work from home) (WI DHS, 2020, p. 19). While the study began on March 30, the Safer-at-Home order was ended by the Wisconsin Supreme Court on May 13, 2020. There had originally been a planned, slow reopening based on certain criteria for COVID-19 case numbers (WI DHS, 2020). However, after the Safer-at-Home order was struck down, openings varied in Wisconsin by city and by county. We conducted 19 of our 25 interviews before the Safer-at-Home order was prematurely struck down. We conducted six more interviews between May 13 and June 29. In a sub-sample analysis, the themes identified in those six interviews did not differ from the initial 19 interviews; therefore, we chose to include all 25 interviews in our final analysis. We conducted interviews until we reached data saturation (Morse, 2014; Tolley et al., 2016). All interviews were conducted over the phone and recorded using a Yeti microphone and Presonus software (Blue-Yeti, n.d.; Studio One, n.d.; PreSonus, n.d.). Interviews took an average of 30 min, although some lasted up to one hour. MH, who completed all the interviews, also took notes during each interview.

Data analysis consisted of a qualitative thematic analysis (Tolley et al., 2016) and was carried out by two co-authors. The analyses were further reviewed by a third co-author to ensure the verifiability and dependability of our findings (Morse, 2014; Tolley et al., 2016). Working with multiple coders aids to “offset the subjective bias of any one researcher” (Tolley et al., 2016, p. 213) thereby enhancing dependability. To ensure credibility, we examined negative cases, possible differing
explanations, and incorporated investigator triangulation, and theoretical triangulation, as evident in our design and discussion (Flick, 2008; Morse, 2014; Tolley et al., 2016).

As discussed previously, each participant was asked the same questions in the same order, thereby improving validation (Morse, 2014). The authors developed a codebook and kept record of their audit trail during the analysis, which included process notes, data reduction notes, data reconstruction notes, and detailed materials about the study (Morse, 2014). Moreover, in the development of our inclusive codebook, we included, both definitions and example responses, and we also had regular meetings among the coders to order to ensure consistency (Morse, 2014). All of these actions helped us ensure validity.

3 RESULTS

Participants ranged in age, 36% were between the ages of 20 and 29, 16% were between the ages of 30 and 39, 8% were between the ages of 40 and 49, 24% were between the ages of 50 and 59, and 16% were between the ages of 60 and 69 (Table 1). Additionally, 36% of participants were White, 20% were Black/African American, 16% were South-East Asian, 4% were Central Asian, 4% were Southern Asian, 8% were Latinx, and 12% were biracial (Table 1). Moreover, 60% of participants identified as female, 36% identified as male, and 4% as Gender Queer (Table 1). Finally, 28% of participants had children under the age of 18, 28% of participants were unable to work from home, and 20% of participants worked in healthcare (Table 1).

Based on the interviews, we identified the following three themes: (1) "Health care starts way before you ever enter the doors of a healthcare facility"; (2) "To live in a society is to help each other"; and (3) mental health as impacted by COVID-19.

Theme One: "Health care starts way before you ever enter the doors of a healthcare facility" – Participant 18

The open-ended interview questions elicited much discussion, and many participants discussed how COVID-19 had impacted their impressions of health and healthcare in the U.S. Participants noted that the pandemic had demonstrated flaws in the U.S. healthcare system.

These participants underscored the important point that factors such as employment, national preparedness, and other people’s choices impact one’s health. Those factors, compounded by fear over medical debt led to stress among participants. A participant in their 50s, who worked as a healthcare worker in a long-term care facility, noted their stress about exposure, particularly because they did not have sufficient personal protective equipment due to a lack of national preparedness. They said,

“I think it’s stressful. Yeah. I feel like the health care workers aren’t protected and I’m not even on you know, the front lines as far as working somewhere where I’m exposed to it all the time. I know that I do think that my … director of nursing and my facility are doing what they can to get us what … they can get us. I just think it was a national shortage and they don’t. I don’t think they feel good about it either that it’s the way it is. But they have to be careful with how much we use.” - Participant 6

One participant in his mid-20s, who had lost his job because of the pandemic, said:

“COVID-19 has shown that there are flaws in our healthcare in the United States… There’s definitely flaws in our healthcare system. For example, right now there are a lot of people leaving their jobs and they have their health insurance tied into employment. So, some people are becoming uninsured and if they get COVID they end up having to pay a massive hospital bill. And they end up um, going way way into debt sometimes.” - Participant 7

Another participant in their 50s who worked at a non-profit echoed that sentiment, saying: “In America, health is a business. It’s not looked at, like, access to quality health as a human right. And it’s definitely the way that the person in the White House [President Trump] is framing this and looking at you know…” - Participant 15
In addition to noting issues with the U.S. healthcare system, participants discussed that health care and factors impacting health occur beyond the walls of a healthcare facility. In essence, participants noted that one person’s decisions can impact others. One participant in their 20s, who was an essential worker, said:

“The reality is, is that when they talk about it, they’re like... my choice is not affecting anybody else. It’s just not how health works. Health is a global reality and if one person is sick that has a knock-on effect on everybody in their lives, either biologically, economically or socially... Health held as a privilege is nonsense. Because if one person is sick then that is taking, you know, maybe 10 people out of function, which then it takes another 10 people out for each one of them just because of stress or they’re tired or they don’t feel well. And it’s like health care is not a commodity, health care the right, and people have the right to be healthy.” - Participant 3

Another participant, also in their 20s, who worked from home said:

"Health care starts way before you ever enter the doors of a healthcare facility." - Participant 18

However, as this participant, who was also an essential worker, and other participants who were essential workers noted that one may not always be able to choose their level of exposure and risk. A participant in their 30s noted that,

“...people are incentivized by economics to make unsafe personal choices, right. So like, if they’re an hourly worker, and they don’t feel like they have access to leave, or they don’t feel like they have access to health care, then they’re incentivized to continue to go to work, even if they’re sick. And that’s ridiculous, or like this thing about how people are expecting employees to work from home, even when they’re taking care of their children or trying to have their I mean, it’d be much worse if our kids were like, you know, five and seven. And we were supposed to be trying to like get them to do math homework and stuff. Like there’s no way we can do that." Participant 13

Theme Two: “To live in a society is to help each other” – Participant 12

Throughout the interviews there was an emphasis on the importance of social responsibility in stopping the pandemic, and also frustration with the Safer-at-Home order. One participant, in their 20s, who was recovering from COVID-19 at the time of the interview, said,

"it’s [Safer-at-Home] a necessary component to all of this, frustrating, but I think it’s important that everybody does it. And we have sort of universal sacrifice. And a positive outlook is you know, people gain a general perspective of their day-to-day life and you know, kind of appreciate.” – Participant 2

Another participant, in their 20s and working from home, echoed that sentiment, saying, that even though it was not good for her personally, the societal benefit outweighed her personal discomfort: “It’s definitely...It could be a lot worse I think. I get a little stir crazy, but I also think that it is necessary right now. So I understand like that we should be doing it. Even though it may not be like the best, the best for me personally, it’s best for everyone, for me to be doing it, and for all of us to be doing it.” – Participant 9

Similar to the first theme, participants echoed the sentiment that we impact one another’s health, saying: “I understand that we need to do it to help lower and slow the curve from what I’ve heard and what I’ve read. And to help those who you know, have poor immunity, the less they’re forced to go out, and the less we’re forced to interact with them, the safer it is for them.” – Participant 12

Still another participant, in their 30s, an essential worker in healthcare, and who was also recovering from COVID-19 at the time of the interview, expressed that they wished that more people understood the benefits to taking collective action, saying: “I just hope that people would, you know, take it more seriously and they themselves be more aware of like the public health benefits of making the sacrifices right now.”– Participant 1

Yet, despite discussion of the importance of collective action, some participants questioned the severity of COVID-19, but still quarantined. A participant in their 60s who worked for a governmental agency said:

“my youngest son, and his wife feel that this is just a big conspiracy. And of course, I can’t get into arguing with them because, you know, people are gonna think what they want to think. And ... but for ... as I just feel like in some regards, I go back and I look at how many people died of the flu and even though we have vaccines for flus people still die in huge numbers. And we don’t make a big deal about it. But because this is new, I, you know, I have to, I have to sort of justify because this is new and we don’t have anything, you know, and we need to get it under control. I can, I think I can make that sacrifice, staying at home. You know, I don’t have as much to lose, because I’m working. If somewhat, if I wasn’t working, you know, I guess I’d be maybe a little more panicked.” – Participant 14

Theme Three: Mental Health as impacted by COVID-19

The theme of mental health included three sub-categories: mental health generally, mental health and routine, and mental health among parents with young children.

3.1 Mental health generally

For some participants COVID-19 disrupted planned events they had been looking forward to, which they perceived negatively impacted them. One participant in their 30s who was working from home said: "Man, this is... heavy, it’s almost depressing to... be stuck
inside and not have that typical, you know, enjoyment of going out to a restaurant or maybe a concert or something like that, or sporting event to look forward to. And so there’s that aspect of it that I think mentally weighs on people and that’s been kind of tough.” – Participant 23

Several participants noted dual aspects of the pandemic impacting their mental health. For example, one participant noted that the bombardment of information about COVID-19 even though they were an essential worker who had to go out, combined with a removal of their typical coping mechanisms, was a significant source of anxiety. They said:

“And we’re just being constantly bombarded by information. And if you’re in a position like me where you can’t, you can’t just leave reality for 15 days or however long really would probably be shut down and, you know, theoretically till the end of April probably the end of May. It’s really stressful and, you know, my anxiety is kicking off really bad because I have a chronic anxiety disorder that you know, external stress, makes flare-up worse. My depression is kicking off because there’s you know, external stress that isn’t allowing me to deal with myself in a healthy manner. And then normally would you know, I can’t I can’t go to my normal dance classes why usually blow off steam because my studio is closed. I just think the amount of external pressure and the amount of information and not helpful information either just a bombardment of kind of useless information and how stressful it is. I think it’s gonna have a knock on effect for quite a while after COVID has gone.” – Participant 3

Additionally, and importantly, the aspect of collective grief also impacted participants’ mental health. One participant said:

“We are talking about mental health during COVID which is a good thing as a community. And I think that it’s good to talk about the grief. We are, we’re... even if we haven’t lost a human being that’s not what this the grief is really about. The grief is about not being able to touch another human being other than the people you live with. The grief is about not being able to go to your favorite restaurant. Losing those things. The ability to be mobile is grief. And you know, it’s a grief that we experience.” – Participant 15

3.2 | Mental health and routine

Among participants, there was an intersection between disruption to routine and mental health. One participant in their 20s, managing school and several jobs online noted:

“Yeah, it’s been slightly a struggle. So whenever I do that, I just tried to get done what I have. I had these like little checklists, like sometimes I use my agenda. Sometimes I just use a piece of paper of like what I need to get done for today. And I just tried to stay focused as much as I can. And then now what I’ve actually started like three days ago of like, setting a cutoff time of like, I don’t know, let’s say nine o’clock, and then I can like read and like meditate and start trying to like heal in a sense, you know, but prior to that I was just all over the place.” – Participant 17

Another participant in their 30s, working in the non-profit sector, describe the challenge of suddenly managing everything online and from home, saying: “I have no concept of the days or the time anymore.” – Participant 11

Importantly, a participant noted that the impacts of COVID-19, and specifically the impacts of COVID-19 on routine, would have impacts both during and after the pandemic is over. They said:

“And so I think there’s a, you know, both the, the concern of the disease itself on the physical side, but then also just the wellbeing of society. And humans are animals of routine... And so that aspect is disruptive as well. And I think that’s going to cause people to potentially act in ways that maybe they wouldn’t have, which I think we saw the other day when, you know, the Supreme Court opened up [the] state of Wisconsin, and all of a sudden the bars are packed of people. You know, that’s not really rational behavior. But when you go through something like this, and you lose that routine, I think you lose some of that rational behavior. And so I think it’ll take some time just as a society to kind of get back in place, even if even when the physical side is eradicated or a vaccine’s available. I think it’s gonna take time for society to kind of get back into our typical routines.” – Participant 23

3.3 | Mental health and having young children at home

Participants with young children noted that while there were benefits to having their kids home with them all day, there were very many challenges, particularly when their regular workload had not been adjusted due to employer requirements during COVID-19. One participant, who’s employer expected the same level of output as prior to the pandemic, said:

“for there to be no daycare, and for people to pretend like you can just do your job as if everything is normal is fucking insane. And makes me livid. Because, I mean, we have two small kids and two careers. So one person has to be with the kids all the time to prevent, you know, mortal peril. And so the only other person basically I am always either with both kids or working.” – Participant 13

Additionally, participants noted the challenge of parents trying to provide education to their kids or keep track of educational
4 | DISCUSSION

The themes identified in our research demonstrate several areas for potential improvement in the pandemic response and public health nursing interaction with patients and the community. Themes one and three demonstrate the need for further advancement of health care in the U.S., as the pandemic demonstrated the role of other factors (such as job status and living arrangements) on health, and specifically mental health. They also illustrate the importance of the Social Determinants of Health (SDOH). SDOH are, "the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks." (Healthy People 2030, n.d.). In the case of COVID-19, public health nurses, other healthcare providers, and government officials, need to consider complex myriad of factors that impact communities such as healthcare access, job safety/security, childcare, and mental health.

Importantly, public health nurses are in a unique and advantageous position regarding the intersection between public prevention and clinical care. For example, it has been recommended that nurses conduct a SDOH screening with patients (Bradywood et al., 2021), yet currently, only one-third of hospitals conduct SDOH screenings (Bradywood et al., 2021). Implementing this screening more widely may provide a more illuminating picture of the factors intersecting with COVID-19 risk, and its implications. Additionally, as noted by the Council of Public Health Nursing Organizations, "[Public health nurses] are uniquely prepared with the knowledge, skills and experience to partner across all components of the health system and within various community sectors" (Levin et al., 2016, p. 3), and thus public health nurses are in a position to navigate the juncture between COVID-19 and SDOH.

Notably, however, SDOH requires attention prior to an emergency, because the COVID-19 emergency may simply be one emergency on top of several others. In essence, these emergencies may exacerbate one another. For example, Milwaukee was and is still facing a lead crisis (Martinez, 2021). SDOH needs to be addressed before we are encountering emergencies on multiple fronts.

Regarding theme two, the support for public health responses to the pandemic (i.e., the Safer-at-Home order) is based on a sense of community cohesion and support. By community cohesion we draw on Beider’s (2012) definition. According to Beider (2012), community cohesion involves a sense of community, relationships among community members, and a sense of one’s rights and responsibilities to and in a community. Participants stated that due to a sense of responsibility in their communities, they would engage in safer behaviors.

Moreover, public health nursing and public health, in general, need more support. Public health in Wisconsin is extremely underfunded, which impacts every part of dedicated public health officials’ ability to do their jobs. For example, other researchers have found that early clear and consistent messaging from officials, particularly in the media, could “proactively address public perception” (Al-Ramahi et al., 2021). Greater support for public health could enhance messaging and other health campaigns, building upon the strengths of communities, such as strong community cohesion, to improve future pandemic responses. Understanding and addressing public perception is important in creating programs, guidelines, mandates, etc. that are effective and adhered to.

4.1 | Limitations

There are several limitations to our study. First, there is the threat of selection bias given that we used a form of convenience sampling (Salazar et al., 2015). Second, all participants were from southeastern Wisconsin. Hence, we sampled a predominantly urban populace which may differ in perceptions from a more rural populace. For example, Milwaukee maintained mask mandates while representatives from more rural counties such as Racine, Dodge, and Jefferson counties fought the Safer-at-Home order (Gerlach, 2020). Third, interviews were conducted over the phone, thus we may have missed non-verbal cues. Finally, interviews were only conducted with English speakers, hence we lacked the perspectives of non-English speakers.
CONCLUSION

Understanding perceptions and reactions to COVID-19 can help inform public health nurses, healthcare professionals, and policymakers in improving communication, compliance, and understanding of pandemic response. We conducted our study in Wisconsin, against the backdrop of political turmoil impacting the public health response, to examine Wisconsinites’s perceptions and reactions to COVID-19 within this context. Participants noted that many factors—besides health care—such as employment, employer requirements, and living arrangements impacted their health, and especially their mental health. They also recognized how their health behaviors impacted others; hence while some expressed frustration with public health mandates, they also expressed support. Our findings demonstrate that public health needs greater support to fulfill its goal of preventing disease. Understanding perceptions and reactions to COVID-19 can help public health nurses and other healthcare professionals understand and better react to future pandemics.

CONFLICTS OF INTEREST
No conflicts of interest

ETHICS APPROVAL
This study was approved by the University of Wisconsin-Milwaukee Institutional Review Board.

DATA AVAILABILITY STATEMENT
The authors elect not to share data.

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