A Case Study on the Effects of Environmental Racism on the Latine Community in California

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ABSTRACT

According to the Environmental Protection Agency (EPA) and the US Energy Information Administration (Silverman, 2022), from the 1990s up until the mid-2000s, the total greenhouse gas emissions in the United States seemed to be increasing consistently and CO2 emissions across all fuel types sectors – coal, natural gas, and petroleum – have also been in an upward trend since the year 2000. This, of course, excludes the decrease between the year 2019 and 2021 caused by the COVID-19 pandemic. The general world population is well aware of the increasing carbon emission levels and worsening climate, and whether they believe in it or not everyone has been affected. However, due to various circumstances outside of their control, low-income communities of color tend to be the most affected. Therefore in this study, we assessed the effects of global warming and pollution on the Latine communities across California with a special focus on the Latine community located in Richmond due to its proximity to the largest polluter in California – the Chevron Richmond Refinery. A particular emphasis was placed on the health effects of environmental racism on the aforementioned community, specifically in relation to preventable and treatable illnesses such as asthma, access to preventative and curative healthcare, and access to nutritious food.

KEYWORDS

Food deserts, Polyfluoroalkyl substances, asthsma, chemical dumping, Richmond Chevron Refinery

INTRODUCTION

Manufacturing warehouses, chemical waste sites, power plants, and refineries are all major contributors to global warming, each contributing to pollution in a different way. For instance, manufacturing warehouses produce over 380 Million tons of single-use plastic every year (Plastic Oceans, 2021) and chemical waste sites produce thousands of pounds of chemical waste – nearly half of which is sent out of state to be dumped due to California's strict regulations (Cal Matters, 2023). These sites also tend to dump large amounts of their chemical waste into nearby water sources (Pulido) and release high levels of carbon dioxide (the primary greenhouse gas) into the air we breathe. These Greenhouse gases – which primarily consist of Carbon, Methane, Nitrous Oxide, and fluorinated gases – accumulate and form a fog-like layer in our atmosphere, in the troposphere in particular, and essentially reflect infrared radiation (heat) back onto the earth's surface. In short, these gases trap the heat of the sun, and the denser the cloud the more heat gets trapped. This accumulation of gases in the troposphere is known as the Greenhouse Effect (Environmental Protection Agency, 2022), which leads to increased temperatures on our planet – hence the term global warming. The accumulation of greenhouse gases in the troposphere isn't all bad. A layer of these gases is actually necessary in order to make the earth livable, having an excess of said gases would lead to larger quantities of trapped heat, and this is the issue we are currently dealing with.

Although the released gases mix in our atmosphere, meaning there should be similar concentrations of chemicals throughout the planet, those who live near the sources have higher levels of exposure. The top one percent are some of the main contributors to carbon emissions, as they tend to be the owners of large production companies. However, the populations that tend to suffer the most at the hands of climate change are the low-income folks that tend to work these places and live in the surrounding areas, specifically, those low-income folks who have been oppressed and silenced for centuries: people of color. As previously mentioned, waste sites and large manufacturing sites are some of the largest contributors to global warming, and increased carbon emissions, usually decrease the overall prices and quality of the surrounding

neighborhoods. Many times these low-income areas are turned into food deserts, areas without access to grocery stores and fresh foods, making the inhabitants reliant on fast and prepackaged food, especially as they begin to acculturate into American culture health starts to decline (Maldonado, 2021). This also means a higher level of exposure to PFAs (perfluoroalkyl substances), which can be found in grease-resistant materials (commonly found in pre-packaged foods), cosmetics, water sources (especially those near dumping sites), and air. These chemicals tend to have many long-term harmful health effects on how the body achieves homeostasis, and can even negatively affect reproductive health (Goodrich, 2021). Since low-income communities of color are less economically privileged than their Caucasian and middle-to-upper-class counterparts, they tend to live in these areas. This means these communities face higher levels of exposure to the harmful chemicals and pollutants released by these sites (Bullard, 1993) and have less access to preventative and curative healthcare. For the sake of this analysis, we will be primarily focusing on the low-income Latine community in the United States, although many of the studies included have been conducted in tandem with the Black community.

METHODS

In order to best address this issue of environmental racism, we will be taking three different approaches. First, we will go through and analyze various articles, research papers, and news articles found using the following key phrases: ‘Latino environmental racism’, ‘low-income food access’, ‘Latino asthma, ‘environmental racism’, ‘PFAS health effects’, and ‘food deserts’. Within each journal, I will be searching for well-backed-up statements and the results of whatever treatment their experiment placed on their community of interest – which in most of these cases should be the low-income Latine community. These articles may also be compared to each other based on the methods, results, and limitations, especially if the results from one contradict the results of another. Notable facts and information that are backed up by evidence (either substantial evidence in a single article or evidence across various papers) will be collected and utilized. General sentiments of the community of interest will be assumed based on the evidence presented, along with the general knowledge these communities have on their health and the environmental hazards or crises occurring around them. Any previous and current

environmental policy and regulation – those which affect carbon emissions and toxic substance dumping in particular – will be analyzed and addressed in order to determine whether they have had a positive effect or no effect on the communities. This will also be used to determine what action should be taken now in order to achieve a better future for these communities.

Additionally, since my area of interest is that which is surrounding the Chevron Refinery in Richmond, I will search for relevant pre-existing data. This includes noting which counties surround the Chevron refinery, their ethnic makeups, their general financial statuses, and the number of asthma cases in by county. This same data will be collected from another 15 counties that are predominantly Latino/Hispanic in California and from 15 counties that are predominantly non-Hispanic/Latino. This will be achieved using pre-existing Census data, which will be collected from the year 2019 onward in order to keep the data as recent and accurate to the present time as possible. The population of all California counties will be collected along with the number of Latine folks in each county, which will then be turned into percentages and analyzed using a scatter chart to determine the correlation between the Latine population in California and the number of asthma cases in California. The collected data on asthma and the number of Latine folks in Califonia will then be compared to each other using a Chi-Squared test of independence to determine if the variables of interest are related. The proximity of grocery stores to homes, the number of Title 1 schools in each area, and the availability of hospitals in each area of the city (Richmond) will also be noted. Additionally, the presence of chemical waste sites and factories will also be noted in the top 5 counties with a high Latine population, the top 5 counties with the lowest Latine population, and the areas surrounding the Richmond Refinery. This data will be analyzed in order to determine whether there is a correlation between the number of toxic waste sites, community income, and community ethnicity makeup.

Finally, in order to receive more general community data, I will be interviewing two prominent people in the Richmond environmental justice force. The two people being interviewed are a part of two distinct community-based, non-profit organizations. The first interview will be with Katt Ramos, the managing director of Richmond Our Power Coalition. This coalition has 9 different branches, but they all mainly focus on restoring locations around the bay area that have been affected by environmental racism and global warming, in particular focusing on restoring areas that are predominantly Latino and low-income. The second interview

will be with Jesus Miguel Diaz, research manager in the toxic enforcement branch of As You Sow. This organization focuses on addressing environmental racism by working with the companies causing the harm, this is done so at the stakeholder level. The questions that I will ask during these interviews will be about their communities of interest, their main goals as a non-profit, their current, past, and future projects, how their organization addresses environmental racism, and how their organization hopes to heal these communities from the damage caused by environmental racism. As a way of analyzing what has and hasn't worked for these communities, I will also be discussing what other local organizations have to offer for these communities.

RESULTS

From my article search, I was able to find around 30 different sources. Each of these sources provided me with a different approach to environmental racism and its consequences on communities of color. Fourteen of the resources I found focused exclusively on the effects of food availability – or lack thereof – on the levels of cholesterol or sugar. A few of these resources addressed the holes in pre-existing research that focused on low-income communities of color, and how certain stereotypes – especially when it comes to illness and the types of food each community consumes – were extremely harmful to the community. Five of these sources exclusively focused on highlighting the correlation between high blood sugar/high cholesterol and a lack of food/a lack of grocery stores in low-income areas. A few of my other resources focused on the effects of PFAS (poly-fluoroalkyl substances) on all communities, but especially in low-income communities of color. Many of them also focused on the overexposure to harmful toxins these communities face and the fact that many – like PFAS – tend to bioaccumulate and get passed on to the next generations.

Moving on to the second method, I collected California census data (Census, 2022) from the year 2020 in order to determine the size of the Latine population in the state as a whole, and in my community of interest. Figure 1 represents the Latino demographic throughout the state of California, categorized by county.

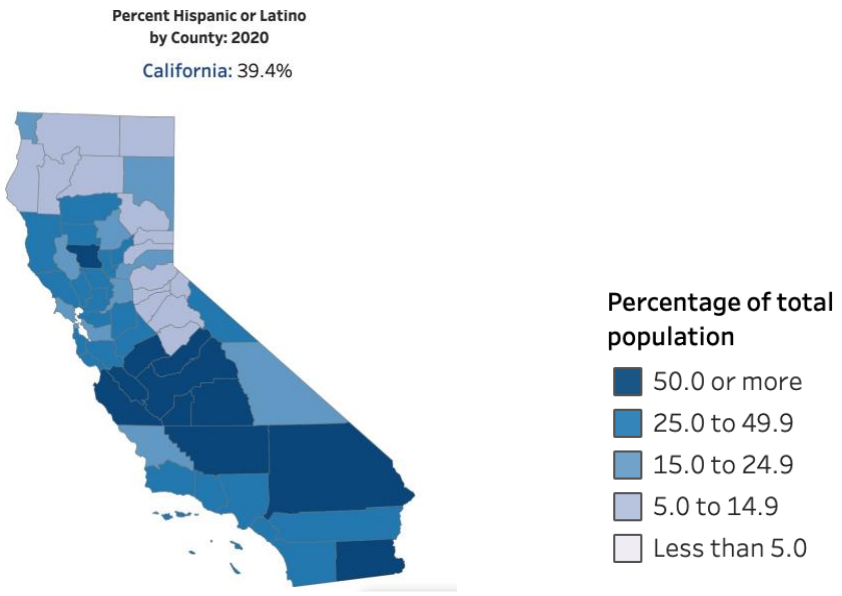

Figure 1: Percent Hispanic/Latino population in California by County

Using the asthma dashboard created by the California Department of Public Health (California Asthma Dashboard, 2022), I found the asthma rates in each of the counties surrounding the Chevron Refinery. This includes Alameda, Contra Costa (where the refinery is located), Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma. These counties were chosen due to their proximity to the San Francisco Bay and the San Pablo Bay, which are the water sources nearest to the Richmond Refinery. Additionally, I collected this same data – the county population, Latine population, non-Latine population, and asthma rates – from the 15 darkest counties on the map, those with the highest Latine population, and the 15 lightest counties on the map, those with the smallest Latine population. The 15 darkest counties include Ventura, Imperial, Tulare, Merced, Colusa, Monterey, Madera, Kings, Kern, San Bernardino, Fresno, Riverside, Stanislaus, Los Angeles, and Santa Barbara. The populations of these counties are more than 40% Latine identifying, with the max being 88% in Ventura.

County	County Population	People with Asthma	Asthma Rates	Latine Population	Non-Latine Folks
Imperial	179,702.00	28572.618	15.90%	153,027.00	26,675.00
Tulare	473,117.00	46838.583	9.90%	309,895.00	163,222.00
Merced	281,202.00	53147.178	18.90%	173,857.00	107,345.00
Colusa	21,839.00	3690.791	16.90%	13,476.00	8,363.00
Monterey	439,035.00	63221.04	14.40%	265,321.00	173,714.00
Madera	156,255.00	30313.47	19.40%	93,178.00	63,077.00
Kings	152,486.00	32327.032	21.20%	86,607.00	65,879.00
Kern	909,235.00	160934.595	17.70%	499,158.00	410,077.00
San Bernardino	2,181,654.00	279251.712	12.80%	1,170,913.00	1,010,741.00
Fresno	1,008,654.00	201730.8	20.00%	540,743.00	467,911.00
Riverside	2,418,185.00	295018.57	12.20%	1,202,295.00	1,215,890.00
Stanislaus	552,878.00	93989.26	17.00%	265,978.00	286,900.00
Los Angeles	10,014,009.00	1462045.314	14.60%	4,804,763.00	5,209,246.00
Santa Barbara	448,229.00	43029.984	9.60%	210,584.00	237,645.00

Figure 2: Asthma rates in the California counties with the highest Latine populations

The 15 lightest counties were found to be Trinity, Alpine, Plumas, Nevada, Shasta, Sierra, Mariposa, Siskiyou, Tuolumne, Calaveras, Amador, Humboldt, El Dorado, Modoc, and Placer. These populations had below 15% of their population identify as being of Latine or Hispanic descent, with Trinity having the lowest percentage of Latine-identifying people at only 5%.

County	County Population	People with Asthma	Asthma Rates	Latine Population	Non-Latine Folks
Trinity	16,112.00	2142.896	13.30%	937.00	15,175.00
Alpine	1,204.00	302.204	25.10%	84.00	1,120.00
Plumas	19,790.00	2632.07	13.30%	1,897.00	17,893.00
Nevada	102,241.00	14824.945	14.50%	10,416.00	91,825.00
Shasta	182,155.00	37341.775	20.50%	19,730.00	162,425.00
Sierra	3,236.00	430.388	13.30%	377.00	2,859.00
Mariposa	17,131.00	4299.881	25.10%	2,140.00	14,991.00
Siskiyou	44,076.00	5862.108	13.30%	5,527.00	38,549.00
Tuolumne	55,620.00	13960.62	25.10%	7,124.00	48,496.00
Calaveras	45,292.00	11368.292	25.10%	5,865.00	39,427.00
Amador	45,441.00	11405.691	25.10%	6,014.00	39,427.00
Humboldt	136,463.00	22925.784	16.80%	18,535.00	117,928.00
El Dorado	191,185.00	33266.19	17.40%	26,459.00	164,726.00
Modoc	8,700.00	1157.1	13.30%	1,259.00	7,441.00
Placer	404,739.00	71638.803	17.70%	60,628.00	344,111.00

Figure 3: Asthma rates in the California counties with the lowest Latine populations

I conducted three different Chi-Square Tests of Independence, one on the population of the Bay Area counties, one on the 15 counties with the highest percent of Latines, and one on the 15 counties with the lowest percent of Latine folks. The null hypothesis (H0) states that the proportion of people with asthma in each county is independent of ethnicity while the alternative hypothesis (Ha) states that the proportion of people with asthma in each county is not independent of ethnicity. From this test, I was able to find the expected number of Asthma rates for each county, I have included a chart comparison between the actual and expected number of asthma cases in the bay area, the top 15 counties, and the bottom 15 counties.

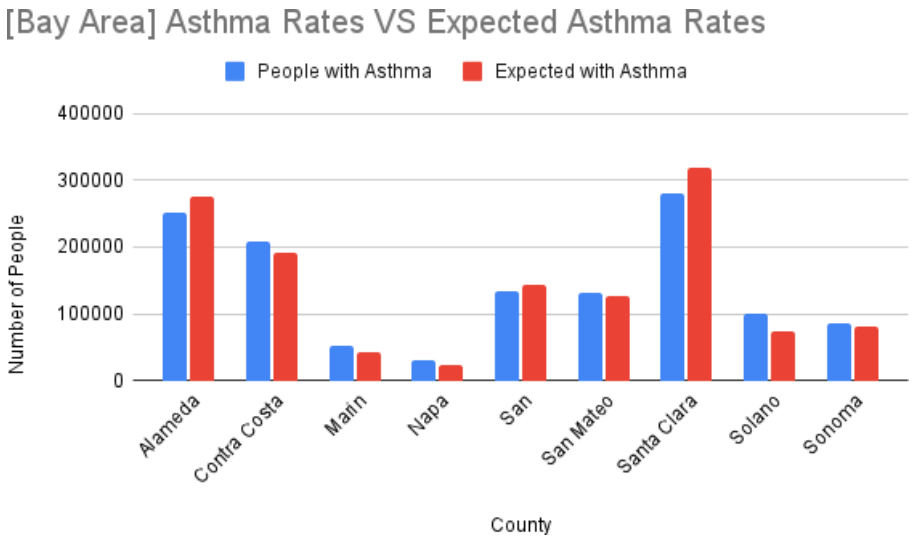

Figure 4: A comparison of the number of asthma cases between the counties of interest in the Bay Area

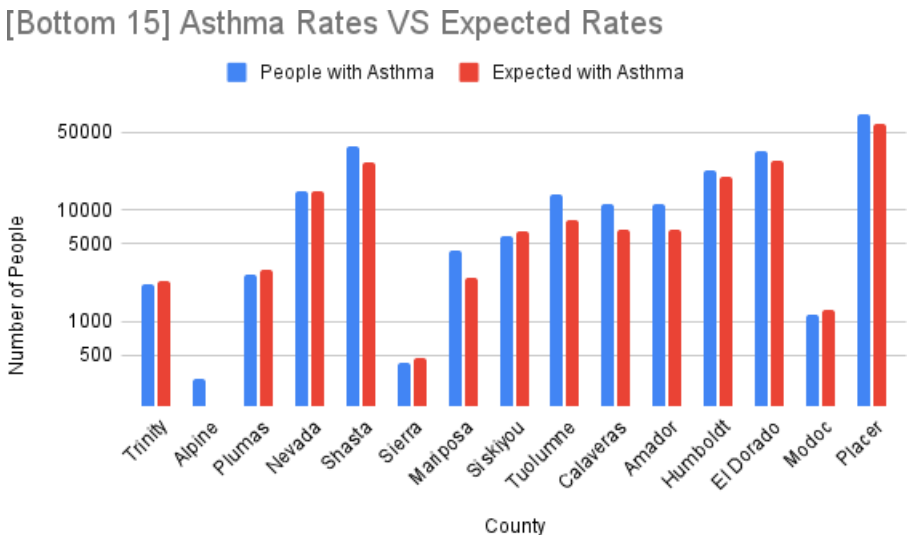

Figure 5: A comparison of the number of asthma cases in the bottom 15 counties with the percentage of Latine folks (in Log for visibility purposes)

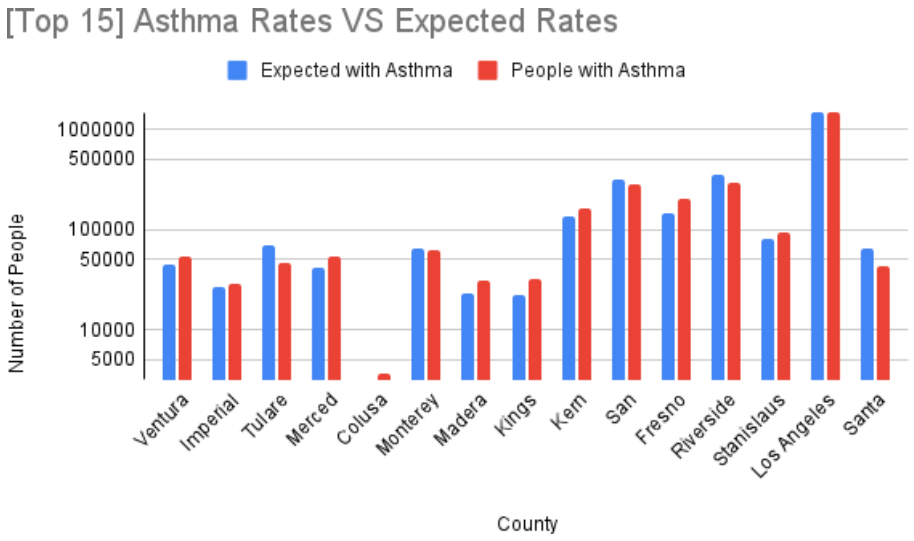

Figure 6: A comparison of the number of asthma cases in the top 15 counties with the percentage of Latine folks (in Log for visibility purposes)

From the data collected, I created a scatter plot using the percentage of asthmatic folks in every county and the percentage of Latine folks in each county. A trendline has been added for better visibility.

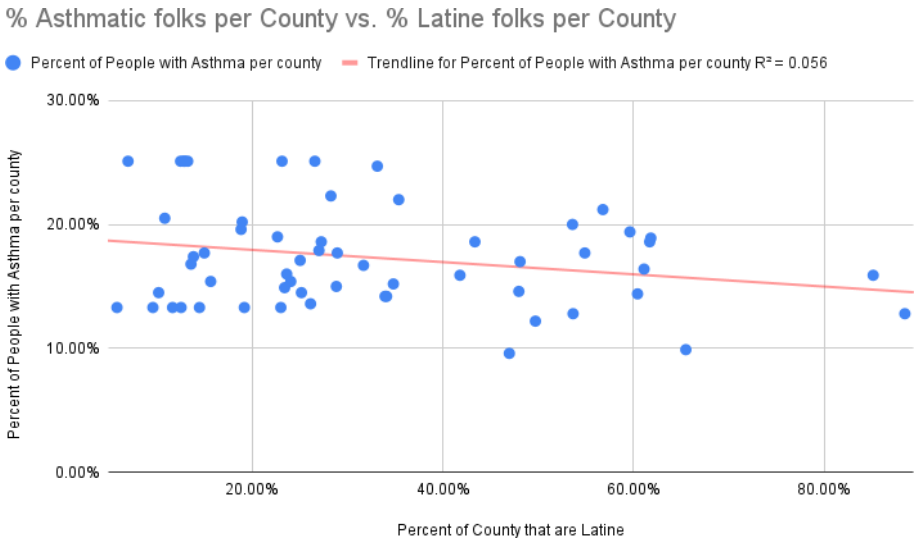

Figure 7: Scatter plot portraying the percent of people with asthma in each county of California in comparison to the percent of Latine folks in each county

DISCUSSION

Low-income communities of color tend to suffer more at the hands of environmental pollution due to pre-existing social structures, this is known as environmental racism. For states such as California – whose population consists of approximately 15.5 Million Latinos – this means that almost 2/5ths of the population in California suffer from overexposure to harmful toxins, especially compared to their white and more affluent counterparts. In order to determine exactly to what extent this community– the Latine low-income and migrant community – is suffering, I've collected data on the health effects of environmental racism, which includes information on the effects of chemicals on the human body in both the short and an analysis of long-term conditions associated with these long-term exposures. My location of interest is the backyard of the University of California Berkeley – where this study originates - Richmond. In particular, I will research the Richmond Chevron Refinery and the communities surrounding it, which releases some of the highest levels of carbon emissions in California, and areas of Southern California with the highest Latine populations in the entire state. In order to do this I

took three different approaches to research: literature analysis, data analysis, and a community interview.

The implications of location and accessibility

One of the most notable literary papers I analyzed was that of Richard Bullard (The Threat of Environmental Racism, 1993). Bullard has been labeled the father of environmental justice for his notable contributions to environmental research and his strong advocacy for environmental equity. In 'The Threat of Environmental Racism' he claims that not only are low-income communities of color targeted for the construction of new chemical waste facilities, but also that race was the most important factor in the location of abandoned toxic waste sites, 'more important than income, homeownership rate, and property values' (Bullard, 24). He specifically mentions communities such as Downtown LA — a community which is predominantly low-income Latine and Black folks — are targeted due to their cheaper rents and weaker enforcement of carbon release regulations. Power plants also emit large amounts of fine-particle pollution, which includes the release of harmful substances such as mercury, sulfur dioxide, and arsenic. These emissions have been linked to the development of lung cancer and increasing the health risks of those with asthma and heart disease (Desikan, 2019). Rethinking Environmental Racism (Pulido, 2000) summarizes six different studies, all of which conclude that people of color are disproportionally exposed to environmental hazards, with the working-class Latine community being the most vulnerable.

Although it isn't explicitly stated in the text, this is likely due to the fact that most working-class Latine folks work in manual labor, specifically in agriculture as cultivators. In fact, according to the California Research Bureau, around 92% of farmworkers were of Latine descent back in 2013 (Rogers, 2013), a number which likely hasn't changed throughout the years as the Latine population in the United States continues to grow exponentially. Agricultural work is extremely taxing on the human body. Not only is it physically demanding, but the nature of the job itself exposes these communities to an excessive amount of harmful chemicals. Increased exposure to PFAS has been associated with the dysregulation of lipid and amino acid pathways due to the natural structure of various PFAS – which mimic that of fatty acids. There have also

been various studies conducted on rodents that suggest perinatal or postnatal exposure to said chemicals 'induces increased insulin levels and impaired glucose tolerance' (Alderte, 2019) in the children of the exposed. Additionally, direct exposure of the youth to excessive levels of PFAS was found to cause higher glucose concentrations, symptoms which developed more obviously after puberty (Goodrich, 2021). PFAS negatively affect the fetus via the placenta, and in particular, they affect endocrine-related processes, pro-, and anti-apoptotic signaling, as well as potentially increase the susceptibility of the fetus to metabolic syndrome – which includes obesity, hypercholesterolemia, and impaired glucose tolerance (Blake, 2020). It's common knowledge that the working conditions and salary in agriculture aren't the best, but they're the jobs available for many undocumented folks. Additionally, these communities are less likely to receive government funding due to their standing as low-income communities. This means officials are less likely to get involved in the refurbishing and cleaning of these communities, leading to the creation of an even larger health and equity problem.

The inability to grow out of these jobs or find ones that pay better is a contributor to the weathering of these communities. The acculturation of these communities into a new and unfamiliar environment leads to increased levels of stress, and hence various health issues associated with it. These are all issues from which these communities, unfortunately, don't have the resources to escape. Low-income communities of color, and in particular the Latine migrant communities, are set up with many socioeconomic constraints that prevent them from leaving their current situation, whether that be a job in the fields or moving away from heavily polluted areas. These areas also tend to be located in food deserts, meaning access to healthy and fresh foods is rare, leading to increased consumption of unhealthy and pre-packaged foods, and hence overexposure to PFAS and an increase in food-related illnesses such as diabetes amongst the community. These cycles of poverty and institutionalized racism lock these communities into these situations and make sure that their own children will also continue to live in the cycle of abuse (Arthur, 2019). A common phrase used to describe this is 'Tell me your zip code and I will tell you how long you will live'.

Desikan and Goodrich both conducted research on the direct impacts of environmental racism on the health of these communities. Alderte found that there was a direct correlation between increased levels of glucose In the blood and higher exposure to PFAS. As previously

mentioned, PFAS are toxic substances released by factories and found in the materials used for waterproofing things such as toys and wrappers, essentially PFAS are found absolutely everywhere. However, due to the proximity of these communities to these communities to the sources of pollution, their levels of exposure to said chemicals are far greater than those of their wealthier white counterparts. A few other authors like Gross, Landry, and Smith took a different approach and instead focused on the effects of environmental racism on food availability and the existence of food deserts in these communities. These researchers also connected the lack of nutritious food in these communities to the prominence of many food-related health issues such as type two diabetes and high cholesterol, stating that the inaccessibility to fresh and healthy foods was directly related to increased consumption of fast and processed foods – which also implies a higher level of exposure to PFAS, which as previously mentioned are prominent in said foods.

Another prominent issue in the environmental justice field itself is the accessibility of information and the prominence of non-POC voices. Typically the voices which are listened to are those of white and wealthy white activists, hence why many of the proposed solutions to said issues are tone-deaf and as simple as 'just move'. Unfortunately, it's not that simple. These communities don't actively choose to live in these underfunded areas, they're forced into them by a lack of money and opportunity, something which is especially true for the migrant Latine community. Additionally, whenever information about said issues does make it to the communities it is affecting the most it's usually in exclusive terminology that isn't exactly accessible to the community. Meaning that the information, although available to the community, isn't exactly accessible, further keeping those affected out of the discourse, keeping their voices silent and their needs unmet (Quintero, 2019).

The demographics of California

The census data that was collected for the purpose of this paper brought us to the conclusion that approximately 39% of California's population is of Hispanic/Latine descent, with the highest concentrations of Latine folk being located in Southern California and the Central Valley. In the context of our area of interest, the populations of the counties surrounding the

Richmond Chevron Refinery almost all have a Latine population of above 45%. In fact, the neighborhoods closest to the refinery – and hence the populations being exposed the most – are the Iron Triangle and North Richmond, both of which are predominantly made up of Latine and Black folks. Additionally, these two areas are considered to be some of the most impoverished in Richmond. In the Richmond area, there are a total of 54 public schools, 38 of which are Title 1 schools – meaning that at least 40% of the student's families are low-income. The counties around the area of interest are Marin, Sonoma, Napa, Solano, Contra Costa, Alameda, Santa Clara, San Francisco, and San Mateo. Over 48% of all of these counties' populations are made up of Latine folks, with the other 62% being made up of a mixture of white, Asian, and Black folks. In these counties there didn't seem to be much of a pattern in the asthma levels across the board, the only pattern is found when we include the other counties across California, and this is that those with the highest rates of asthma cases are agriculturally dominated areas. This includes Marin, Napa, San Mateo, Solano, and Sonoma, all of which have over 17% of their population being affected by asthma. This can actually be noted in figure 4, with the expected rates for Alameda, Santa Clara, and San Francisco being above the actual, while those for the remaining counties are above the expected. Figures 2 and 3 describe in detail the number of people in each area and these rates are converted to numbers in order to get a gauge of how many people are affected.

In the bottom 15 California counties – seen in figure 5 –, the asthma rates varied, with the highest rate being in Placer and the lowest being in Alpine (the smallest county included in this study with a population of only 1,200 people). Figure 6 demonstrates higher-than-expected numbers in Tulare, Monterey, San Francisco, Riverside, Los Angeles, and Santa Barbara. Tulare's population is made up of 65% Latine folks, Monterey's is 60%, San Francisco is 15%, Riverside is 49%, Los Angeles is 47%, and Santa Barbara is 46%. Based on the numbers alone there doesn't seem to be a high correlation between asthma cases and ethnicity within a county. Looking at figure 7, the scattered plot contains the populations of every county in California along with the individually calculated number of asthma cases in each. There seems to be a relatively low correlation between the two, with an R-squared value of 0.056. This value is extremely low, and hence it also implies that across the board there is a low correlation between the number of asthma cases and the number of Latine folks in California.

To further investigate this I conducted a chi-squared test of independence, the H0 (null hypothesis) is that the proportion of people with asthma in each county is independent of the ethnicities of the county and Ha is that the proportion of asthma cases in each county is not independent, implying a relationship between the two. Variable 1 in this case is the number of Latine folks in each county while variable 2 is the number of asthma cases in each county. Using an alpha value of 0.05, our test statistics are the following. All test statistics for all four communities – Top 15 W/ Asthma, Top 15 W/O Asthma, Bottom 15 W/ Asthma, and Bottom 15 W/O Asthma – were extremely large, much larger than the sent test statistic on the chi-squared table. This means that we reject the idea that the proportion of people with asthma in each county is independent of ethnicity, implying a correlation between the two. However, based on the data previously discussed, the accuracy of this test is debatable.

Community Outreach and Advocacy

The Chevron Refinery has had many incidents throughout the years, however, the most recent and most tragic occurred in 2012. During this incident around 20 employees were injured and more than 15,000 innocent people from the neighboring communities ended up seeking medical attention in the following weeks, each complaining of breathing issues, pains, and headaches. This incident resulted in the Chevron refinery receiving a total of 6 different charges and being charged a total of $2 Million. In September 2008, the West County Toxics Coalition and Asia Pacific Environmental Network filed a lawsuit against Chevron and the city of Richmond, claiming that the refineries expansion project was in violation of the California Environmental Quality Act. Any attempt at expansion would enable them to refine heavier and more contaminated oils, a process which requires more fossil fuels for extra energy and hence an increase in carbon emissions (Choy, 2009). In the year 2022, many of the Richmond workers went on strike due to unfair treatment and unsafe working conditions. The first interview I conducted was the Katt Ramos, the Managing Director at Richmond Our Power Coalition, an organization working with the people and increasing access to various resources. This coalition contains 9 different organizations, all of which have a different approach to the issue of environmental pollution and racism. ROPC takes on a more community-based approach to environmental health and safety, similar to the organization Communities for a Better Environment – which focuses on educating the youth and the community on their rights. One of

their more recent projects – and one of the most impactful ones as well – as the conversion of a popular dumping site in Richmond into Unity Park in 2012. This park is now a common area of the congregation for ROPC events and for other community-based organizations to mingle with their communities of interest. When asked about her main goal as the leader of such a large organization, Ramos responded that she just wanted the people to be heard and helped.

> *'We'll always work **for** the people because that's who's being affected.*
> *Those are the voices we need to listen to.'*

Similarly, organizations such as Operation Access and the university-based, student-led organization Volunteer Health Interpreters Organization (VHIO), strive for better accessibility to healthcare. Jesus Miguel Diaz shared a similar sentiment when asked about his mission as the research manager in the toxic enforcement sector of As You Sow. This organization focuses on working with stakeholders at the policy level and reaching agreements that are beneficial to the company, but mostly to the people and the environment.

CONCLUSION

Environmental racism has negative effects on all low-income folks and people of color. Due to pre-existing sociostructural barriers, these communities tend to be pushed out to the 'worst' areas, those which tend to be cheaper and hence more accessible. Unfortunately, large polluters are also aware of these cheap prices, they're also aware of the lack of policy enforcement when it comes to environmental safety and protection, which makes it easy for these areas to be targeted as construction sites for factories, chemical waste sites, and other high pollution sites. Proximity to said areas has been found to be correlated with a high number of asthma cases – meaning these communities are more susceptible to asthma simply based on their zip code. Additionally, these areas are also usually considered food deserts due to the lack of fresh food accessible to the community, which in turn leads to an increase in the consumption of unhealthy foods and fast food. This makes these communities more susceptible to preventable illnesses such as type two diabetes and hypercholesterolemia. An analysis of the California

population revealed that more than 30% of California is made up of people of Latine/Hispanic descent, with the highest concentration of Latines being in the central valley and Southern California, followed closely by the Bay Area. Although these communities are the ones with the highest levels of exposure to harmful chemicals, they usually don't have access to basic preventative healthcare – whether that be due to legal status, language, or cost – and much less so to curative long-term care. They also tend to be excluded from these conversations, whether that be due to language barriers, lack of access to information, or their outright exclusion by others. In these facts, we see the presence of a cycle, one that keeps these communities in unhealthy circumstances with little to no chance of getting out. This is where community organization and legal advocacy come into play. In order to achieve change we must continue to advocate for these communities and amplify their voices.

ACKNOWLEDGEMENTS

This research paper would not have been possible without the love and support of many people. Firstly, I'd like to thank professor Patina Mendez, for guiding us through the new terrain of a thesis. I'd also like to thank my mentor, Robin D. López, for always being supportive and patient throughout the process, and for not giving up on me. I would especially like to thank my wonderful partner, Amber Delgadillo, for being my rock and a constant source of inspiration, thank you for always motivating me. I could not have done it without these wonderful people supporting me.

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