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# A mixed-methods community needs assessment of Santa Maria and Guadalupe, California

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**Abstract**
Santa Maria and Guadalupe are neighboring cities in northern Santa Barbara County that have a lower socioeconomic profile than the county overall, are >75% Latino, and have up to 32,000 residents who identify as Indigenous, primarily Mixtec-speaking people from southern Mexico. We conducted a mixed-methods community needs assessment to identify unique health challenges and barriers that Latinx and Mixtec individuals faced. From January to April 2021, targeted and general recruitment approaches were used to recruit a convenience sample of 159 participants (74% Latinx, 72% female, mean age 41.3 years) to complete modified long- and short-form versions of a community health concerns survey. Fifty-four completed the 40-item form and 102 completed the 19-item form. Of these, 24 individuals who expressed interest in further participation took part in structured, open-ended interviews. Among the key issues raised in surveys and interviews were housing, healthcare, and access to recreational resources. However, perspectives and priorities differed depending on the form of data collection (closed-ended survey vs. open-ended interview). For example, interviews echoed survey respondents' dissatisfaction regarding lack of safe and affordable housing but added perspective on housing conditions and vulnerability to landlords' decisions. In interviews, expanding existing resources and mobilizing as a community were noted as potential solutions; existing policies, language, and lack of interest by those in power were raised as significant barriers. Our assessment suggests that Santa Maria and Guadalupe communities face concerns about housing, healthcare, and access to recreational resources. Government, community, and healthcare sectors should focus on addressing these basic health needs.

**Keywords** Community needs assessment · Indigenous · Latino · Mixed methods

## 1 Introduction

Santa Maria and Guadalupe are neighboring cities in northern Santa Barbara County, California with economic profiles heavily influenced by agriculture, including production of strawberries, cauliflower, and wine grapes [1, 2], and demographic profiles featuring a predominantly Latinx/Hispanic population [3]. Northern Santa Barbara County is separated from South County, which includes the cities of Santa Barbara, Montecito, and Goleta, by the Santa Ynez

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Mountains. The physical separation parallels clear differences in their social and economic conditions. In 2018–2019, residents of Northern Santa Barbara County were less likely to have a college degree (23% vs. 34%) and more likely to earn middle versus higher income salaries. Jobs are also more likely to be lower-wage and lower-skill [4] compared to Santa Barbara County overall. According to 2022 population estimates, Latinos made up 77% of the population of Santa Maria and 88% in Guadalupe [3]. Further, as many as 32,000 people in the region are Indigenous people primarily from the states of Oaxaca and Guerrero in southern Mexico [5], speaking primarily one of the Mixtec languages.

Community health needs assessments are essential to identify the needs and priorities of community residents. Santa Barbara County [6], the City of Santa Maria [7, 8], and Marian Regional Medical Center [5] have conducted assessments within the past 5 years to inform decisions regarding services. These assessments discussed concerns about neighborhood safety, access to care, as well as social factors including financial stress and health disparities. However, studies sometimes narrowly defined health to traditional metrics (e.g., obesity, hypertension screening, access to healthcare), lacked assessment of community perspectives on solutions, had limited representation from historically minoritized populations, and/or relied primarily on closed-ended surveys. We conducted a mixed-methods community needs assessment targeting Latinx and Mixtec individuals residing or working in Santa Maria and Guadalupe, with the objective of identifying unique challenges and barriers that these underserved communities face.

## 2 Methods

### 2.1 Recruitment

Participants were recruited as part of the Mi Gente, Nuestra Salud (MGNS) initiative. MGNS aims to mobilize a social movement for community health ownership in the cities of Santa Maria and Guadalupe in Northern Santa Barbara County, CA [9]. Initiated in 2020, MGNS built on existing partnerships with local healthcare providers (Community Health Centers, Marian Regional Medical Center, Women's Mobile Health) and health advocates (Lideres Campesinas, Herencia Indigena, Future Leaders of America) by creating an advisory board consisting of representatives from local government, community organizations, and healthcare providers; adding a structure for collaboration and discussion; and re-orienting existing system partnerships and processes towards action [9]. The MGNS approach includes creating platforms for community voices about health concerns and solutions to be heard by people in positions of power, such as government, healthcare, and academic settings. Health is broadly defined to include social determinants, basic health needs, and chronic disease risk factors. Platforms for sharing community voices include summarizing results from surveys and focus groups, as presented here.

From January to April 2021, targeted and general recruitment approaches were used to recruit a convenience sample of participants to complete a community health needs survey. These strategies were designed to include underrepresented voices from Latinx and Indigenous communities in line with decolonial-inspired frameworks that emphasize reflexivity and community collaboration [10]. Eligibility criteria included: Age 18 + years; English, Spanish, or Mixtec-speaking; and being either a current resident of Santa Maria or Guadalupe or engaging in work affecting the Santa Maria/Guadalupe communities. Bilingual MGNS research associates recruited participants at food distribution sites, grocery stores, community clinics, and community parks and via social media posts and flyers. Survey respondents who expressed interest in further participation were invited to participate in multilingual focus groups and one-on-one interviews to share understandings about health needs, barriers, resources, and assets. Written, informed consent was obtained whenever possible, and consenting procedures allowed for verbal consent for participants who could not read or write. A monthly lottery for a small gift was offered as a token incentive for survey respondents, and a $15 gift card was offered as a token incentive for focus group and interview respondents. All procedures and materials were approved by the Cal Poly Institutional Review Board.

### 2.2 Measures

Survey. The 40-item survey (Supplementary Information) was adapted from the Community Tool Box [11], with additional items addressing COVID, LGBTQ + health, and experiences of racism/discrimination. For each item, participants were asked to rate the importance of that issue and their personal satisfaction with how well that issue is being addressed, on a scale from 0 (not important, or not satisfied) to 4 (very important, or very satisfied). Preliminary, in-person recruitment

efforts demonstrated that length of the survey was a deterrent, especially for participants who preferred that surveys be interviewer-administered. Therefore, mid-way through the study, to reduce respondent burden, the initial survey was shortened to 19 items (Supplementary Information) asking only about satisfaction with each item (i.e., not asking about importance). Surveys also elicited information on demographic characteristics. Surveys were available to be completed in English and Spanish online or on paper forms, or interview-administered for Mixtec speakers.

Interview guide. We developed a bilingual interview guide to capture responses to the following questions: (1) What are the needs or issues in your community? (2) Who does the issue affect? (3) Why does the need exist? (4) What causes the problem? (5) How do people feel about [the needs]? (6) What would you like to see happen with [the need or concern]? (7) What are the barriers to addressing the need? (8) What are potential ways to address the need? (9) What resources (assets) are available to address the need? (10) What would encourage more support around the issue/need in your community? Due to COVID-19 precautions, focus groups were conducted outdoors, and individual interviews were conducted over the phone. All sessions were audio recorded, then transcribed using Amazon Web Services (AWS). Transcriptions were manually edited by a research assistant (M.P.).

The survey instrument was translated into Spanish by bilingual research assistants and independently reviewed and back-translated by a faculty member specializing in Spanish language and culture. The interview guide was translated into Spanish by bilingual research assistants and independently reviewed for clarity by other bilingual members of the research team.

### 2.3 Data analysis

Respondents were described demographically, and long- and short-form respondents were compared using chi-square tests for categorical variables and *t*-tests for continuous variables. We calculated the mean score for each survey item for long and short form respondents separately. To identify items that respondents were least satisfied with, items were sorted by mean score. We similarly sorted by mean score to identify items deemed the most important among long respondents only. Analyses were also stratified by gender, level of education (less than high school, at least high school completion), and language use (non-English and English speakers) to determine if satisfaction and importance scores differed according to these characteristics, defining categories to ensure adequate numbers per stratum. Advisory board members provided input on preliminary survey findings to confirm their face validity before analyses proceeded in greater depth.

For interview data, two student research assistants (D.R., E.H.) trained in qualitative data analysis used an inductive approach to identify themes emerging from the data. Using the constant comparative method, each reviewed the interview and focus group transcripts multiple times, then independently developed an initial list of themes, subthemes, and preliminary definitions, with the objective of developing categories of community health concerns, potential solutions, and barriers to solutions. After, they compared their results and discussed any discrepancies to reach consensus on coding. All qualitative data were analyzed using NVivo software. Additionally, the research assistants separately tallied concerns raised in interviews and focus groups; discrepancies were resolved through discussions. A third team member (M.T.) reviewed and confirmed research assistants' assignation of themes and subthemes.

## 3 Results

### 3.1 Surveys

The 40-item form was completed by 54 respondents mostly from February to March 2021, and the 19-item form by 102 respondents mostly from March to May 2021. Descriptive characteristics of respondents to the long (40-item) and short (19-item) surveys are shown separately in Table 1. Most respondents were female and Latina/Hispanic and, among residents, had lived in Santa Maria for an average of about 20 years. Short-form respondents included a smaller proportion of White (4.1% vs. 23.9%) and a larger proportion of Mixtec individuals (12.3% vs. 2.2%) compared to long-form respondents. Short-form respondents also had lower income and were less likely to have completed high school and college, have health insurance, especially private insurance, and speak English. Most respondents resided in Santa Maria, with only six residing in Guadalupe.

**Table 1** Descriptive characteristics of long- and short-form respondents

| Variable | Long form (n = 54) | | Short form (n = 102) | | *P*-Value[a] |
|---|---|---|---|---|---|
| | n | Distribution | n | Distribution | |
| Mean (SD) age (y) | 46 | 40.35 (14.03) | 98 | 42.0 (14.5) | 0.48 |
| Gender (%) | 46 | | 96 | | 0.85 |
| Female | 31 | 67.4 | 71 | 74.0 | |
| Male | 14 | 30.4 | 25 | 26.0 | |
| Non-binary | 1 | 2.2 | | | |
| Ethnicity (%) | 46 | | 98 | | 0.20 |
| Hispanic | 31 | 67.39 | 76 | 77.55 | |
| Mixtec | 1 | 2.17 | 12 | 12.25 | |
| White | 11 | 23.91 | 4 | 4.08 | |
| All others | 3 | 6.5 | 6 | 6.1 | |
| Education (%) | 45 | | 80 | | < 0.001 |
| < high school | 12 | 26.7 | 45 | 56.3 | |
| High school completion | 18 | 40.0 | 28 | 35.0 | |
| ≥ College graduate | 15 | 33.3 | 9 | 11.3 | |
| Income (%) | 45 | | 86 | | 0.07 |
| ≤ $24,999 | 15 | 33.3 | 50 | 58.1 | |
| $25,000–$49,999 | 15 | 33.33 | 27 | 31.40 | |
| ≥ $50,000 | 15 | 33.3 | 9 | 10.5 | |
| Insurance (%) | 35 | 76.09 | 52 | 61.96 | 0.09 |
| Private | 19 | 54.3 | 18 | 20.7 | |
| Public | 15 | 42.9 | 34 | 39.1 | |
| Unknown type | 1 | 2.9 | | | |
| None | 11 | 23.9 | 35 | 40.2 | |
| Mean (SD) years of residence in Santa Maria | 46 | 18.4 (14.6) | 96 | 20.6 (13.3) | 0.42 |
| Any English speaking | 42 | | 70 | | 0.0007 |
| Yes | 25 | 59.5 | 28 | 40.0 | |
| No[b] | 17 | 40.5 | 42 | 60.0 | |

[a] *p*-value for difference between long- and short-form respondents using chi-square tests for categorical variables and t-tests for continuous variables

[b] Other languages spoken included Spanish, Mixteco, and Tagalog

Respondents were included in analyses if they completed any of the satisfaction items on either survey. About 60–65% completed all items on either the long or short form (Table 2). Over 80% completed at least 36 items of the 40-item survey, and 82.4% completed 18 of the 19 items in the shorter survey.

#### 3.1.1 Responses to long-form survey

Mean scores for the 40 items among long-form respondents ranged from 1.17 to 2.64 out of possible maximum of 4.0, with an average over the 40 items of 2.01 (Table 3). The item that respondents were least satisfied with overall (Table 3) was lack of availability of safe and affordable housing (mean (SD) 1.17 (1.24)). Housing also emerged as the item that respondents were least satisfied with when analyses were stratified by gender, level of education, and English language use (data not shown). Other items that respondents overall were least satisfied with related to drug and alcohol abuse (mean (SD) 1.51 (1.10)), having adequate emotional and social support (mean (SD) 1.67 (1.30)), recognition and treatment of mental health problems (mean (SD) 1.69 (1.26)), availability and accessibility of recreational opportunities (mean (SD) 1.69 (1.34)), and availability of dental care (mean (SD) 1.69 (1.42)) (Table 3).

**Table 2** Number of survey items completed by respondents

| Long form (n = 54) | | | Short form (n = 102) | | |
|---|---|---|---|---|---|
| #questions completed | n | Cumulative percent | #questions completed | n | Cumulative percent |
| 40 | 35 | 64.8 | 19 | 61 | 59.8 |
| 39 | 5 | 74.1 | 18 | 23 | 82.4 |
| 38 | 0 | 74.1 | 17 | 3 | 85.3 |
| 37 | 3 | 79.6 | 16 | 4 | 89.2 |
| 36 | 1 | 81.5 | 11–15 | 5 | 94.1 |
| 31–35 | 1 | 83.3 | 1–10 | 6 | 100.0 |
| 21–30 | 2 | 87.0 | | | |
| 11–20 | 6 | 98.1 | | | |
| 1–10 | 1 | 100.0 | | | |

**Table 3** Ten items with lowest satisfaction scores for long-form respondents, sorted by mean satisfaction (lowest to highest)

| Survey item | Mean (SD) satisfaction score |
|---|---|
| Safe and affordable housing is available | 1.17 (1.24) |
| Youth and adults do not abuse drugs or alcohol | 1.51 (1.10) |
| All residents in the community have adequate emotional and social support | 1.67 (1.30) |
| Mental health problems are recognized and treated in our community | 1.69 (1.26) |
| A wide variety of recreational opportunities are available and affordable for people of all ages and levels of physical mobility | 1.69 (1.34) |
| Dental care and preventative screenings are available for all | 1.69 (1.42) |
| Jobs are available in the community | 1.70 (1.25) |
| Children, youth, and adults maintain healthy weights and active lifestyles | 1.71 (1.22) |
| Quality childcare is available and affordable | 1.74 (1.21) |
| Individuals are aware of and know how to access health care services | 1.76 (1.11) |

Items in boldface were also included on the short form

#### 3.1.2 Responses to short-form survey

Among short form respondents, mean scores for the 19 items ranged from 1.77 to 3.27 (average 2.74) (Table 4). As for long-form respondents, the item that short-form respondents were least satisfied with was lack of availability of safe and affordable housing (mean (SD) 1.77 (1.31). Other items that respondents expressed the most dissatisfaction with were inadequate enforcement of laws against selling tobacco products to minors (mean (SD) 2.17 (1.59)), lack of maintenance of healthy weights and active lifestyles among members of the community (mean (SD) 2.32 (0.96)), inadequate help for victims of rape and sexual assault (mean (SD) 2.53 (1.28)), and discrimination against people of color (mean (SD) 2.53 (1.30)).

#### 3.1.3 Integration of responses to long- and short-form surveys

For the 19 items included in both forms of the survey, we compiled two separate lists of the ten issues that long- and short-form respondents were least satisfied with. Six items that appeared on both lists were (means presented for and long- and short-form respondents, respectively): (1) having safe and affordable housing (1.17 and 1.77); (2) recognition and treatment of mental health problems in the community (1.69 and 2.76); (3) availability and affordability of a wide variety of recreational opportunities (1.69 and 2.65); (4) availability of dental care and preventative screenings (1.69 and 2.55); (5) availability of jobs in the community (1.70 and 2.64); and (6) maintenance of healthy weights and active lifestyles among community members of all ages (1.71 and 2.32).

**Table 4** Ten items with lowest satisfaction scores for short-form respondents, sorted by mean satisfaction (lowest to highest)

| Survey item | Mean (SD) satisfaction score |
|---|---|
| Safe and affordable housing is available | 1.77 (1.31) |
| Laws against selling or providing cigarettes and smokeless tobacco to minors are strictly enforced | 2.17 (1.59) |
| Children, youth, and adults maintain healthy weights and active lifestyles | 2.32 (0.96) |
| Victims of rape and sexual assault get the help they need | 2.53 (1.28) |
| People of color are not discriminated against | 2.53 (1.30) |
| Dental care and preventative screenings are available for all | 2.55 (1.21) |
| People in the neighborhood work together to solve local problems | 2.61 (1.14) |
| Jobs are available in the community | 2.64 (1.13) |
| A wide variety of recreational opportunities are available and affordable for people of all ages and levels of physical mobility | 2.65 (1.26) |
| Mental health problems are recognized and treated in our community | 2.76 (1.16) |

Notably, survey items on access to prenatal care and children's access to health care and vaccinations ('Pregnant women access early prenatal care.' 'Children and youth have access to basic medical services.' 'Children and youth are up to date on their immunizations.') were among the items that both long and short form respondents were most satisfied with (not shown).

## 3.2 Interviews and focus groups

We conducted 17 interviews and one Spanish-language focus group with seven participants. Among these 24 individuals, 18 (75%) were female. With respect to ethnicity, 18 (75%) identified as Hispanic, 4 (17%) as Mixtec, and 2 (8%) as non-Hispanic White. With respect to language, over half (13, or 54%) reported speaking only Spanish; only 7 (29%) spoke any English, and 4 (17%) spoke Mixtec. Additional demographic data collected from 14 interviewees showed a mean (SD) age of 40.6 (15.8) years (range 21–65 years), with half earning < $25,000 a year and 86% not having completed high school. Almost a third (29%) were uninsured, while 29% reported having private insurance and 43% having public insurance.

### 3.2.1 Primary needs and concerns

Themes and representative quotes representing the primary community health concerns raised in interviews are shown in Table 5. **Housing insecurity** was the primary issue, raised by 18 of 24 participants. Describing high rents, one participant stated,

**Table 5** Themes representing community health concerns raised in interviews and focus groups

| Theme | n | Description |
|---|---|---|
| Housing | 18 | Concerns over high rent, poor housing conditions, difficulties dealing with landlords, and homelessness |
| Vulnerability | 12 | Being in positions overlooked by power structures, lacking access to power, or lacking the means to communicate with power structures, leading to observable inequities |
| Healthcare | 11 | Concerns relating to lack of access to quality healthcare |
| Cost of Living | 7 | Concerns about increased cost of food, housing, and transportation |
| Work | 6 | Concerns about compensation and hours they are being provided |
| Safety | 6 | Concerns for safety of children and of public spaces such as parks and after-school community centers |
| Covid-19 | 6 | Direct and indirect effects of the Covid-19 pandemic and the community's response to the pandemic |
| Recreational activities | 3 | Concerns about insufficient programs, parks, or other spaces for recreational activities |
| Pesticides and herbicides | 2 | Exposure to chemicals by agricultural workers and residents of neighborhoods near agricultural fields |

I see that with house owners, with apartment owners, they increase […] every 3 months. Nobody says anything. There is not enough control of that, because I see people who were paying up to a thousand dollars for a room for rent.

Another described poor housing conditions–for example: 'Many families come in only one room. And a lot of people are in those homes and those homes are infected with pests. I know many units in my community where we have reached out, and we can see how deteriorated the units are.' Generally participants felt they were at the mercy of the landlord:

[R]egarding rent, it's up to the landlords if they want to increase it or reduce it. Well, just because of the need to rent something, well, you just have to pay. Like me, where I live, I am renting a trailer with a small room. And then I told the landlord, why do you sometimes increase or decrease rent, I spoke to [him/her]. 'If you want, you can rent, if you don't like it you can leave.' Then, what can one do, if you say anything they kick you out. And well, where is one going to go. So then one copes with it.

Another major theme raised by twelve participants related to the **vulnerable position** of some members of the community because of their marginalization and lack of access to power or any means of communicating with decisionmakers–for example: 'For most people, we don't have a social security, a permit to work here legally. That's what's affecting us because we don't have enough funds to …I think that it's that they abuse us because we don't have any papers'. The same theme was echoed in another participant's statements, suggesting a sense of unfairness:

And look, the vast majority of people don't have papers. That is the big, big problem. And they are people who never stopped working, who during the pandemic were there every day, every morning. And they were not entitled, for example, to unemployment benefits. Like all people, right? All the people at home taking more money than the people working.

**Health care**, including dental care, also emerged as a major concern. One participant described a typical experience of seeking and receiving care:

[W]hen I go to a dentist or when I go to a physician for my kids, I feel like it is extremely crowded […] and I don't know if it's because they don't have enough people or, you know, customer service is not great either. […] You go to these doctor's visits and they're not very pleasant, you know? Um, at least me, like, I feel rushed; I feel like, okay, yes, they might ask questions, but they're not … you're being rushed to get in and to get out […]. It's frustrating, you know, as a mom, and I have four kids, so if they need to get–whether its dental or whether it's to go to their, um, primary doctors, it's hard to make appointments to get them in right away. And the only way they can get in right away [is] if it's like life or death, basically–like if they have a cavity or if their temperature is 103 or whatever.

For another participant, the concern focused on accessing care at all:

I don't have the services I need, and I have to look for resources where I have to pay for them. But I don't have the means. So I've been going through my pain and looking north here with my co-worker for a remedy, for a tea that she's going to give me because I can't access treatment.

Other concerns related to **cost of living** other than housing ('Things keep increasing, food, gas, everything') and **work**–specifically the insufficiency of hours they were allowed to work ('Well, they take away instead of adding more hours, they take away the hours') and of wages overall ('Their [farmworker] salaries are not enough to live with dignity').

**Safety** issues often related to concerns for children in the community, particularly with respect to exposure to harmful substances. As one participant stated, 'sometimes the children do not get taken care of or they lack attention because their parents work a lot […] It's easier that they get in harm's way. There are problems with drugs'. Participants also expressed concerns about the safety of public spaces more generally:

[S]ometimes there are many people drinking in the park, going to the bathroom everywhere. Since the men are drinking, they don't care that there are women, there are children, and they go pee everywhere, and I don't think it's right. They don't respect anything.

**COVID-19**-related concerns included its impact on education for children: 'Everyone, we are all looking at the levels of education, the statistics […] the quality of education is below the worst. The level of educational performance is below the standard'. It also included a realization that they and others in their community would receive little support when

they became sick with COVID-19. As one participant explained, 'We were with the community, and a person comes up to me–it was very sad–who tells us, "I got COVID, and no one cared about me"'. According to another participant, 'Nobody cared that I had Covid. Simply the employers at work made us work knowing that [we] had symptoms of COVID'.

**Lack of access to recreational opportunities**–particularly inequitable access–was raised by some participants.

> [I]t seems that if you can afford to have your kids in sports or that sort of thing, then those kids are doing it. But there's not a lot of public knowledge or understanding of any sort of funding to help, you know, families that might not have the support that want their kids to play […].

In the words of another participant:

> [The city] put[s] on events 1 day a month at the park. But not everyone can get there, not everyone knows that it exists then. In other words, the local government absolves themselves of any responsibility by holding an event a month that really isn't solving the problem of what the city and young people need. […] We return to the same thing: no accessibility to finding the necessary resources for the children who need it and the children who want to participate.

Finally, two participants raised concerns about **pesticide exposure** given the salience of agriculture in Santa Maria's environment and economy.

> It really concerns me as far as the just general health of everybody around. Everything just kind of settles here in the valley. […] It blows here and just sits here, where the other areas that kind of blows out of their areas. […] It's weird when you think about it–that they're wearing full body suits and respirators to spray our food that we're about to eat, or that less than 24 hours passes before the next crew comes in. Unprotected picking. […] That's the kind of the first degree [exposure], and the second degree would be everyone else that's breathing it.

#### 3.2.2 Potential solutions

To address many of the concerns raised, a primary category of solutions suggested by participants was to **build on existing resources** available from local service providers or employers–for example, hiring more healthcare professionals or funding mobile health units to expand access to health care; 'employ[ing] more' and 'creat[ing] more positions' to expand local job opportunities; providing 'more security' or tighter restriction of substances to address safety concerns; and expanding or improving outreach for existing programs offering assistance with rent, housing, or food. However, cooperation from those with resources might be more effectively secured with incentives than with mandates; to reduce pesticide use, for example, one participant said,

> I would like to see […] the city, um, propose some creative solutions to not … not necessarily penalize growers for using them, but incentivize them not to use them. So that it's you're not pulling anyone's arm to do it, but that they have a reason to make the switch, and it's not a financial burden to their business to make that switch.

Another category of suggestions to address community concerns related to **strengthening connections between the community and government or service providers**, for example by improving communication about available resources. Local radio and television were suggested as potentially effective ways to disseminate information, as were schools. Another participant discussed the importance of having clear pathways to report issues of concern and to be included in decisions:

> I would like projects to be carried out: that evaluations with the community will include us. They need to include our leaders in these evaluations so that a good result will come. To ask us. To create surveys to ask what the community really needs.

This also included the importance of having someone with a stronger voice in decision-making processes speak for community members, or having 'educated people of high level to represent them'.

The desire for stronger connections between community and power structures also included the hope that those with power would make a greater effort to connect with and understand the needs of the community. In terms of government, one participant expressed the hope:

> That our, our governors, our people, who are leading those places that represent us in our city, would come out to the community, to see with their own eyes the needs we have as people. We are not the minority, we are the

majority. But most of us are in the shadows. Why? Because we are not given opportunities, we are not given resources, we are not given education. I want those people who represent us to come out into the community.

Similarly, with respect to health care providers, another participant suggested,

the local big health players in the community–I think if they came together and put aside whether or not they're competing organizations or not and just said we want to help this population, I don't think there could be any barrier that could stop Cottage [Health], Dignity [Health], CenCal [Health] from putting that into place if those three wanted to because it would be a benefit to their populations just as much as ours and the specific community.

A final category of suggested solutions involved mobilization to enact positive changes–for example, meeting directly with government officials ('I would think we just need to get a meeting in with the mayor and see what we can do about. That just have like a board meeting and maybe we can sit in on a council meeting or something like that'), but also meeting together and forming coalitions ('to start to have meetings among neighbors, start to have groups within agricultural companies […] I think you empower the farmworker'; 'I think that … like us, we have to get together, unite … that there could be a union that would defend everything that we want to advocate for'). In the words of one participant:

I feel that it has to do with who do they respect, who do they feel intimidated by, who do they listen to more, you know, who has a louder voice that could get them in trouble or that they will be like, okay, um, I need to be careful with this person. […]. But for the last three I've seen awakening from, like, community organizers, coalition building, and just more reminding people of the power they have within themselves, you know. Because that's how change happens–when we ask for it. Um, because yeah–the people in power are not always going to be like, Oh, hey, I'm here to help you. You know, they have a specific interest.

#### 3.2.3 Barriers

While **policies** affect housing availability and employment opportunities were mentioned as barriers to effectively addressing community concerns, most of the barriers that were discussed related to the disconnect between community members and decision-makers. Some of the disconnect was attributed to language barriers. With respect to navigating resources among non-English speakers, for example:

[T]here are many people who don't speak Spanish, don't speak English, much less Spanish, and we as co-workers who reach out to the community, have seen people who speak Mixteco who need services and simply can't access them because they don't speak Spanish.

Another described her experience of not understanding an ongoing food assistance program:

I asked the man, but the man spoke English, and […] I couldn't find out why the man arrived in a pickup truck and has a lot of food. And I asked the man what do I do to be able to qualify to get that food. But since [he] spoke English and I couldn't find that out.

Language was also discussed as a barrier to self-advocacy:

We let them tell us that we can't. And that's how it stays. We're left with that, 'No, you can't.' But if we really had that trust or the language, the language, I could fight. And there are places where I would like to advocate: 'Hey, explain to me.' And I try to do it with the little English as I have, but obviously, it doesn't suit them.

However, there was also a sense that people in power did not want hear from them or did not prioritize their interests: 'Yes, the big monopolies and the huge agricultural companies […] all over the United States, and they want higher and higher earnings for themselves without worrying only about production and not about the worker as a human being.' In the words of another participant:

I also understand that there's, you know, we have to be patient with people and as long as they want to learn. But sometimes they just close their doors. Yeah. And it's hard to see someone with so much power and authority not even, you know, giving it a try and being open to feeling uncomfortable.

Another participant described a fear of speaking out, despite a desire to do so:

> We go out on our own with the confidence that nothing will happen to us because we have a little bit of security. Most of us have documents, but what about other people who want to advocate for rights and who lack those rights and those resources? They are not going to come out to protest […] Even if people want to advocate, there's this fear... that if they identify me, if they recognize me, or if the police pick me up that's a way that they can deport me, then it's fear. It's not that there isn't the need […] So, if we suppose we followed up on an uprising to demand our rights and it reaches the police. I'm then charged with X and XX. It affects my legal status. Obviously I'm not going to risk it because it would affect my legal status and affect my family. So it's not that you don't want to do it.

## 4 Discussion

In this mixed-methods assessment, housing was the primary issue raised in both surveys and interviews. Other key community health issues raised by participants were healthcare and access to recreational resources. Qualitative data from interviews additionally raised the theme of the vulnerability of some community members. Specifically, participants noted the importance of bridging the gap between marginalized community members and government representatives, service providers, and employers. They also expressed the need for a stronger voice to have their interests better recognized and addressed, with mobilization raised as a possible solution [12, 13].

Taken together, these findings point to broader systemic inequities in the social determinants of health, the importance of infrastructural changes to reduce inequities, and the necessity of involving community members in decision-making processes. Previous studies have shown that socioeconomic disadvantage in the form of housing instability [14, 15] and lack of access to social and recreational spaces [16] has negative health effects, especially among Indigenous and non-native English-speaking populations [17], and that macro-level interventions can have meaningful, positive impacts [18, 19]. However, because cultural and linguistic differences contribute to a disconnect between community members and service providers, the development and implementation of any interventions should purposefully include marginalized and disadvantaged communities, as a means of both empowerment and assurance that solutions will be culturally and contextually relevant [20–25].

### 4.1 Comparison with prior assessments

While our assessment clearly highlighted housing as the major priority, previous, recent assessments of health needs and priorities in Santa Maria did not [5, 7, 8]. One of the assessments [7] was conducted over 3 years ago, and the housing situation has changed substantially [26]. Additionally, housing may not have been captured because of the closed-ended nature of prior assessments [5, 7, 8]. In a Quality and Changes survey completed by > 500 community members from July to September 2020 as part of Santa Maria's process to update its General Plan, 'Ensuring access to quality affordable housing across all income levels' was rated one of the 'most important' changes for the city by 71% of respondents, second only to, 'Ensuring access to healthy lifestyles, medical services, and mental health facilities' (75%) on a list of 13 suggested changes [27]. Similarly, in a component of MRMC's 2022 assessment targeting vulnerable groups in the community, 20 of 39 respondents named housing as one of the top five greatest health needs facing their community [5].

Findings of assessments also depend on characteristics of the participants. In a Visioning Survey completed by 286 respondents from November to December 2020, also as part of Santa Maria's General Plan update process, respondents rated, on a scale from 1 to 5, 25 potential changes within five categories: housing, transportation, public spaces, services and safety, and economic opportunity [28]. Six items scored > 4.5 (growing local businesses, road maintenance, expanding job options, walking and biking, education and training, park maintenance); none were in the housing category. Notably, only 52% of respondents identified as having Hispanic, Latino, or Spanish origin, while 41% identified as non-Hispanic White, indicating a substantial underrepresentation of input from Hispanic/Latino residents. On the other hand, housing was the primary topic of one of the four 'Community Cafés' also held as part of the General Plan update process [29]; it emerged as the most important concern in two other community cafes–one on environmental justice and another for the farmworker community [30, 31]. These findings suggest that qualitative data captured in smaller settings remain an essential piece of any community assessment and are critical in capturing concerns among more vulnerable community members, who may be fewer in number and also less likely to participate in more online surveys.

A major area of overlap between our findings and those of prior assessments relates to concerns over the access to recreational resources and safety of public spaces. Issues raised in previous years–crime prevention and gang suppression [7], park maintenance, and better walking and biking conditions [28, 32]–reflect the continued desire

of community members for spaces that encourage outdoor recreation and healthy lifestyles and that are safe for children and youth [33]. Concerns over work [28], cost of living [8], access to health care [5, 27, 31], pesticide exposure [30, 31] are also consistent with some previous assessments. Mental health remains an under-addressed issue among Latinx (im)migrant communities, where cultural and linguistic barriers hinder access to care [34].

### 4.2 Strengths and limitations

Worth emphasizing is the extent to which major findings of assessments depend on the study sample and data collection methods. As in this assessment, survey and interview components shed light on different perspectives and priorities. Santa Maria's assessments for its General Plan update indicate the same. Priorities raised in the four community cafes [29–31, 33] differed starkly from those emphasized in the Visioning Survey [28]. Both our effort and Santa Maria's assessments suggest that smaller settings with targeted recruitment for focus groups and interviews are critical to capture perspectives that may be missed in quantitative surveys, typically underrepresented in such efforts and also often designed without their input.

Indeed, a major strength was our targeted recruitment of participants from vulnerable populations, who often face barriers to participating in research, such as language barriers, logistical challenges, and disconnect from or even mistrust of researchers [35]. Our research team included people from the community and spoke Spanish or Mixteco, and we made efforts to approach people at places and times where and when we expected they would be able to stop to complete the survey. Community-driven approaches used during the COVID-19 pandemic highlight how adaptive strategies can address immediate health needs while promoting long-term health equity for Latinx immigrants [12].

Another major strength is our use of a mixed-methods approach [36], which captures both quantitative and qualitative data, thereby providing a more holistic understanding of and greater insight into the community's needs and challenges. For example, in our study, interviews echoed survey respondents' dissatisfaction regarding lack of safe and affordable housing but provided deeper insight into housing conditions and feeling at the mercy of landlords. As another example, cost of living, COVID, and pesticides were concerns raised in interviews that did not emerge as priority issues among survey respondents, possibly because the survey items ('Healthy foods are available and affordable for all.' 'There are resources to help people identify and manage COVID-19.' 'Local air, water, and soil is free from pollutants.') did not adequately capture interviewees' concerns. Thus, qualitative components from focus groups and interviews offered deeper or more nuanced insights into community members' lived experiences, which might have been overlooked by quantitative surveys alone.

## 5 Conclusion

In sum, this mixed-methods community assessment identified housing, healthcare, and access to recreational resources as priorities for Santa Maria and Guadalupe. Stronger connections to existing or expanded services and resources were noted as potential solutions, as well as community mobilization, although participants also noted that existing policies and a disconnect with those in power were significant barriers. Our assessment highlights the importance of intentional recruitment of underrepresented community members in smaller settings to give voice to potentially more vulnerable and underserved individuals who may be missed using more standardized methods of recruitment and data collection. It also serves as an example of an effort to design studies that are scientifically rigorous, socially responsible, and responsive to community contexts.

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**Data availability** The data that support the findings of this study are available from the authors upon reasonable request.

**Code availability** Not applicable.

## Declarations

**Ethics approval and consent to participate** All procedures and materials were developed in accordance with the policies of the US Department of Health and Human Services, the Code of Federal Regulations for the Protection of Human Subjects (45 CFR 46), and the principles outlined in the Belmont Report, were approved by the Institutional Review Board of the California Polytechnic State University in San Luis Obispo, CA.

**Competing interests** All authors declare that they have no affiliations with or involvement in any organization or entity with any financial or non-financial interest in the subject matter discussed in this manuscript.

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