

Environmental Health Impacts on Asian American Elders in San Francisco

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ABSTRACT

In 2020, the Asian American population in the United States reached nearly 20 million, making it one of the largest growing racial and ethnic groups in the country. My thesis paper focuses on Chinese, Filipino and Korean identifying Asian American elders in San Francisco while examining if the healthcare system is affecting their overall health and workspace area at home. My Central Research Question addresses “How is the healthcare system in San Francisco affecting Asian American elders’ workspaces; in terms of their health, environment, environmental equity, and cleanliness?” To gather data, I created an anonymous Google Survey, and over 200 responses were collected from elders taking my survey. Additionally, I conducted 10 interviews over a 2-week time period with local San Francisco residents living in San Francisco Chinatown and Portola District; specifically the San Bruno/Visitation Valley area. The responses from my anonymous Google Survey were collected, and analyzed, yet presented in multiple bar graphs via Google Sheets highlighting differences between the two sites and different Asian American races. From my findings, more elders living in San Francisco Chinatown have a larger environmental health impact than elders living in the Portola district due to limited housing spaces, language barriers, no direct transportation to the nearest hospital, environmental racism, and not having access to a clean and safe water source.

KEYWORDS

Environmental Issues, Environmental Equity, AAPI, Cleanliness, Healthcare

INTRODUCTION

In 2020, nearly 20 million people in the United States identify as Asian American, now the largest growing racial and ethnic group in the United States. If you ever get to know an Asian American individual, the main reason why they immigrated to the United States was hoping for a better life, however, many Asian American elders don't have access to healthcare, insurance, medical, and various medical equipment. "Asian Americans represent individuals with ancestry from more than thirty countries. The top six Asian American subgroups include Chinese Americans (3.7 million), Filipino Americans (3.4 million), Asian Indian Americans (3.1 million), Korean Americans (1.7 million), and Vietnamese Americans (1.7 million)" (Yoo et al. 2014). Additionally, another obstacle Asian American elders experience is the language barrier in a hospital setting. If the doctor prescribes medication, they often don't have any idea about the instructions and would have to find interpreters or family members that speak both languages. "Fifty-seven percent of women reported difficulty getting medical care because of difficulty in finding interpreters" (Lee et al. 2001). Instead of going back to the hospital to get refills on their medication, Asian American elders would find the easier alternative; whether it's going to a random drug store location or purchasing medication at a higher price. "When in need of healthcare, many AAs use complementary and alternative medicine; also known as CAM. Over 75% of AA participants responded that they had used some form of CAM in the past year" (Wooksoo and Keefe 2010).

There are 36 different neighborhoods located in San Francisco. Each San Francisco neighborhood is primarily divided by social class; whether you are a low-income or high-income individual. For many white individuals residing in San Francisco, they typically live in the downtown or Marina/Presidio district; which is considered one of the most expensive neighborhoods in San Francisco. On the other hand, many Asian American individuals live in the rural part of San Francisco; which is either the Portola district, Visitacion Valley district, or Chinatown district. Especially with the limited housing in San Francisco and the price increase in the housing market, it leaves Asian American elders to downgrade their current living stability because of the cost. In the article, *San Francisco's Housing Crisis puts Pressure on Historic Asian Enclave* by Caitlin Yoshiko Kandil, she talks about the housing crisis for Asian Americans and what the outcome of the result is. "The soaring housing prices in San Francisco have led

many low-income Asian Americans to live in overcrowded, single-room-occupancy hotels, also known as SROs. According to a 2015 report from SRO Families United Collaborative, the number of families living in SROs in San Francisco increased 55 percent from 2001 to 2014. The majority of those families - 74 percent - live in Chinatown" (Kandil, 2018). With the limited housing opportunity for Asian American elders residing in San Francisco may result in a workspace that isn't accessible and may not have access to a clean and safe water system. Regarding environmental health impacts on Asian American elders, many elders don't have modes of transportation, resulting in overall fewer appointments. "Only 57% of Asian American women aged 40 or older visited the hospital in the past two years, compared with 62.6% for Hispanics, 68% for African Americans, and 72% for white individuals" (Wang et al. 2007).

To give you a bit of background about the generosity of Asian American elders, elders are one of the kindest and friendliest people to approach. If you ever needed any assistance, the majority of Asian American elders would offer assistance as a kind gesture. "These individuals require knowledge of their cultural origins and effects of early socialization, their life history in the United States, those age-related changes that occur regardless of early learning or ethnicity, and their expectations as to what it means to be old" (Kalish and Moriwaki. 1973). Even if the elders were financially stable, Asian American elders can adapt to any sudden change. In *Correlates of Neighborhood Environment With Walking Among Older Asian Americans* by Yawen Li, Dennis Kao, and Tam Dinh, they did a survey with 1045 adults that are older than 55 years old and within the 5 ethnicities; which were either Chinese, Filipino, Japanese, Korean or Vietnamese. "The results showed that different from the less active health profile among Asian Americans when compared with White adults, Asian older adults overall walked considerably more than White seniors" (Li et al. 2015). The purpose of my study is to resolve any problems and see if there are any real estate apartments that are available for low-income families (specifically people who live near factories and Chinatown) at a discounted price. Especially for a lot of Asian American elders who live under the poverty line, these elders are working long hours and making minimum wages to be financially stable.

For my thesis paper, my CRQ is how does the healthcare system in San Francisco affect Asian American elders' workspaces; in terms of their health, environment, environmental equity, and cleanliness. The first subquestion is "Did Asian American elders residing in San Francisco have a good workspace when going to their doctor's appointments? In terms of workspaces, I am trying to see if Asian American elders have a good workspace when they're at home; either

focusing on their home environment or work environment. The second subquestion is “What health problems/health impacts did Asian American elders get when visiting their doctor; especially elders who live near factories? The third subquestion is “Do Asian American elders who live near factories have access to safe and clean water at home?” After looking at my 3 subquestions and CRQ, my hypothesis is that the majority of Asian American elders who live near factories/Chinatown don't have access to clean water and their environment at home isn't the best. Google Survey is my data collection method. Since there are more than 30 ethnic groups that are considered Asian American, I decided to narrow it down and only focus on Chinese, Korean, and Filipino Asian American elders. My objective is to collect at least 90 survey results and with the results, I will make a bar graph looking at all the responses. I will be asking a total of 12 questions in my survey; which may ask about their age, gender, ethnicity, do they have access to clean and safe water, rating their environment at home, etc. The survey responses won't ask for any personal information; such as their names, or phone number because it will be anonymous. Along with my survey, I conducted 10 interviews in San Francisco Chinatown and spoke with elders that had struggled for multiple generations, and where they addressed some topics they were concerned about.

EXTENDED INTRODUCTION

In 2020, nearly 20 million people in the United States identify as Asian American, now the largest growing racial and ethnic group in the United States (Hayrapetian et al. 2021). There are more than 40 plus ethnicities that identify themselves as Asian Americans. In terms of understanding why Asian Americans are moving to the United States, many Asian American elders are hoping for a better life and more opportunity, however, many Asian American elders don't have access to healthcare, language barrier, access to resources, and how comfortable their environment is at home. “Fifty-seven percent of women reported difficulty getting medical care because of difficulty in finding interpreters” (Lee et al. 2001). Typically, instead of getting a transportation ride to their hospital to refill certain medications, Asian American elders would find a different way; which might be going to a local pharmacy, buying medication online, or

buying medication for a higher price since it's more efficient to them. “Many Asian Americans use complementary and alternative medicine; also known as CAM. Over 75% of Asian American elders and participants have used CAM over the past year” (Wooksoo and Keefe 2010).

Asian American elders don't have access to safe and clean water at home; particularly Asian American elders in San Francisco Chinatown. Looking at the bigger picture, 1 in 3 people, or 33% of people of the world's population, don't have access to clean water. For elders living in developing countries or cities that have enough space to grow, finding accessible water access is extremely difficult. This may be due to not having advanced technology and resources, no access to water for elders in Chinatown, or the water isn't safe and clean for people to use. “The use of conventional water and wastewater treatment processes become increasingly challenged with the identification of more and more contaminants, rapid growth of population and industrial activities, and diminishing availability of water resources” (Zhou and Smith 2001). For my final project, Asian American elders' specifically immigrants, who live in poverty and don't have enough money for water supply in their household and face a lot of different obstacles and challenges. Especially in larger cities with a high population, such as San Francisco and Los Angeles, these places are expensive places to live; especially the cost of transportation, food, renting or owning a house, and the cost of healthcare. “In this sense, elders' perceptions of the unreliability of the health system are similar to descriptions of the experience of resource insecurity, such as scarcity of food and water” (Jaramillo and Willging 2021). Every person should drink water to hydrate themselves, however, Asian American female elders lack in staying healthy, in terms of water quantity and lack certain nutrition.

Asian American elders who reside in Chinatown are trying to leave and move to the suburbs due to the environmental health impact, how the water flows in Chinatown, and how expensive the cost of renting a place in Chinatown is. “There is a review of scholarship on food and water insecurity that shows that unreliability of access to such vital resources produces emotional and mental distress rooted in experiences of uncertainty and unpredictability, stigma and shame, and anger at being the victim of social injustice” (Wutich and Brewis, 2014). Without water access, elders have emotional and mental distress in their lives. Furthermore, elders who lack certain nutrients and vitamins cause people to become more emotional. On the other hand,

mental health issues associated with rapid sociocultural change observed in different Asian societies are discussed, as well as the relative shortage of mental health personnel available in many Asian societies" (Tseng 2001). Since Chinatown is a tourist attraction in San Francisco County, there is a lot of traffic which can impact Asian American elders who have asthma, health problems, and issues associated with air pollution.

Study site

There are 36 different neighborhoods and 11 different districts located in San Francisco. Many Asian American elders live in the rural parts of the city since the cost of living in San Francisco can be expensive. Specifically, I will be discussing the Portola district, Visitacion Valley, and San Francisco Chinatown. "The neighborhoods surrounding Chinatown have seen many immigrant groups come and go - usually after having been through several generations and having saved up enough money for the move out to the suburbs" (Chin 1971). San Francisco is considered one of the most expensive places to live. Since the prices for San Francisco apartments are extremely expensive, it results in the elderly moving into SROs (also known as single-room occupancy) or moving away to the suburbs. "The soaring housing prices in San Francisco have led many low-income Asian Americans to live in overcrowded, single-room-occupancy hotels, also known as SROs."

METHODS

"On the assumption that from the 1870s to the 1900s Chinese San Francisco's population was about thirty thousand, it represented no less than 17 percent in the 1870s and 25 percent in the 1900s of the total Chinese American population" (Chen 2002). San Francisco Chinatown is 1 of the 11 districts located in the heart of San Francisco. Within the 11 districts, Chinatown has one of the highest Asian elder populations to this date. Many Asian American elders living in Chinatown still follow traditional rules and practice just like how they grew up in their hometown. Letting your clothes air dry outside, having no shoes inside the house, and greeting everyone are some of the rules and practices Asian American elders follow. Looking at the big picture, San Francisco Chinatown is a total of 8 blocks long and 3 blocks wide. Within the 8

blocks long and 3 blocks wide, totaling around 30 square blocks, there are around 70,000 people that reside in Chinatown. On the other hand, the 2nd location I decided to examine was in the Portola district; where I am specifically looking at San Bruno Avenue. San Bruno Avenue stretches along the freeway, which is a total of 8 blocks long. San Bruno Ave is considered Chinatown for many Asian American elders who live in the suburbs; whether that's in the Portola, Excelsior, or Visitation Valley district. Additionally, there are many transportation options; which are convenient for people that don't know how to drive; just like elders past 60 years old. For my study, I decided to narrow pinpoint 2 locations along Chinatown and San Bruno Avenue. For Chinatown, I decided to survey the elders between Stockton and Grant street, and for San Bruno Ave, I decided to survey elders between Bacon and San Bruno Ave. These 4 streets are one the liveliest intersections filled with thousands of Asian American elders.

Google Survey is my data collection method. Since there are 30 ethnic groups that are considered Asian American, I decided to narrow down the options and only focus on Chinese, Korean, and Filipino elders, hoping for a variety of result responses. For my survey, I decided to survey 45 elders who live in Chinatown and 45 elders who live in San Bruno Avenue, which totals 90 elders. More specifically, for both locations, I decided to survey 15 Chinese elders, 15 Korean elders, and 15 Filipino elders. My survey was anonymous, meaning that I didn't know who took the survey. In total, I passed around 120 survey QR codes in both locations (San Bruno and Chinatown) and only 90 elders responded within the 2 week period. There were a total of 12 survey questions with topics such as environmental health impact, access to clean and safe water, what their environment was like at home, cleanliness patterns, etc. To add on, I also asked some general questions to get a better understanding of the elders taking my survey. Some general questions I had on my survey were their age gap (ie; 60-70 years old, 70-80 years old), ethnicity, gender, where they lived, rating their home environment, etc. However, my survey did not include any personal information; such as their name, address, and phone number.

Quantitative Data Analysis was one of the methods I used for my senior thesis project. I wanted to test whether my hypothesis was true or false. To restate my hypothesis from my introduction plan and outline assignment, my hypothesis was "I believe that the majority of Asian American elders don't have access to clean and safe water and how bad their environment was like at home." After collecting and analyzing all the responses within the 2 weeks frame from elders in Chinatown and San Bruno Ave, I decided to make 2 bar graphs to compare all the

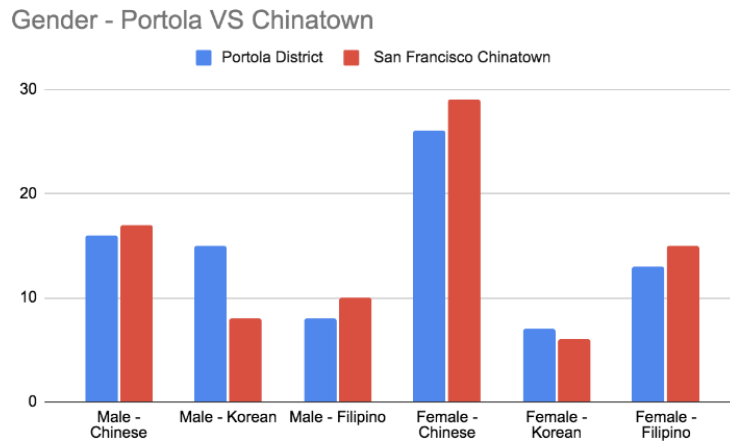
survey results. The first graph was the responses from elders who took my survey at Chinatown and my second graph was the responses from elders who took my survey at San Bruno avenue. To simplify even more, for each question I asked on my survey, there are 3 bar plots answers per question. The 3 bar plots are grouped by their ethnicity; whether they are a Chinese, Korean or Filipino Asian American elder. This is to examine which ethnicity elder struggled the most and see what the similarities/differences were. After looking at the results, something I noticed between the 2 graphs was how similar the responses were for Filipino elders in both the Chinatown and San Bruno locations. On the other hand, the responses I got for Chinese elders were shocking since the responses I got were the opposite; which may be due to their environment at home (whether they live in the suburbs or in the city).

RESULTS

After gathering my data and my responses from elders in San Francisco Chinatown and Portola district, I created different types of graphs to show the comparison between the two different sites. My survey consisted of some multiple choice questions, yes or no questions, short responses, ranking a statement I provided on a scale of 1-5 (1 being strongly disagreed and 5 is strongly agreed), and true or false statements. I asked a total of 15 different questions, and on the top of my Google Survey, I asked them to fill out what they were comfortable with, but filling out all my questions would be greatly appreciated. Along with my survey, I asked for some basic information about each elder. Combining both of my study sites, I gathered a total of 170 responses, 85 participants in San Francisco Chinatown and 85 participants in the Portola District.

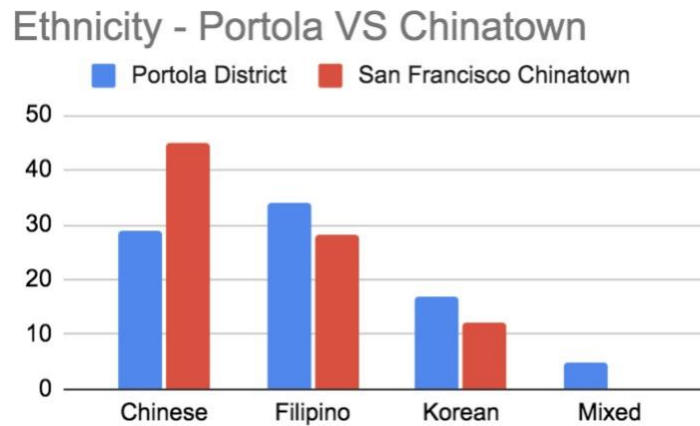
Pie charts, bar graphs, and tables were some of the graphs I used to show the comparison between my two different sites; San Francisco Chinatown and Portola District. Looking at the genders from the Portola District, there were 16 Chinese male elders, 15 Korean male elders, 8 Filipino male elders, 26 Chinese female elders, 7 Korean female elders, and 13 Filipino female elders. On the other hand, in San Francisco Chinatown, there were 17 Chinese male elders, 8 Korean male elders, 10 Filipino male elders, 29 Chinese female elders, 6 Korean female elders, and 15 Filipino female elders. I noticed that more female and male Chinese elders took my survey due to the fact that many Chinese Asian American elders live in Chinatown and the

Portola district. To visualize the number of elders that took my survey, I created a bar graph which is shown below.



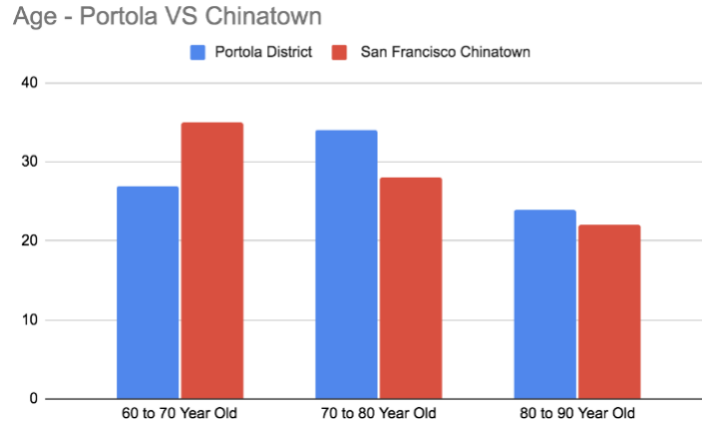
The y-axis means the number of people I surveyed and the x-axis are the different genders

We compared the different ethnicities for my project. There were a total of 170 elders for both of my sites. However, if you look at the 4th chart in the Portola District, there were 5 elders that were a mix of Chinese and Korean ethnicities.



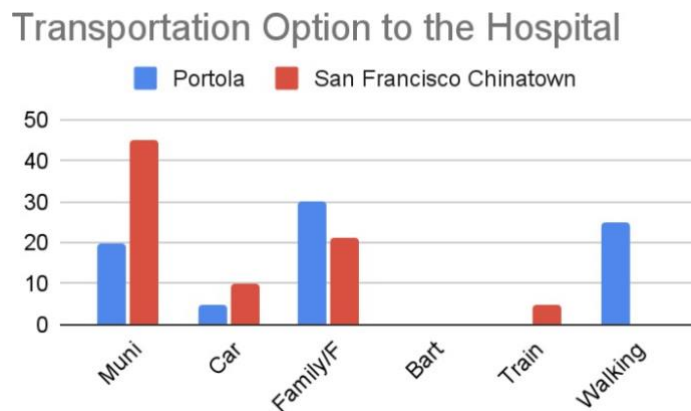
The y-axis means the number of people I surveyed and the x-axis are the different ethnicities

For the Portola District, there were 27 elders that were 60 to 70 years old, 34 elders that were 34 years old, and 24 elders that were 80 to 90 years old. On the other hand, in the San Francisco Chinatown site, there were 35 elders that were 60 to 70 years old, 28 elders that were 34 years old, and 22 elders that were 80 to 90 years old.



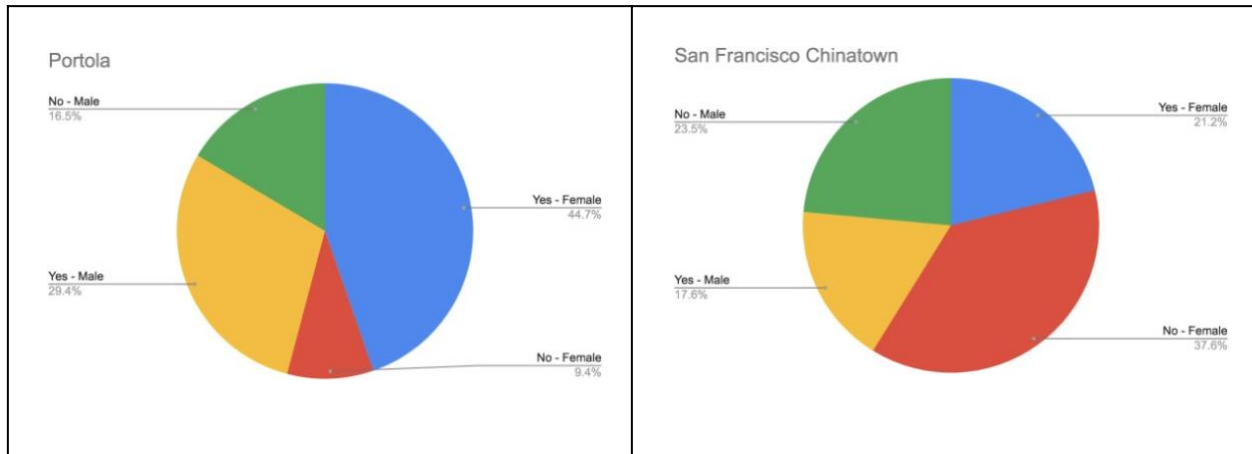
The y-axis means the number of people I surveyed and the x-axis are the different age gaps among elders

For this bar graph, the question I asked the elders was “what their mode of transportation was in case of any emergencies?” For the Portola District, there were 20 elders taking the muni, 5 elders driving, 30 elders relying on friends/family, 0 elders taking the Bart, 0 elders taking the train, 25 elders walking to the hospital, and 5 elders who said the other. On the other hand, in San Francisco Chinatown, there were 45 elders taking the muni, 10 elders driving, 21 elders relying on friends/family, 0 elders taking the Bart, 5 elders taking the train, 0 elders walking to the hospital, and 4 elders who said the same thing. Since there is a local hospital within the Portola district, muni, family/friends, and walking to the hospital was the best option. On the other hand, in Chinatown, the majority of the elders have to ask their family/friends for a ride or take multiple buses to reach the nearest hospital since there isn't one closeby.



The y-axis means the number of people I surveyed and the x-axis are what transportation options the elders took.

One question I asked was “Do you live with any of your family members or have family members close by?” In Portola, for the females, 44.7% said yes, 9.4% said no. For the male elders, 29.4% said yes and 16.5% said no. In Chinatown, for the females, 21.2% said yes, and 37.6 said no. For males, 17.6% said yes and 23.5% said no. This is due to the fact that Chinatown is a tourist destination and the surrounding neighborhood is too expensive for their families to live in.



These two pie charts are a comparison between Portola and Chinatown elders asking if they live close to family members.

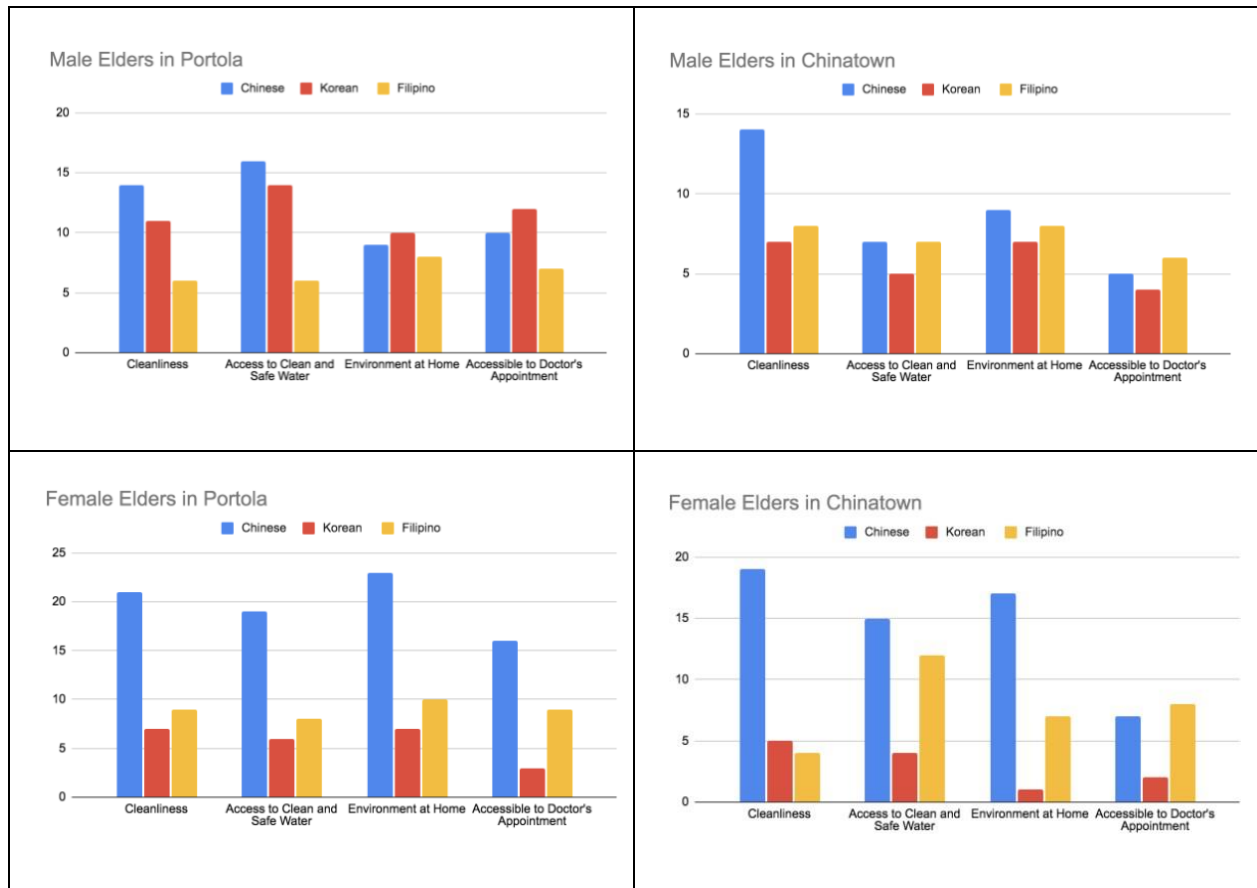
On the right, these are screenshot images of the question “On a scale of 1-5, rank how comfortable your environment is at home and explain your reasoning. 5 being the best and 1 being the worst.” If you look at both of the responses, more people in Chinatown gave it a 1. Some people in the Chinatown site mention phrases like “not enough space”, “outdated appliances” and “water leakage.”

	Male - C	Female - C	Male - K	Female - K	Male - F	Female - F
1	0	0	0	0	0	2
2	1	3	2	1	0	1
3	7	10	3	2	2	4
4	3	12	3	4	2	3
5	5	1	7	0	4	5

	Male - C	Female - C	Male - K	Female - K	Male - F	Female - F
1	2	7	1	0	0	0
2	4	5	3	2	1	2
3	5	10	2	3	6	6
4	3	5	2	1	3	5
5	3	2	0	0	0	1

In terms of the environmental health impact aspect of my study, I asked about their home environment. I asked questions about their cleanliness at home, whether or not they have access to clean and safe water, what their environment is like at home, and if they had trouble going to the doctor's appointment in case of any emergencies. On the left were the elders from the Portola District that took my survey and on the right, were the elders from San Francisco Chinatown.

These were the results that I got:



In addition to my survey, I decided to conduct 6 total interviews (3 elders in Chinatown and 3 elders in the Portola District). Each interview I conducted lasted between 5-10 minutes and out of the 6 guests I interviewed, there were 3 phrases that I thought were important to highlight and showcase. Lee Kim Sung is a 73-year-old male that lived in the Chinatown neighborhood for over 20 years. “I have 6 people living in my 1-room studio, there isn’t enough room for my kids to play inside” (Sung). Zhong Lu Wu is a 61-year-old male who lives in the Portola District area that doesn't have direct transportation to the hospital in case there were any emergencies. “My son doesn't have access to a vehicle, so I rely on taking three forms of public transportation to take me from the house to the doctor” (Wu). Yung Kin Wong is a 76-year-old who lives in an outdated apartment located in Chinatown. “The water pipes in my building don’t have good water flow, so I talk to the homeowners every week to resolve this issue” (Wong). Out of the 6 elders I interviewed in San Francisco Chinatown and Portola District, these are some of the issues Asian American elders face on a day-to-day basis.

After looking at my results, the elders living in Chinatown had a larger, yet bigger environmental health impact than the elders living in the Portola district. Specifically in San Francisco Chinatown, there are smaller housing complexes and tiny alleyways leading to their buildings, there isn't any direct transportation to the hospitals and there were water leakages in the kitchen and bathroom that affected their environmental surroundings. Additionally, since San Francisco Chinatown is considered the top 5 attractions in the San Francisco Bay Area, there are a lot of tourists that visit on a day-to-day basis. If these tourists visit Chinatown with their own vehicle, these individuals are an issue for Asian American elders living in the Chinatown neighborhood due to traffic, which can affect the elders’ health and have different environmental health impacts (air pollution and mental health).

DISCUSSION

The issue of workspace adequacy for Asian American elders in San Francisco extends beyond their medical appointments and the quality of their workspaces at home, seeking and highlighting the needs for greater attention to their overall living and working conditions. Asian American elders are one of the most hardworking individuals, from working early morning to late hours, helping out with their community, and helping out their families. However, Asian American elders rely on assistance from the government; whether it's a financial or money issue

since they don't get paid a lot. My first subquestion is “Did Asian American elders residing in San Francisco have a good workspace when going to their doctor’s appointments? In terms of workspaces, I am trying to see if Asian American elders have a good workspace when they're at home; either focusing on their home environment or work environment.” From the data, more Chinese-identifying Asian American elders had trouble and had higher environmental health issues in Chinatown than in Portola District since the closest hospital from Chinatown is 10+ miles away. Normally, the elders would need to take 2 or more transportation, rely on the cars from friends and family, or rely on other different types of methods.

The health of Asian elders, particularly elders living near factories, has raised concerns about the potential health impacts and problems they are experiencing when going to their doctors appointment. Particularly on environmental health risks, elders who live near factories constantly breathe air pollution and toxic chemicals that will affect their bodies. If there were any emergencies, these elders would need to find access to nearby hospitals that are within walking distance since many elders cannot drive. The second subquestion is “What health problems/health impacts did Asian American elders get when visiting their doctor; especially elders who live near factories? Typically, these elders would have to commute 3x the distance by bus than by car. This is due to the fact that there isn't a direct transportation option, making elders take 2 or more buses to reach their final destination. Whereas, if the elders had a car, they would get dropped off right in front of the hospital. Looking at the transportation graph from the result section, many elders rely mainly on taking the bus. Similarly, my third subquestion is “Do Asian American elders who live near factories have access to safe and clean water at home?” Especially in the housing properties in San Francisco Chinatown, there isn't clean and safe water to use at home from outdated appliances, outdated housing complexes, or not enough funding. Diving deeper into housing in the neighborhood of San Francisco Chinatown, many Asian American elders live in studios or one-bedroom apartments, making no space for updated renovations. From my survey, more Chinese identifying Asian American elders experience issues regarding health qualities near factories.

Limitations and future directions

Some of the limitations of this study includes not having enough Asian American elders; specifically Korean and Filipino elders to take my survey. If there were the same amount of elders for each ethnicity and gender I was surveying, the results and graph would've been more

accurate and precise. For my thesis project, I initially thought that standing between the most “tourist” populated crosswalks would indicate that there will be different ethnicities stopping and filling out my survey, however, this was challenging to get different ethnicities' elders to stop, talk with me, and fill out my survey. I also had to interact with hundreds of elders and ask them about their ethnicity and see if they were a candidate for my thesis project. On the other hand, in the interviews aspect of my thesis project, I only understood how to translate elders who spoke Mandarin or Cantonese, rather than Korean and Filipino due to cultural language differences. However, I did record the interviews, but I didn't know how to interpret what they were saying. My study population only focuses on Chinese, Korean, and Filipino Asian American elders in San Francisco Chinatown and the neighborhoods surrounding the Portola district, so I cannot apply my conclusion to elders living outside the areas I was interviewing at. Last year, I hypothesized that the majority of Asian American elders don't seek healthcare on their own due to language barriers, no transportation access, and environmental health issues. The experimental design addresses my hypothesis because, with the results, we can see which ethnicity had the largest impact and how to address those issues.

Expanding into different neighborhoods and cities within the United States, interviewing people with diverse backgrounds and ethnicities, expanding the age group, and surveying more Asian American elders would be something I would look for in the future. Since I grew up in San Francisco, I would love to dive deeper into different parts of California (Los Angeles or San Diego) as well as compare it to a suburban city where there are fewer Asian American individuals and see the difference in results. To this date, there are more than 39 million individuals living in the state of California, which is considered one of the most populated states in the United States. Some further step that is needed for my thesis project is finding a dataset that has data on different age groups and all 38 ethnicities that are considered Asian American. Out of the 38 ethnicities that are considered Asian American, which ethnicities experience the largest environmental health impact? Furthermore, I would also love to tailor the Google Survey to their native language, so it's easier for the elders to follow the instructions and answer the prompts.

Implications and conclusion

Quantitative Data Analysis and gathering responses from elders in San Francisco Chinatown and Portola district is difficult if you don't understand their native language. My results help address the big issue because a lot of Asian American elders don't have access to safe and clean water at home, how comfortable their environment is at home, if they live in any hospital in case of any environmental health emergencies, and cleanliness. To reiterate, the big idea for my thesis project is as the Asian American population increases each year, more Asian American elders should have a healthy and clean workspace, have access to medical treatment if there were any environmental health emergencies, and have safe and clean water for us at their homes. Looking at my results, the elders living in Chinatown had a larger, yet bigger environmental health impact than the elders living in the Portola district. Specifically in San Francisco Chinatown, there are smaller housing complexes and tiny alleyways leading to their buildings, there isn't any direct transportation to the hospitals and there were water leakages in the kitchen and bathroom that affected their environmental surroundings. If you haven't seen your grandparents in a really long time, please visit them, take them out to eat, or give them a phone call because they'll appreciate it.

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