frontiers | Frontiers in Communication

TYPE Original Research
PUBLISHED 10 July 2024
DOI 10.3389/fcomm.2024.1369796

OPEN ACCESS

EDITED BY
Iccha Basnyat,
George Mason University, United States

REVIEWED BY
Md Mahbubur Rahman,
Massey University, New Zealand
Purba Das,
Ohio University, United States

*CORRESPONDENCE
Shamshad Khan
✉ shamshad.khan@utsa.edu

RECEIVED 12 January 2024
ACCEPTED 20 June 2024
PUBLISHED 10 July 2024

CITATION
Dove SA, Khan S and Kline KN (2024) Structural violence, social suffering, and the COVID-19 syndemic: discourses and narratives on the margins of the state in Texas.
Front. Commun. 9:1369796.
doi: 10.3389/fcomm.2024.1369796

Structural violence, social suffering, and the COVID-19 syndemic: discourses and narratives on the margins of the state in Texas

Sophia Annette Dove[1], Shamshad Khan[2]* and Kimberly N. Kline[2]

[1]The University of Texas at Austin, Austin, TX, United States, [2]University of Texas at San Antonio, San Antonio, TX, United States

While the repercussions of the novel Coronavirus or COVID-19 have been felt across the world over the past few years, the impact has not been consistent. Instead, it has been mediated by the systemic ways in which existing social and structural disparities have failed vulnerable populations globally. Drawing on document analysis and fifteen in-depth interviews (n=15) conducted among the key stakeholders in the city of San Antonio, South Central Texas, this paper reveals how structural violence worsened during the COVID-19 pandemic resulting in making it a syndemic pandemic of high rates of deaths and illnesses among the most vulnerable and disadvantaged groups. A grounded theory approach particularly revealed themes of social suffering such as low income and pre-existing medical conditions that contributed to higher mortality rates, the presence of racism and misinformation, the importance of trustworthy communication channels, and streamlined collaborative partnerships with clear and effective communication through all levels of the government, especially when communicating scientific information.

KEYWORDS

COVID - 19, syndemics, structural violence, health communication, Texas, health disparities

Introduction

While the repercussions of the novel Coronavirus or COVID-19 have been felt across the world over the past few years, the impact has not been consistent. Reports from across the world have confirmed that the COVID-19 pandemic played a significant role in exacerbating societal health inequities resulting in increased mortality and morbidity rates for vulnerable populations (McGowan and Bambra, 2022; Pincock et al., 2022). While the role of social structures and policies in relation to housing, education, health, and other areas of people's lives are known to create health and social inequities, the systemic response during the COVID-19 pandemic further exacerbated these fault lines, making lives particularly difficult for the vulnerable groups (including people of color and those experiencing mental health illnesses, substance use, and homelessness) (Viswanath et al., 2020). Communities experiencing structural inequities in their lives before the pandemic were the hardest hit with the virus and its associated outcomes that resulted in worsening of their already vulnerable conditions.

In this paper, we share findings from a study in San Antonio, Texas, a majority-minority state with a significantly large Hispanic population, that aimed to explore the experiences of local stakeholders involved in policymaking, health, and human services, who faced challenges and structural realities while working with the most vulnerable and some of the hardest hit groups and zip codes in the city during the pandemic. The narratives shared by these stakeholders (city council members, city officials, public health professionals and researchers, and community-based non-profit organization executives) foreground how COVID-19 pandemic exposed and worsened the pre-existing health disparities in the region.

This study holds immense importance because while much research has been done in the past couple of years to study the effects of COVID-19, the way the pandemic impacted the everyday lives of vulnerable communities and decision makings at local levels, especially in South central Texas and the United States, is yet to be known. Indeed, there remains a huge gap in an otherwise burgeoning literature on COVID-19 that could help illuminate the tensions between multiple and intersecting layers of marginalities (and vulnerability) of the communities on the margins of the state, on the one hand, and the one-size-fits-all official response at the national or state level on the other. Drawing on critical theoretical lens, document analysis, and in-depth interviews, our research aims to fill this gap as it also unravels narratives, experiences, and challenges faced and shared by local council members, public health professionals, and non-profit organizations who struggled to address the needs of their community in the face of larger social, political, and structural constraints.

We first begin by discussing the literature on structural inequities and violence as a way to contextualize and better understand the impact of the COVID-19 pandemic on socially disadvantaged populations.

Structural violence and COVID-19: a syndemic pandemic

As the COVID-19 pandemic unfolded at the global, national, and local levels, it cast a striking light on the existing structural inequities in societies. Structural inequities, primarily resulting from systemic racism, sexism, classism, ableism, and other inhibiting factors, are known to create specific social, economic, and cultural conditions that produce and exacerbate health inequities in society. Structural inequities, associated with poverty, marginalization, and vulnerability, can be seen as forms of violence that are embodied and experienced by people and that result in significant injuries, disabilities, and illnesses, causing immense human and social sufferings (Farmer et al., 2006; Singer and Rylko-Bauer, 2021).

Johan Galtung, a Norwegian sociologist, introduced the term "structural violence" to identify the ways in which social constructions and processes can lead to unfavorable outcomes for certain groups over the others (Farmer et al., 2006; Hirschfeld, 2017; Singer and Rylko-Bauer, 2021). The concept of structural violence aims to illuminate the systemic elements of power, oppression, and privilege as byproducts of systems throughout society that inhibit the abilities of those suffering from it to fight against illnesses and other injustices meted out to them. It places emphasis on how the social structures in our society (economic, political, legal, religious, and cultural) prevent some individuals (and groups) from achieving their full potential in their lives, including better health (Khan et al., 2018; Dutta et al., 2019; Khan, 2020). Structural violence is pervasive and invisible as it remains "embedded within the structures, histories, ideologies, and institutions" and "shows up as a lack of power" in those who are targeted by the system (Pincock et al., 2022, p. 872). Social inequities are at the heart of structural violence (Farmer, 2004) and therefore the focus remains on the allocation of resources and how that impacts the experience and quality of life of disadvantaged populations.

Farmer (2004) popularized structural violence as a lens to understand the mechanisms by which some people, unlike others, suffer a disproportionate burden of epidemic diseases like HIV/AIDS (or Tuberculosis and Ebola) and how it could be related to the history, political economy, and social context of their lives (Khan et al., 2018; Dutta et al., 2019). The COVID-19 pandemic has provided a yet another avenue to understand the role that structural violence plays in exacerbating the effects of social and health inequities that ultimately result in a cumulative effect on mortality and morbidity status of already disadvantaged populations.

This situation has led some scholars to call the COVID-19 crisis a *syndemic*, rather than a pandemic (Bambra et al., 2020; Gravlee, 2020; Courtin and Vineis, 2021; McGowan and Bambra, 2022). The concept of "syndemic" was first proposed by anthropologist Merrill Singer to understand the correlation between epidemics of HIV/AIDS and other issues like substance use and violence in the United States, based on the knowledge that epidemics hit those communities the most who were already disadvantaged resource-wise and who were living on the margins of society (Singer, 1996, 2009). The core point of syndemic theory is that epidemics create a synergy among themselves and, in the process, bring out even worse outcomes for the disadvantaged communities. The uniqueness of syndemic theory lies in how it integrates the concept of disease concentration – how multiple epidemics co-occur due to structural inequities and violence – with the concept of disease interaction –ways in which epidemics further worsen those structural conditions and vulnerabilities- foregrounding that the effects of overlapping epidemics are much more than "sum of its parts" and requires a multi-level analysis (Singer, 1996; Gravlee, 2020; Singer and Rylko-Bauer, 2021).

As Gravlee (2020) explains, "Pandemics always follow the fault lines of society—exposing and often magnifying power inequities that shape population health" and COVID-19 pandemic has emerged as a disastrous syndemic of structural violence (p. 1). It is now well documented that COVID-19 has exacerbated the pre-existing social and health inequities resulting in a syndemic pandemic of higher mortality and morbidity rates among the most disenfranchised and disadvantaged communities (McGowan and Bambra, 2022; Pincock et al., 2022). For instance, 91% of 95 studies conducted in five of WHO health regions (including in the Americas, Europe, and the Africa) showed a significantly high COVID-19 mortality rates in disadvantaged communities relative to affluent ones (McGowan and Bambra, 2022). However, it is not so much the high rates of mortality or of comorbidity that makes COVID-19 a syndemic, rather how it intensifies the conditions of structural vulnerability among some people. As aptly said by epidemiologist Camara Phyllis Jones:

> "Race doesn't put you at higher risk [of COVID-19]. Racism puts you at higher risk …People of color are more infected because we are more exposed and less protected. Then, once infected, we are more likely to die because we carry a greater burden of

> chronic diseases from living in disinvested communities with poor food options [and] poisoned air and because we have less access to health care." (Wallis, 2020).

Structural vulnerability, thus, emerges through numerous aspects of people's lives including food and housing insecurities, precarious job situation, poor access to health care, as well as a host of related issues that poverty and powerlessness bring in people's lives (Singer and Rylko-Bauer, 2021).

As the COVID-19 pandemic unfolded globally, the public health measures adopted and enforced were of a one-size-fit all solution that resulted in certain people/groups being advantaged over the others. For instance, in the United States, many of the occupations deemed essential during the pandemic were disproportionately staffed by people of color, thereby putting them and their families at a considerable risk of exposure to the virus that got reflected in their over representation in COVID-19 mortality rates, particularly in the early phase of the pandemic (Rogers et al., 2020). Further, as noted in several studies, the racial disparities in COVID-19 mortality could be traced to several factors at play that included daily commutes in public transportation, living in dense neighborhoods and in small homes (Rogers et al., 2020; Almagro and Orane-Hutchinson, 2022). Globally, household overcrowding became an immediate factor in people's inability to prevent COVID-19 transmission, with data indicating a positive correlation between household size and positivity rates for the virus (Bajos et al., 2021; Almagro and Orane-Hutchinson, 2022). In the Western world, the trend became for the rich, who owned a second home, to escape to the safety of their suburban homes during high levels of transmission (Seraphin and Dosquet, 2020; Kay and Wood, 2022), which, particularly in the case of the United States, disrupted the pandemic slogan of American unity, "we are all in this together" (Ravenelle et al., 2022).

LaPoe et al. (2022) encourages the acknowledgement of ethnicity when discussing COVID-19 pandemic, since the historical domination of minority groups reified their vulnerability to the virus which showed up in alarming COVID-19 mortality statistics. For instance, while the Indigenous communities only make up about 1% of the United States population, they represented over 20% of the COVID-related deaths in the country, with a similar trend of overrepresentation in mortality rates for Black Americans and Latin Americans as well (Hull et al., 2020). Furthermore, ethnicity in the context of COVID-19 plays a critical role in communities' willingness to get the vaccine as many are scarred from the historical treatment of marginalized populations (LaPoe et al., 2022). Privor-Dumm and King (2020) note that communities of color are often hesitant to trust the advice of medical professionals and are more likely to trust leaders within their faith communities. This distrust in public health information increased the value of information sharing and reliance on family members and close friends about knowledge related to COVID-19, particularly within communities of color (Kang et al., 2022). Privor-Dumm and King (2020) argue that with local sources of information holding more weight, that may or may not be scientifically credible, it often led to the spread of misinformation and disinformation that fueled conspiracy theories. This was most evident in countries like Brazil and the United States where such misinformation got quickly shared on social media within the targeted communities, often resulting in exacerbating the existing health disparities (Viswanath et al., 2020).

Unfolding of the COVID-19 pandemic in the state of Texas

San Antonio (Bexar County) is the seventh most populous city in the United States and is known to be a minority-majority city with 65.7% of its population as Hispanic or Latino (U.S. Census Bureau, 2021). A study on the impact of COVID-19 pandemic on the lives of Texans showed that more than a third of the participants (37%) had someone in their household who lost their jobs, about half (50%) faced financial losses, and almost half (46%) reported poor mental health conditions (Sim et al., 2020). Notably, these dismal "numbers" were directly related to the existing structural inequities. An analysis of the zip codes that were most impacted by COVID-19 within the Bexar County revealed how the poorer zip codes, primarily made up of Hispanic and Black communities, faced a large disparity in both confirmed COVID-19 cases and COVID-19-related deaths. As of September 16, 2022, the city's COVID-19 Data by Zip Code Dashboard (2022) reported 23 of the County's zip codes having over 10,000 cumulative cases, and 21 of those zip codes were on the city's south and westside communities, despite their combined population only making up approximately half of the County's population (City of San Antonio, 2022). Further, around 15 of the 23 most severely impacted zip codes from COVID-19 fell much below the median household income for the County, reinforcing the fact that the most impoverished parts of the city got the worst hit of the virus (U.S. States Census Bureau, 2020).

Furthermore, Texas has the highest number and percentage of uninsured residents, with about one in three under the age of 65 years being uninsured and with a majority of those being Hispanic Texans with low incomes (Grubbs and Wright, 2020; Sim et al., 2020; Conway and Branch, 2022). The exacerbation of long-standing racial health disparities by the pandemic perhaps is most clearly reflected in the disproportionate burden of COVID-19 illnesses, hospitalization, and deaths in Hispanic communities, with 11.6% longer delay between symptom onset and testing, 2.8 times more likelihood of hospitalization, and 2.3 times more chance to die from the virus as compared to non-Hispanic white people (Hosek et al., 2022). Additionally, pandemic-related orders positioned marginalized groups at greater risk. Essential workers were required to report to work, and in Texas essential workers "are two times more likely to be African American and 1.3 times more likely to be Hispanic compared with non-Hispanic white people" (Hosek et al., 2022, p. 546). These minority communities were also more likely to be in jobs that did not allow for remote work and to reside in dense multigenerational homes and neighborhoods (Sim et al., 2020; Hosek et al., 2022). All these factors in conjunction placed the risk of the virus overwhelmingly on families and communities that were already vulnerable.

While valuable research has been conducted on the impact of the pandemic on different population groups, not many have explored the linkages to the structural vulnerabilities in people's lives. Besides, much of the research has been focused on media analysis and cross-sectional surveys, with only a few qualitative studies conducted to explore the issues faced by the impacted communities (Wagner et al., 2022). There also remains a gap in understanding the tensions involved in local policy or decision-making processes during the pandemic and the perspectives and experiences of those working on the frontlines of health care and

service delivery. In this paper, we fill this gap by specifically sharing the perspectives and experiences of Bexar County council members, city officials, non-profit organization leaders, and public health professionals about the pandemic and its impact on the communities they served. The real-world knowledge and experiences of these informants, involved in the local, day-to-day decision-makings – whether city council, health, or human services-- hold the potential to suggest pathways to building a sustainable communication infrastructure that strategically addresses health disparities in the region and beyond.

Method

The overall goal of this research study was to identify systemic changes that are required to enable a more efficient and collaborative decision-making process at the levels of city council, health, and non-profit sectors, that will ultimately lead to more equitable services for the vulnerable populations in Bexar County. To that extent, we engaged in purposive sampling to include participants who were in leadership roles within the fields of policy making, public health and medical professions/research, and non-profit community organizations in the city of San Antonio. The leadership role and positions of power/responsibility as an inclusion criterion was used to understand the experiences of those who found themselves in decision making positions impacting the lives of their constituents and organizations in a crisis period. While the marginalized community members were not directly recruited into this study, the focus continued to be on including those decision makers who represented and were closely associated with the vulnerable communities and who had a direct knowledge of their lived realities, by way of having worked in this field and through their professional experiences.

We used the snowball technique of recruiting this purposive sample of participants. After obtaining ethics approval from the relevant institutional review board, detailed background research was conducted on the different task forces that were created by the city mayor and the county judge in response to COVID-19. All relevant government and non-governmental organization websites, as well as those of local news channels were reviewed to create a list of potential participants. An initial email outlining the study purpose and an invitation to participate was sent out to each potential participant. This was followed up with a phone call to ensure receipt of email and to provide clarifications as needed and to schedule a meeting in case of interest. Additionally, several of these potential participants connected the researcher to others who would be suitable for the study. Semi-structed interviews were conducted between Jan. 22, 2021, through February 24, 2021, with a total of 15 participants, 10 women and five men. These included five council members of the hardest hit areas of the city, two city officials, four medical officers/public health professionals and researchers, and four non-profit community organization directors. Most of these participants ($N = 10$) had postgraduate degrees and considerable professional experience in their area, with the average experience being 8 years. Some of these participants (councilmembers) were themselves part of the communities they served which led to their passionate responses and, at times, frustration, and a sense of helplessness. Due to the safety protocols surrounding the COVID-19 pandemic at the time of data collection, all interviews were completed virtually via Zoom, Microsoft Teams, or on a phone call. A semi-structured interview format was adopted to allow participants to elaborate on their thoughts and to cover areas relevant to them. Prior to the start of the interview, verbal consent was sought, and the voluntary nature of participation reiterated. All interviews were audio-taped with consent from participants. There were over 10 h of audio recordings resulting in 185 pages of transcripts.

A grounded theory approach, that allows for unraveling of themes through rigorous cycles of analysis, was used to manage and analyze the interview data (Charmaz and Belgrave, 2019). This included several sets of reading of transcribed transcripts as well as listening to the audio file to generate an initial set of unique codes that were compiled into a master codebook. These codes were then subjected to further analysis by the authors and were combined to produce a set that reflected best the themes and ideas brought out by the participants. The analysis and constant comparative approach to the transcripts of the interviews with participants revealed patterns that build knowledge of a complex communicative process (Charmaz and Belgrave, 2019).

Findings

Participants responded passionately and with candor, sharing their thoughts and experiences, regarding the structural barriers faced by the communities, the compounding trauma experienced by the most vulnerable among them, and the need to engage communities in policy planning for effective crisis management. Drawing on the theoretical foundations of structural violence, the narratives from the participants help to illuminate the highly contextual experiences as they addressed the response to the COVID-19 pandemic.

Structural violence and compounding trauma

Discussions with council members and medical professionals/researchers made it clear that the communities who were marginalized and had experienced structural violence were also the communities who were most impacted by the pandemic. In the case of San Antonio, these were largely people who resided on the south and west sides of the city- the less affluent neighborhoods with inadequate access to resources.

Access to basic healthcare

A city council member, who was closely connected with these communities as a member herself, shed valuable insights into the daily lives and situational vulnerability of these communities at the time of COVID-19.

> [This is] … a community that doesn't have medical services, doesn't have a hospital, we have the clinics, but they don't speak to the true health issues of the district, high diabetes rates, high cholesterol, high heart disease, you talk about lupus, leukemia,

> multiple sclerosis, you talk about cancers and things of that nature, you're speaking to a community that doesn't have the outreach and the access to get to medical care [Councilwoman #1].

Historically, these communities of color have experienced racial, socio-economic and health disparities as well as traumas that have largely gone unnoticed and unaddressed. What the COVID-19 crisis did was to bring these disparities and the daily realities of these marginalized communities into focus:

> We have learned as a healthcare system and this country is, like a little more slowly as compared to other countries, you know, the social determinant of health is so important to maintaining wellness, and if you have individuals who don't have access to care, and they don't get to see those providers, if they have transportation issues, they can't get to your appointment. If they have food insecurity issues, then you know they're not able to just feed themselves or their families [Public Health Professional, #3].

The pandemic illustrated the ways in which response strategies were a one-size-fits-all approach that failed to reach those who were most vulnerable. Participants who led non-profit organizations witnessed the trauma experienced by their communities. Homebound residents were not able to travel to vaccination sites without any operating public transportation systems. Digitally disconnected citizens were unable to log onto the Internet to register for vaccination slots that were quickly filling up. The pandemic intensified and worsened the conditions experienced by many residents.

> People that we serve already had childhood trauma that could include everything from abuse and neglect to other traumas, and so to add COVID-19, you know, as a community-wide challenge and trauma has just made it more compounded and complex trauma [Non-profit executive #2].

Thus, the communities that were already on the margins before the pandemic experienced compounded trauma as many were left without access to healthcare and/or forced to live within violent households further adding to the devastating effects of the pandemic.

Mental health, homelessness, and social stigma

Interviews with participants revealed how the virus compounded the pre-existing trauma of poverty, racism, and pre-existing health conditions like mental health illness through job loss, high stress, and isolation. These factors are undoubtedly impactful for anyone but, for a population that is already vulnerable, the consequences multiplied during the COVID-19 pandemic. As shared by a senior director at a local emergency housing facility:

> The population who are already the most vulnerable are staying more vulnerable…People with substance abuse disorder or mental health issues couldn't go through the quarantine time, because they couldn't stand being in a hotel room by themselves, because they needed to go get their fix or the voices in their head were telling them to leave [Non-profit executive #1].

While COVID-19 pandemic required a rapid response of designating one of the local hotels for the unhoused population to avoid further damage, a few participants noted that such a plan of action was scoffed at by some community members who argued how is it that "these people" get to stay in a hotel room for free. This is yet another reminder of how neoliberal ideology works at the grassroots level -- visible in these everyday forms of approval or disapproval-- impacting the life-chances of those on the margins of society. Social stigma linked to homelessness and to seeking welfare led to a lack of empathy, particularly at a time when the allocation of resources was under stress. An Executive director of a non-profit organization that supports the population experiencing homelessness shared:

> We've become accustomed to seeing people who are unsheltered, and we've heard it can be really dehumanizing for people that are experiencing homelessness to have people walk by and not acknowledge them and their situation and it makes them feel, you know…there's just not a lot of dignity in that [Non-profit executive #2].

The above participant, having worked for several years with people facing homelessness, relates with their realities of having to deal with the lack of compassion and empathy, as well as accusations of laziness and entitlements from the public that robs them of a life of dignity and basic humanity. Several participants pointed to the local political culture, reflecting on their deeper understanding of the contextual experiences of unhoused people where, according to them, the general population continues to perceive the unhoused community as living a self-inflicted lifestyle created by decisions completely within their own control.

> Living on the street is very difficult, and you know, there's this stigma attached to the individual, 'well homeless individuals are… they're all drug addicts or all violent… they're all drunk' [Non-profit executive #1].

In the above quote, the participant from the non-profit organization is trying to highlight the struggles they face with common public misconceptions and stigma about unhoused individuals as they try to provide services to them. This lack of compassion among those out of touch with the realities of the unhoused community poses barriers to accessing resources, as the respondent below further points out:

> Even if somebody is refusing help, you know, they've experienced so much trauma, when you hear their individual stories, you know, they've lost partners and lost their income, lost everything. You know, everyone has a story that led them to the place that they are… and people also need to see that [Non-profit executive #3].

Poverty and homelessness were not introduced by COVID-19; however, it increased dramatically with the drop in income and employment opportunities as a result of the pandemic measures (Economic and Community Development Department, 2023). Along with impoverishment, the impact of COVID-19 on an already traumatized population heightened their pre-existing social and health issues.

Participants passionately narrated how they thought structural violence played an important role in compounding trauma, along the intersecting lines of race, immigration status, mental health, and

socio-economic conditions, and shared how strategies could be adopted to address some of it.

> A fear of being deported or getting someone from their household in trouble… Oh gosh, how do you, I mean, first of all, you can't just solve that problem with like, you know, a brochure or a public, commercial, right. You've got to be creative and humble and diligent and so that's, that's, sort of one thing we're thinking about now is that's a vulnerable population across a lot of South Texas [Public health professional/Researcher #2].

Participants expressed the importance of choice of words and taking a more person-centered approach to their communication and understanding of individuals in crisis.

> One of our communication strategies is to avoid kind of stigma or putting people in a box to where they're just a 'homeless person.' They're an individual person that's just in crisis or going through something. It is in our language. We'll try to say they're experiencing homelessness. It's not defining who they are as a person because they don't have a roof over their head [Non-profit executive #3].

Acknowledging the elevated health burden of the pandemic on people of color, a researcher, who self-identified as a Latina, shared:

> Our historical or cultural context is not as deep as we've seen with the Tuskegee case studies with African Americans, but there also has been mistreatment and misuse among Latinos, and so there's rumors going on that the vaccine is made with fetal tissue, which is not true. You know and so a large community doesn't believe in abortion, and so forth…you know, I have a cousin who's a nun and her whole congregation, they're not going to, they're not going to be vaccinated [Public health Researcher #1].

Thus, groups that have historically experienced marginalization, traumas and disadvantages at several levels felt the brunt of COVD-19 the most, having very less trust in a system that has been largely oppressive to them and with no social safety nets to fall back on when the lockdowns resulted in calamitous social and economic impacts. While the experience of marginalization was common to these groups, it differed in several ways because of the varied cultural historical contexts, thereby highlighting the need for keeping those contexts in focus when actions for mitigating the effects of pandemic are taken.

Enforcement of pandemic measures and the widening of social inequities

With many San Antonians living on the edge of the poverty line, when COVID-19 took away their jobs for extended periods of time, it created serious financial strains on them. Participants noted how some of the public health orders passed at the beginning of COVID-19 pandemic disproportionately weighed on these communities who were struggling to make ends meet.

> So obviously, you can tell people to stay in your homes and never go out. But then every business shuts down and people don't have a livelihood. And then you have people who have food insecurity and medical conditions that are getting worse. So, you have to consider those unintended consequences as part of your overall calculus [Public health professional #2].

Unfortunately, these policies to protect the public were grossly out of touch for the people who needed the most protection. The people who were reliant on public programs for support were essentially disconnected and forced into isolation as a means of protection from the virus that further placed them at risk of food and housing insecurity.

> Think of that for COVID, right, like, no. no, stay home if you have these symptoms, screw that! My family won't eat. I've got to come to work, right. So ironically that policy city council was trying to pass, a PTO sick leave, and, you know, businesses were saying, No, that's against the law it's unconstitutional [Non-profit executive #4].

Thus, many who were already living under financial strain before COVID-19 found themselves without jobs and in the worst situation when the lockdown measures were implemented.

While on the one hand, many lost jobs, on the other hand, pandemic measures required others whose services were deemed 'essential' to work even if that meant bringing the risk of the virus close to home. Essential workers are known to typically belong to multi-generational households and to live in poorer neighborhoods, which further increases the risk of infections within their extended families. This multi-generational home structure was confirmed by the Councilwoman (#3), whose district averages a household size of 3.6 people and with 32.2% of the district's population living in poverty, indicating a high probability of multiple workers within each household (SA 2020, 2018). This average household size is the highest in the city. She also pointed out how the severity of the virus was sometimes not understood or taken seriously by the people until it started to physically affect their immediate family members. The councilwoman attributed this to the financial obligations and desperation of these working families.

> That's why this happens, that transmission happens faster, and essential workers…So, our people can't stop working because they can't…communicate [the risk] like this, right? They have to be there for their jobs [Councilwoman #4].

Despite the necessity to keep working during the pandemic, as their positions were deemed "essential" by the local government, these workers (and others who lost their jobs) became even more financially strapped and were often forced to reach out to local community organizations for help. For instance, many of these individuals sought food assistance, often for the first time. A director at a local food resource noted how the food assistance culture began to see a shift with the economic devastation brought on by the COVID-19.

> 45% of the people that showed up to get food, had never come to distribution [before]…We're bankrupting the middle class. I mean that. And I don't, I wouldn't say they're middle class… upper-lower class…we've always known, San Antonio, you know, a lot of families are living on the edge, COVID just pushed them over the edge, but they were…there were families that were just 'okay'. I mean they didn't have a lot, but they didn't, they didn't

> have to ask for help, they were able to make ends meet, sacrifice and do what they could [Non-profit executive #4].

He further outlined how difficult it is for people to qualify for or even to fill out the paperwork for government assistance as some of the previous eligibility requirements no longer made sense in the pandemic context. For instance, he shared how he started to see people arrive at the food bank facility with 'nicer' vehicles and wondered about the asset test for government assistance which places a certain dollar amount limit on a person's assets to qualify for government assistance. He used the example of a Honda Civic car that is worth $19,000, which would immediately disqualify a person from benefits, and the only solution is for that person to allow the vehicle to be repossessed by the bank to clear that asset off their books to qualify for government assistance, which in turn would make them less mobile and more vulnerable. He, thus, noted:

> Fast forward to today's pop ups, and you're going to see nicer cars, you're going to see, you know, you know a 2019 Honda Civic, right, going through our line. And to the conservative they're like, they don't need this.

There is often a stereotypical image or an idea that is associated with how someone who truly needs food assistance looks like, even down to what kind of car she/he may drive. The pandemic, by exposing the fault lines of our society, where the needy no longer had obvious physical indicators, further highlighted the need to listen to these vulnerable population groups, many of whom are also often hard to reach because of their low access to resources and structural disparities.

Structural barriers to life-saving resources

Study participants outlined in detail how the communities that have always faced barriers to accessing services felt it most severely with the onset of the pandemic, when the need was urgent and critical.

> …Communities of color are definitely experiencing a greater health burden, due to the pandemic. Some of that is because of the way the pandemic happens and exposes vulnerabilities, and, at-risk communities, and part of it is because of a pre-existing health disparity in, access to care, and in socio economic status [Public health professional #2].

These disparities were particularly noted in the lack of access to technology, transportation, and health care.

Digital divide

As shared by participants, particularly Councilwoman (#4), representative to one of the most at-risk districts, there remained an "incredible digital divide" in the city with "70% of my students who do not have access to Wi-Fi." This is further supported by the San Antonio community data for this district according to which only 54.6% of the households in this district had access to a computer and the Internet (SA 2020, 2018). When COVID-19 lockdowns were ordered and everything seemed to move online (from groceries to education), the lack of or low digital access impacted this population severely.

> You know, the activities and classes went virtual. And this was not a population that has high speed broadband or, you know, state-of-the-art computer equipment. Um, I think that's with the families we serve and children…probably the great impact has been just the struggle to help kids, you know, stay on grade level and stay up to date [Councilwoman #3].

Low digital access not only affected the education of young students, but it also acted as a major barrier for many community members to receive important information regarding COVID-19 at a time when access to accurate information was critical and people's lives depended on it.

> So, with the evolving information we use social media heavily, but then we know that we have a digital divide in our community. So, getting those community health workers to go door-to-door to those who may not be able to get the information from our social media. And then we also utilize our newsletters, so our newsletters and our E blasts [Councilwoman #1].

> We did a postcard as well, with information. We want to make sure that the folks who did not have access to social media, while the city was pushing a heavy social media push, that they would also get the information [Councilwoman #3].

This directly speaks to the challenge of reaching the most at-risk community members that members of the community leaders and service providers faced. Often times, with COVID-19 lockdown measures, many of the traditional ways of reaching community members (door-to-door) could no longer be easily used, leaving them more vulnerable to the crisis situation.

Besides information, low digital access also created barriers for this population to have timely access to vaccines and to be informed about the process. Councilwoman (#3) pointed out how her attempt to get COVID-19 vaccination appointments for primarily older (65+), impoverished, and uninsured residents of the community (those at most risk), proved to be difficult and unsuccessful:

> We're still trying to be able to target those zip codes as of census tracks that have been most impacted by COVID, but the state [of Texas] is not letting us do that. So, it is not allowing us to put that equity into action [Councilwoman #3].

The statistics available for her district show that 22.3% of the population live in poverty (with 12% of the residents over the age of 65 years) and 20.9% without health insurance (SA 2020, 2018).

Access to vaccine

Thus, the severely affected districts hit hard by COVID-19 were already largely impoverished, with a significant size of the population experiencing social and structural barriers. This was especially evident in the Councilwoman (#1)' response, who worried about lack of access to COVID-19 vaccine:

> When you talk about infrastructure, and how it looks when you're talking to a community that can barely afford rent, let alone a car

> payment and insurance, who are struggling to make sure they have food on the table, you have to bring the resources into the community. There is no way that we can set them [vaccination sites] up at one designated location and think we're going to touch everyone in the district. It's a widespread area [Councilwoman #1].

Similar arguments were offered by other participants about bringing vaccination centers close to the communities that lack personal transportations:

> We've seen transportation or lack of transportation as issues. for people, you know, they would they, they have asked for smaller vaccination sites closer to their neighborhood closer to the community. We've advocated for that, but it hasn't happened yet [City official #1].

In particular reference to the elderly population, another city official noted:

> If you open a mass vaccination site, you can't, 'well, first we're going to serve seniors 75 and older, and then we're going to serve, you know, communities of color.' It's just if you're in a 1-A or a 1-B status, you can make an appointment. And the way you make an appointment favors people who have resources because you either do it online or you do it by phone and you know, Internet speed, your ability to maybe be dialing two or three phones at the same time can kind of give you that boost [City official #2].

These challenges require the decision makers to be fully informed of options and resources available to meet the needs of the vulnerable populations even if their hands are tied by the policies or governments at the state and federal levels.

The process of booking a vaccine appointment proved to be a significant barrier for this population group. The Alamodome (a 60,000-seat stadium) vaccination site set up phone appointments which was helpful for those who did not have a computer or Wi-Fi; however, other vaccination sites were accepting only online appointments, and the slots were filling up within minutes of posting, leaving a large portion of the population unable to sign up. This vaccination signup process was effectively summarized by one of the city officials:

> It's hard to get through, right, if they're picking up the phone. It's just impossible to get through. The significance of the digital divide, particularly in that zip code where people, you know, you have…we knock on doors of, you know, 85/90-year-olds who don't have access to the internet, you know, they don't necessarily have smartphones, and so when you do these signups for slots, and it's online, I mean they're at a disadvantage [City official #1].

Another response from Councilwoman (#2) further illustrates how structural violence plays a role by limiting access to only one vaccination site in the area of the town most impacted by the pandemic:

> We only have one vaccine site on the south side of San Antonio, we only have one vaccine site in the area that's most impacted by COVID. Most deaths…and most infections. The three other mass distributions are all 410 north. And then you have the Alamodome that has been very sporadic with its vaccines, and then you have WellMed at the south, only one site. That's a clear disparity [Councilwoman #2].

Limiting access to quality healthcare is indeed a form of structural violence, and when this is experienced by a large segment of the population, their lives are adversely impacted. A closer look into the health statistics of Bexar County reveals an approximately 20-year life span difference between the richly resourced north side of town and the largely uneducated and impoverished south side of the town (City of San Antonio Metropolitan Health District, 2017). From the narratives shared by the participants, it was clear that the voices of the marginalized and discriminated against groups did not make it to the State level of policymaking to make a real dent in the burden of the COVID-19 morbidity and mortality in San Antonio.

On engaging the communities

The pandemic left many of the vulnerable community members unheard and left without agency to make decisions or act to protect and provide for themselves. For their voices to be elevated and heard required commitment on the part of policymakers to reach out to those communities as well as to develop effective communication strategies. The health professionals in the study agreed that vulnerable populations are often very hard to reach because of structural and health disparities.

> San Antonio has some real health disparities, some of which are represented, geographically. We need to actually do the hard work of finding and earning the trust of those disenfranchised communities [Public health professional #2].

Council members and non-profit organizations shared how often they hear the concerns of their constituents and clients first-hand and the need to empower their residents to promote better health. Councilwoman (#1) said:

> It makes it difficult when you're talking about COVID-19. When you're talking about how you get a community that has always been kind of the back burner of the conversation to the forefront of the conversation [Councilwoman #1].

While the council members felt that they understood the challenges that were unique to their communities, they also realized that their hands were often tied when attempting to provide solutions or seeking assistance from higher levels of government. One of the city officials (#1) rather wryly stated: "So, the locals [government officials, people] are, to a great extent, at the mercy of what the State is willing to do." Professional/Researcher #2 also shared similar insights about the vaccine rollout saying, "The vaccine piece has been difficult, because the State makes all the rules about how the vaccine will roll out." Additionally, Councilwoman (#2) voiced frustration with the state regarding the inequity of vaccination sites by sharing, "but the State gave three mega vaccination sites in Arlington, Dallas, and then one in Houston. I mean that's a clear disparity, as well, two in the north, and nothing south or south-central. So…I sometimes feel it's

just falling on deaf ears." This top-down approach to much of public health interventions, and especially the vaccine rollout confirms the need to have a more attuned ear to the populations that have been largely overlooked in society.

Several participants acknowledged that the members of the unheard or overlooked populations are the ones who truly know what they need, and the best thing to do is to listen. Non-profit leader #3, whose organization serves people experiencing homelessness, mentioned that this approach is what ought to set the tone for the engagement with marginalized communities. Instead of identifying those needs on their behalf, we must listen to them.

> It's easy to start to come up with ideas that sound good on paper, but then, you know, if you're not talking to someone who's actually been through it that can just give you the practical like, 'well no, I, but I can't access services that way, how would I get there? How would I know about it?' Like, there's so many obvious things that they're able to bring to the table that are just important in planning [Non-profit executive # 3].

Another participant (Researcher #1) further emphasized the need for more opportunities for members of the public to be able to express their needs. She suggested more town hall type of events where policy makers and professionals go in and admit upfront that they are there to learn from the community members.

Similarly, the early stages in planning were described by a member of one of the city's task force teams on COVID-19. He shared how the task force began their work:

> What does science tell us we should do? And we initially, if I recall, we initially began with an assessment of what's out there, what guidance already exists, what models came, from a focus, which you can imagine makes sense to doctors. It came with a focus on being risk aversive. How do we mitigate risk, so people don't get hurt? And we immediately started with an understanding of what counts as harm to people and the risk of harm for people in a very broad way so that, you know, economic injury cashes out as injury to health as well [Public health professional #2].

So, it appears that even when the taskforce tried to have a broad-based understanding of the risk of harm to people (especially those most marginalized), their voices on possible solutions were not included – thus, many despite being told to remain isolated continued to work in order to provide for their family or left the confines of their homes to avoid domestic violence.

The cultural context of health in Bexar County differs even between districts. This is most evident in the faith-based communities. While in the Latino community, faith-based leaders are hesitant toward the vaccine, many of the African American faith-based leaders were supportive of the vaccine and encouraged their parishioners to participate. The lack of support from religious leaders, who have a huge influence within the Hispanic communities, significantly impacted their decision making or agency. Councilwoman (#1), who represents the district with the most African American residents, states:

> We're going to start working with our faith-based outreach, working with UIW [a local university] to make sure that we're bringing in those resources to the community. So, we reached out to a couple of our faith-based churches who have asked us, could they be vaccination hubs right here in the heart of our community [Councilwoman #1].

She further comments,

> Let's work with our faith-based, we have churches that are open, willing, and have the space. If it's a food drive, let's take it to the heart of the community, and our faith-based outreach, and our pastors, and our ministers are ready, willing, and open.

Conversely, a researcher for the communities of color, who focuses on the health of the Latino community shared:

> Our faith-based community works very differently from the African American community, the African American community faith-based community is really getting into the messaging and really promoting, and our faith-base has been a little bit quieter, and there's misconception, misinformation that's going on…so there's rumors going on that the vaccine is made with fetal tissue, which is not true [Researcher #1].

Thus, the powerful position of the faith-based leaders is evident. Their influence reaches far beyond their church walls, and it is critical to understand and acknowledge this powerful position. They shape the beliefs and behaviors of community members from a trusted position.

The intersection of vulnerabilities and powerlessness unleashed by the pandemic created a situation where the only way forward is to engage the communities to gain their trust and to foster partnerships in creating effective strategies that make sense to them. Whether on the economic front or in regard to access to health care or information, it is evident that strategies need to come from people, so they feel they have some control in making choices for their better health and life situations.

Discussion and conclusion

The Novel Coronavirus hit the shores of the United States in mid-January, and by mid-March 2020, Americans were ordered into quarantine. For the first time in recent history, there was a global pandemic that required rapid response to a universal threat. While the threat was universal, the response and outcomes were not. Bexar County, Texas is a resource-rich, large metropolitan region with a significant population of uninsured individuals living with chronic illnesses as well as undocumented individuals due to its close proximity to the Texas/Mexico border. There is a clear racial and economic divide in the County as the south side residents experience much shorter lifespans and higher rates of poverty than residents on the north side of the County and most of the COVID-19 infection and mortality rates were concentrated on the County's south and west sides. These same parts of the County were also historically redlined, discouraging financial and social investments, further confirming the drastic effects of the pandemic based on social barriers, compounded trauma, and lack of access.

Farmer (2004) describes how social inequities are at the heart of structural violence and emphasizes the importance of intentional allocation of resources. The pandemic created a scenario where resource allocation, such as vaccination sites, has been at the center of attention. The manner in which these resources are distributed results in allowances for survival dictated by individuals and organizations who make decisions on behalf of the communities they serve. Based on the experience of the participants of the study, the key findings point to social sufferings such as low income and pre-existing medical conditions that contribute to higher mortality rates, the presence of racism and misinformation, and finally, the importance of trustworthy communication channels, streamlined collaborative partnerships, clear and effective communication through all levels of the government, especially when communicating evolving scientific information.

The barriers described by the informants reveal the social structures that intensified the devastation of the pandemic, beginning with the difficulty in the application process for receiving government-funded aid. Applications for government assistance are lengthy and, at times, overly complicated. During the pandemic, it was revealed that many Bexar County residents who never reached out for assistance before, were now showing up to receive aid. These first-time support seekers were forced to comply with registration protocols in order to receive aid. These already stressful scenarios became even more burdensome during a fear-filled, socially distanced process. Part of the reason there was an influx in demand for resources was due to the employment disruption. Bexar County thrives from tourism revenue, such as conferences, which came to a complete stop leaving many residents without pay. The identification of essential workers became a hot debate for business owners who also argued against paid time off benefits, as many claimed it was unconstitutional to force businesses to offer their employees paid time off during the pandemic, creating a financial strain on the already impoverished workers in the community.

In addition to financial issues, the social barriers for people to schedule and receive their vaccine was problematic. The prioritization of who received the vaccine first was made at the state level, which is far removed from the County level officials who have a clearer understanding of the community needs. The process to set up an appointment for vaccines favored those with resources, because it was either done online or by phone on a first-come, first-serve basis. Internet access and speed widened the gap between those who could receive the vaccine and those who were without access or ability. In addition, vaccination sites were located far from those who needed them the most as many high-risk individuals lack transportation or were elderly and homebound.

Another key finding was the additional trauma of the pandemic on pre-existing trauma such as racism and the spread of misinformation. The pandemic worsened the experience of vulnerable populations. Racism in the United States has been evident in even the most protected spaces like doctor's offices. Stigma and "othering" occur when the public feels threatened as was evident with the COVID-19 (Croucher et al., 2022). This has happened with past public health threats such as HIV/AIDS where people of color or of specific sexual orientation were blamed and stigmatized (Parker and Aggleton, 2003; Farmer, 2006; Khan, 2014, 2020). Many unhoused Bexar County residents faced a similar reaction as they remained in public spaces during the lockdown. While the city provided hotel rooms to people experiencing houselessness, it was reported that more privileged community members viewed this as a frivolous use of resources. Additionally, the pre-existing mental disorders that many unhoused individuals live with created challenges as many found it difficult to remain isolated in a hotel room.

Another lack of consideration was cultural sensitivities to previous medical trauma faced by communities of color such as the Tuskegee Syphilis Study. This abuse at the hands of scientists and doctors is never far from the minds of these community members and undoubtedly influenced an individual's motivation to "get the jab." This distrust in the medical community has positioned communities of color in a disadvantaged position when communicating important health information. For medical information, many communities of color rely on each other which became problematic in the case of the COVID-19 as many people were ill-informed about the virus (Privor-Dumm and King, 2020). A participant of this study disclosed how misinformation regarding the presence of fetus tissue in the vaccine as a point of contention for people of the Catholic faith. The lack of access to trustworthy information and clear communication led to intensifying consequences of the virus in impacted communities.

The multiple levels of government and decision makers also led to challenges in communication, adding to much noise and confusion. Participants emphasized how decisions such as vaccination sites and prioritization of recipients would have been more successful if they were handled at the local level. The state's limiting of access to quality healthcare is an expression of structural violence and a large portion of Bexar County residents were adversely affected. Many of the protocols surrounding COVID-19 were presented as a one-size-fits all, trickling down from the state level, and that favored some groups over the others.

The findings from the study clearly indicate that the districts in Bexar County that were high on vulnerability index were also the ones with high prevalence of chronic diseases (like diabetes) and were hit the hardest with COVID-19. The narratives of participants outline a confluence of pandemics of social disadvantages, systemic racism, chronic diseases and of COVID-19 resulting in a syndemic pandemic in the making. These stark realities have a profound impact on society and the ability for individuals to live quality lives.

The significance of this research lies in not only revealing the intricacies of the impact of social structures during the COVID-19 pandemic but also action that needs to be taken to address deep-rooted disparities, primarily by including the voices and experiences of those on the margins of the state. We argue that the involvement of the marginalized communities should be prioritized, particularly during times of crisis, as the knowledge and experience gained from these communities is valuable to effective policy making that results in direct benefit to the affected communities. The typical one-size-fits all approach from the state was not found to be effective and instead there was a clear need for more local empowerment of county officials to help their unique communities that they are most familiar with. In addition, effective practical strategies and education for frontline workers would be beneficial as these people were gravely overlooked and many suffered physical and mental

trauma during the pandemic. Communication strategies could also be significantly improved to provide clear, concise, and credible health information to the public as well as between service organizations. Besides, strategic partnerships between policy makers, medical and public health professionals, and non-profit organizational leaders are essential for quality and equitable healthcare, instead of them working in siloes to respond to crises, that often results in experiences of burnout by service providers. Understanding strategies for collaborative partnerships and communication will be beneficial particularly in the event of the next crisis in the region and beyond.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The studies involving humans were approved by the University of Texas at San Antonio (UTSA) -Office of Research Integrity (IRB). The studies were conducted in accordance with the local legislation and institutional requirements. The ethics committee/institutional review board waived the requirement of written informed consent for participation from the participants or the participants' legal guardians/next of kin because as there were no reasonably expected risks associated with participation.

Author contributions

SD: Data curation, Formal analysis, Investigation, Writing – original draft, Writing – review & editing. SK: Conceptualization, Data curation, Formal analysis, Supervision, Writing – original draft, Writing – review & editing. KK: Writing – original draft, Writing – review & editing.

Funding

The author(s) declare that no financial support was received for the research, authorship, and/or publication of this article.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

References

Almagro, M., and Orane-Hutchinson, A. (2022). JUE insight: the determinants of the differential exposure to COVID-19 in New York city and their evolution over time. *J. Urban Econ.* 127:103293. doi: 10.1016/j.jue.2020.103293

Bajos, N., Counil, E., Franck, J., Jusot, F., Pailhé, A., Spire, A., et al. (2021). Social inequalities and dynamics of the early COVID-19 epidemic: a prospective cohort study in France. *BMJ Open* 11:e052888. doi: 10.1136/bmjopen-2021-052888

Bambra, C., Riordan, R., Ford, J., and Matthews, F. (2020). The COVID-19 pandemic and health inequalities. *J. Epidemiol. Community Health* 74, 964–968. doi: 10.1136/jech-2020-214401

Charmaz, K., and Belgrave, L. (2019). Thinking about data with grounded theory. *Qual. Inq.* 25, 743–753. doi: 10.1177/1077800418809455

City of San Antonio. (2022). Bexar County COVID-19 data by zip code [data set]. Available at: https://cosacovid-cosagis.hub.arcgis.com/datasets/bexar-county-covid-19-data-by-zip-code/data?geometry=-100.582%2C29.018%2C-96.336%2C29.855&orderBy=Positive&orderByAsc=false

City of San Antonio Metropolitan Health District. (2017). Mortality in Bexar County, 2017 report. City of San Antonio Metropolitan Health District. Available at: https://www.sanantonio.gov/Portals/0/Files/health/News/Reports/Mortality/2017MortalityReport.pdf

Conway, D., and Branch, B. (2022). U.S. Census Bureau, report number ACSBR-013. Health insurance coverage status and type by geography: 2019 and 2021. American community survey briefs. Washington, DC: U.S. Government Publishing Office.

Courtin, E., and Vineis, P. (2021). COVID-19 as a Syndemic. *Front. Public Health* 9:763830. doi: 10.3389/fpubh.2021.763830

Croucher, S., Nguyen, T., Ashwell, D., Spencer, A., Permyakova, T., and Gomez, O. (2022). COVID-19 prejudice towards afro-Brazilians. *J. Intercult. Commun. Res.* 51, 383–399. doi: 10.1080/17475759.2021.1957702

Dutta, S., Khan, S., and Lorway, R. (2019). Following the divine: an ethnographic study of structural violence among transgender jogappas in South India. *Cult. Health Sex.* 21, 1240–1256. doi: 10.1080/13691058.2018.1555718

Economic and Community Development Department. (2023). *HOME-ARP allocation plan*. Bexar County document center. 1–45. Available at: https://www.bexar.org/DocumentCenter/View/38226/Bexar-County-HOME-ARP-Allocation-Plan---Revised-May-2023-Draft#:~:text=In%20Bexar%20County%2C%20chronic%20homelessness,a%204.525%20increase%20from%202020

Farmer, P. (2004). An anthropology of structural violence. *Curr. Anthropol.* 45, 305–325. doi: 10.1086/382250

Farmer, P. (2006). AIDS and accusation: Haiti and the geography of blame. Berkeley: University of California Press.

Farmer, P., Nizeye, B., Stulac, S., and Keshavjee, S. (2006). Structural violence and clinical medicine. *PLoS Med.* 3, e449–e1691. doi: 10.1371/journal.pmed.0030449

Gravlee, C. C. (2020). Systemic racism, chronic health inequities, and COVID-19: a syndemic in the making? *Am. J. Hum. Biol.* 32:e23482. doi: 10.1002/ajhb.23482

Grubbs, S., and Wright, B. (2020). Uninsured Texans. Many more lose coverage in Pandemic. Available at: https://comptroller.texas.gov/economy/fiscal-notes/2020/oct/uninsured.php (Accessed February 12, 2023)

Hirschfeld, K. (2017). Rethinking structural violence. *Society* 54, 156–162. doi: 10.1007/s12115-017-0116-y

Hosek, M. G., Sharma, A., Nunn, M., Tran, S. T., Bousquet, M. O., Allen, Z. T., et al. (2022). Disproportionate burden of COVID-19 infection among Hispanic patients during the first COVID-19 surge in South Texas. *Health Equity* 6, 546–553. doi: 10.1089/heq.2021.0185

Hull, S., Stevens, R., and Cobb, J. (2020). Masks are the new condoms: health communication, intersectionality and racial equity in COVID-times. *Health Commun.* 35, 1740–1742. doi: 10.1080/10410236.2020.1838095

Kang, S., Dove, S. A., and Kim, H. (2022). Communication factors influencing behavioral intention of prevention and community engagement during COVID-19 in the United States. *J. Med. Res.* 15, 5–25. doi: 10.24193/jmr.43.1

Kay, J.B., and Wood, H. (2022). 'The race for space': capitalism, the country and the city in Britain under COVID-19. *Continuum J. Media Cult. Stud.* 36, 274–288. doi: 10.1080/10304312.2021.2001435

Khan, S. (2014). Manufacturing consent?: media messages in the mobilization against HIV/AIDS in India and lessons for health communication. *Health Commun.* 29, 288–298. doi: 10.1080/10410236.2012.753139

Khan, S. (2020). Examining HIV/AIDS-related stigma at play: power, structure, and implications for HIV interventions. *Health Commun.* 35, 1509–1519. doi: 10.1080/10410236.2019.1652386

Khan, S., Lorway, R., Chevrier, C., Dutta, S., Ramanaik, S., Roy, A., et al. (2018). Dutiful daughters: HIV/AIDS, moral pragmatics, female citizenship and structural violence among devadasis in northern Karnataka, India. *Global Pub. Health* 13, 1065–1080. doi: 10.1080/17441692.2017.1280070

LaPoe, V. L., Carter Olson, C. S., Azocar, C. L., LaPoe, B. R., Hazarika, B., and Jain, P. (2022). A comparative analysis of health news in indigenous and mainstream media. *Health Commun.* 37, 1192–1203. doi: 10.1080/10410236.2021.1945179

McGowan, V. J., and Bambra, C. (2022). COVID-19 mortality and deprivation: pandemic, syndemic, and endemic health inequalities. *Lancet Public Health* 7, e966–e975. doi: 10.1016/S2468-2667(22)00223-7

Parker, R., and Aggleton, P. (2003). HIV and AIDS-related stigma and discrimination: a conceptual framework and implications for action. *Soc. Sci. Med.* 57, 13–24. doi: 10.1016/S0277-9536(02)00304-0

Pincock, K., Jones, N., Mitu, K., Guglielmi, S., and Iyasu, A. (2022). COVID-19, state (in)visibility and structural violence in low- and middle-income countries. *Int. Soc. Sci. J.* 72, 869–885. doi: 10.1111/issj.12358

Privor-Dumm, L., and King, T. (2020). Community-based strategies to engage pastors can help address vaccine hesitancy and health disparities in black communities. *J. Health Commun.* 25, 827–830. doi: 10.1080/10810730.2021.1873463

Ravenelle, A. J., Conley, J., and Newell, A. (2022). Left behind: yachts, dinghies, and perceptions of social inequality in COVID-19. *Sociol. Q.* 64, 1–20. doi: 10.1080/00380253.2022.2133755

Rogers, T. N., Rogers, C. R., VanSant-Webb, E., Gu, L. Y., Yan, B., and Qeadan, F. (2020). Racial disparities in COVID-19 mortality among essential Workers in the United States. *World Med. Health Policy* 12, 311–327. doi: 10.1002/wmh3.358

SA 2020 (2018). *City Council profiles* (1) [community indicators by City Council district]. SA2020. https://sa2020.org/city-council-profiles

Seraphin, H., and Dosquet, F. (2020). Mountain tourism and second home tourism as post COVID-19 lockdown placebo? *Worldwide Hospitality Tour. Themes* 12, 485–500. doi: 10.1108/WHATT-05-2020-0027

Sim, S., Marks, E., Sutton, J., Ben-Porath, E., and Evans-Pigford, A. (2020). Texans' views on the COVID-19 pandemic. 3–30. Available at: https://www.episcopalhealth.org/report-type/covid-19/

Singer, M. (1996). A dose of drugs, a touch of violence, a case of AIDS: conceptualizing the SAVA syndemic. *Free Inquiry Creative Sociol.* 24, 99–110.

Singer, M. (2009). Introduction to syndemics: A critical systems approach to public and community health. San Francisco: John Wiley & Sons.

Singer, M., and Rylko-Bauer, B. (2021). The syndemics and structural violence of the COVID pandemic: anthropological insights on a crisis. *Open Anthropol. Res.* 1, 7–32. doi: 10.1515/opan-2020-0100

U.S. Census Bureau (2021). Quick facts: San Antonio city, Texas. Available at: https://www.census.gov/quickfacts/fact/table/bexarcountytexas,TX,sanantoniocitytexas/RHI725221 (Accessed February 14, 2023).

U.S. States Census Bureau. (2020). *Median household income in the past 12 months (in 2018 inflation-adjusted dollars) - estimate* [Data set]. Available at: https://data.census.gov/cedsci/map?q=B19013&g=8600000US78109,78201,78207,78210,78211,78213,78214,78221,78223,78224,78227,78228,78233,78237,78240,78242,78245,78249,78250,78251,78253,78254&tid=ACSDT5Y2018.B19013&vintage=2018&layer=VT_2018_860_00_PY_D1&cid=B19013_001E&palette=Teal&break=5&classification=Natural%20Breaks&mode=thematic

Viswanath, K., Lee, E. W. J., and Pinnamaneni, R. (2020). We need the lens of equity in COVID-19 communication. *Health Commun.* 35, 1743–1746. doi: 10.1080/10410236.2020.1837445

Wagner, T., Ramirez, C., and Godoy, B. (2022). Covid-19 rural health inequities: insights from a real-world scenario. *J. Commun. Healthc.* 15, 22–26. doi: 10.1080/17538068.2021.1975472

Wallis, C. (2020). Why racism, not race, is a risk factor for dying of COVID-19. Scientific American.