Food Access Impacting Health in Richmond CA

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Historical background

- In 1901 Santa Fe moved it's shops to what would soon become Richmond CA and the Standard Oil company started building it's refineries.

- Richmond was incorporated as a city in 1905 and was established as an industrial town.

- In a few years these substantial industries were located in Richmond such as Pullman Palace Car Shops, American Radiator, Standard Sanitary Company, Stauffer Chemical Company, and several others less well known.

Social Determinants of Health

- Contra Costa County has 4.66 times as many fast food restaurants and convenience stores as grocery stores and produce vendors.
- In 2015-2016, an estimated 39.2% of California children ages 2-11 ate fast food two or more times in the past week.
- 33% of adults in Richmond eat 3 or more servings of fruits/vegetables per day, and 23% of children eat 5 or more servings of fruits and vegetables per day.
- Only about 72% of eligible Californians actually used SNAP benefits in 2016. People fear their information will be reported to U.S. Immigration and Customs Enforcement (ICE).

Social Determinants of Health

- 32% adults in Richmond most likely to be obese compared to 17% in Contra Costa County
- 39% of teens in Richmond are overweight or obese compared to 16% of teens in Contra Costa County
- Adults in Richmond are less likely to be engaged in regular physical activity compared to the county (19% v. 34%, respectively).
- In 2019 in Richmond, 98% of households with low food security were worried they would run out of food, 95.9% couldn't afford to eat balanced meals, 31.7% adults and 2.3% of kids did not eat for a whole day.

Goal and Rationale

- Goal: Getting healthy food into the hands of those living in poverty (food insecurity - people not knowing where they will get their next meal from)
- Goal: Finding the main cause of lack of healthy food in low-income areas, finding a solution to lack of access to healthy food
- Rationale: Try and give low income families healthier food options
- Rationale: People are losing money, which may make people more food insecure during the coronavirus pandemic

Research Question:

How does not having access to healthy foods affect the health risks associated with chronic diseases of low-income people in North Richmond?

Hypotheses:

- **The lack of grocery stores in low income area can lead to people eating unhealthy which can cause obesity**
- If people lack access to grocery stores, they might eat more fast food and they will become less healthy
- Less access to healthy food might cause people to exercise less, which might lead to more obesity

Methods and Approaches

- Systematic Social Observation (SSO) instrument - A tool that helped the research team track different assets & disorders in the community. Such as parks, murals, litter, beer bottles, etc.
- Google Street View - A site that allowed the group view many different locations throughout the world.
- UCSF Health Atlas - Site that allowed one to see issues in communities in California.
- Choosing census tracts - Using census tracts to gather data.

Methods and approaches (cont.)

- Creating walking circles - A path followed for SSO data gathering.

- Veggie Giveaway Tallies - Number of people who attended Lifelong Medical's Veggie Giveaway on July 15, July 22, and July 29 (Adults and children included).

- Avoiding bias - No input of personal opinion or previous knowledge on the community when collecting data.

Systematic Social Observation (SSO)

- **Techniques**: This useful instrument allowed for our team to be organized with our data when it came to labeling institutional and individual assets/orders and disorders.

- **Use/Purpose**: To differentiate and contrast the assets/orders and disorders found across various communities throughout Richmond.

SSO

- **Institutional assets/orders**: schools, parks, local businesses, and grocery stores, etc.
- **Institutional Disorders:** liquor and tobacco sales, and commercial or industrial properties poorly maintained but occupied, etc.
- **Individual assets/orders:** safe place to walk, street lights, trash cans, and shade on sidewalk, etc.
- **Individual Disorders:** no safe place to walk, empty lot poorly maintained, and residential properties poorly maintained but occupied, etc.

Google Street View

- Techniques: Google street view was a necessity due to social distancing measures, this was a solution we used in order to gather data.
- Use/Purpose: This tool allowed the group to view different communities and neighborhoods within the selected ten census tracts in Richmond for data collection purposes.

UCSF Health Atlas

- Techniques: A source that has published data available in different counties, cities, and areas which gives the team an understanding of the determinants of health and health conditions.
- Use/Purpose: This source was important in helping our group find what census tract was most subjected to the outcomes of interest (Asthma ED Visits, Obesity prevalence, high blood pressure prevalence, low physical activity prevalence, and unhealthy retail food environment).

Veggie Giveaway

- Techniques: Lifelong Medical has a weekly veggie giveaway that serves Richmond and its surrounding areas by giving fresh produce to community members.
- Use/Purpose: The group gathered tallies on July 15th, July 22nd, and on July 29th to see how many people rely on this service.

Avoiding Bias

Techniques:
– Making observations only on what was there (in Google Street View) and not what one's prior knowledge is .
– A collaborative decision was agreed on for which definitions made sense to group members.

Use/Purpose:
– To make our observations as objective as possible.

Choosing Census Tracts

– **Techniques**: As a group, we have chosen different census tracts based on the areas of interest in Richmond CA. Those areas being Northern Richmond and the Iron Triangle

– **Use/Purpose**: Census Tracts were chosen to further view the issue in low-income communities and high-income communities

Zip codes and census tracts

- The group decided on the following zip codes: 94801, 94804, and 94806.

- The group has decided on census tracts: 3650.02, 3730, 3780, 3770, 3760, 3790, 3750, 3680.01, 3680.02, 3720.
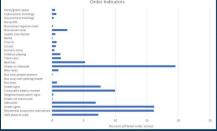
Creating loops and segments

- A path followed for SSO data gathering.
- Using census tracts to gather data.
- These walking routes were created to be used in different census tract areas in order to avoid repetition in data due to the gathering of the data being online
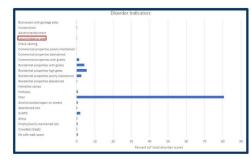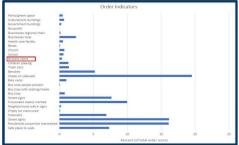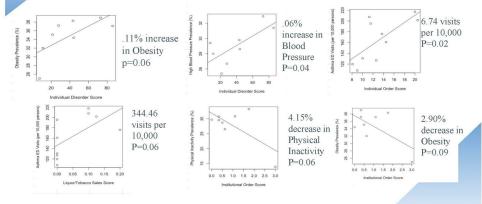

Indicators of Order and Disorder

Indicators of Order and Disorder

Results

.11% increase in Obesity p=0.06

.06% increase in Blood Pressure P=0.04

6.74 visits per 10,000 P=0.02

344.46 visits per 10,000 P=0.06

4.15% decrease in Physical Inactivity P=0.06

2.90% decrease in Obesity P=0.09

Acknowledgments

Conclusions

- The more individual disorder the more health problems they create
- In order to address obesity we need to reduce disorders and increase assets
- Our research reflected that grocery stores aren't the main cause of obesity
- In order to decrease high blood pressure we need to decrease disorders
- In order to decrease asthma we need to decrease the amount of liquor/tobacco stores around
- In order to reduce physical inactivity we need to increase institutional order

Limitations

- **Google street view**: Having to use Google Street View for data collection limits us from properly depicting certain objects which may affect data collection numbers.

- **Poor wifi and technical issues**: Having to work solely online has its own issues, technical difficulties and troubleshooting has played its role which is a distraction and a burden to progress.

- **Working through Zoom**: The entirety of the project was done using Zoom which was difficult due to having to adapt to the platform.

- **Different image capture dates**: Image captures made by Google Street View vary between months and years making some data not up to date or recent.

- **Working with limited time**: Even with these applied limitations, working time was also scarce for the majority of the project.

Future Steps

- With food access options being so limited to certain communities, the team is determined to make healthy foods accessible to Richmond communities and neighboring areas.
- The YPAR team has created a Richmond food access survey and has plans on distributing the survey into the hands of the public in order to get an understanding of the size of the food access issue and to depict which area most commonly faces this issue.
- When social distancing measures begin to ease, plans to start a community garden in areas that are mostly affected by the issue will begin to take place.
- Find ways to increase assets