

# Survey on Attitudes and Behaviors About Compost and Littering

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Communication



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## ACKNOWLEDGEMENTS

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- The City Council: Barbara Halliday (mayor), Sara Lamnin, Francisco Zermeno, Marvin Peixoto, Al Mendall, Elisa Marquez, and Mark Salinas
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## About Pioneers for Sustainable Communities

Pioneers for Sustainable Communities (P4SC) is a year-long partnership between Cal State East Bay and a community partner that represents local or regional government. P4SC is one of a network of campuses nationwide—the EPIC-N Network—that have adopted a model of using course-based, faculty-lead, student research to support the sustainability goals of local communities. P4SC focuses on sustainability, social justice, and quality of life in the San Francisco East Bay region. It leverages the expertise of faculty and the enthusiasm, time, and innovative ideas of students, providing thousands of hours of research to support local partner sustainability programs including: data acquisition and analysis, stakeholder surveys, geo-spatial mapping and referencing used to establish socio-environmental baselines, track progress, and facilitate planning and communications.

- **P4SC Reports** present the final results of one or more full-time equivalent courses devoted to a single P4SC project.
- **P4SC Mini-Reports** present the results of partial courses devoted to a PSC project, typically used for projects in progress.

## About Cal State East Bay

Cal State East Bay's beautiful main campus is located in the Hayward hills with panoramic views of the San Francisco Bay shoreline. Situated above the city of Hayward, the campus offers an ideal setting for teaching and learning and yet easy access to the many cities along the bay. The University has a satellite campus in Concord, a professional development center in Oakland, and a significant presence online. Founded in 1957, Cal State East Bay is one of 23 universities of the California State University system (CSU). With an enrollment over 15,800 students, Cal State East Bay is recognized as a regionally engaged and globally oriented university with a strong commitment to academic innovation, student success, engaged service learning, diversity, and sustainability.

## P4SC Directors and Staff

Karina Garbesi, P4SC Co-Director, Professor and Director of the Environmental Studies Program, Department of Anthropology, Geography, and Environmental Studies, Cal State East Bay

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Audrey Wade, P4SC Program Coordinator, Cal State East Bay

*With support by Jillian Buckholz, Director of the Office of Sustainability*



## About the City of Hayward

The City of Hayward was incorporated in 1876. With a population of 150,000, Hayward is the sixth largest city in the Bay Area and proudly the second most diverse City in California. A Charter City, Hayward operates under the Council-Manager form of government with a directly elected Mayor and six member City Council. Hayward is a full service City comprised of thirteen departments providing services ranging from public safety and public works to library and community services. The City strives to be a safe, clean, green, and thriving community for all of its residents. To learn more about the City of Hayward, visit [www.Hayward-ca.gov](http://www.Hayward-ca.gov).





# Survey on Attitudes and Behaviors About Compost and Littering

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## PROJECT DESCRIPTION

### **Objectives**

The City of Hayward has identified the prevention of littering, and the promotion of composting as routes toward greater sustainability. They are partnering with California State University, East Bay to help meet these ends. To establish solid foundations for this strategy we are including a course in quantitative research. The researchers surveyed for attitudes, awareness, knowledge, perceptions, and behaviors as they regard to littering and composting, as well as the media consumption habits and demographic information of the participants.

### **Research Method**

Researchers administered a survey to individuals in the Bay Area, primarily Hayward residents. The survey was administered in person and via e-mail and telephone. 110 people participated in this study. The survey items consisted of 31 questions (16 Likert scales and 15 closed-answer questions).

The first section of the questionnaire asked questions regarding attitudes toward and perceptions of litter and its effects, in general and in Hayward. The second section of the questionnaire asked about attitudes toward, perception of, and knowledge of the issues surrounding composting. The final section of the questionnaire asked questions about media usage and demographic information.





## California State University East Bay

# Implied Consent to Participate in Research (Littering and Food Scrap Sorting Survey)

Researchers in the Department of Communication at California State University, East Bay, and the Utilities & Environmental Services Department of the City of Hayward would like your participation in a survey. The researchers, Yung-I Liu, is an assistant professor at California State University, East Bay, and Mary Thomas, Management Analyst-Utilities & Environmental Services of the City of Hayward, are conducting research for the Pioneers for Sustainable Communities (aka The Sustainable City Year Program). The purpose of this survey is to learn more about your perceptions of littering and food scrap sorting. We would like to use your careful and honest feedback to develop effective approaches to reduce littering and increase composting in Hayward. You are being asked to participate in this study because you are a resident in Hayward/the San Francisco Bay Area.

If you agree to participate in this research study, you will be interviewed over the phone or in person for approximately 10 minutes, or you will fill out the questionnaire (please see attached), which will take approximately 10 minutes to complete. There will be no additional cost to you for participating in this research.

Please answer each question to the best of your ability. You will face no risks. It is important to note that: (1) your participation is voluntary, (2) you may withdraw from the study at any time with no penalty, and (3) you are free to not answer any question for any reason. You will be guaranteed privacy and confidentiality. No names or identities will be used in any published reports of the research. Please do not write your name on this form or the questionnaire. The research data will be kept in a password protected computer, and only the researchers will have access to the data. At the conclusion of the study, all identifying information will be removed and the data will be kept in a password protected computer in a locked office. There will be no compensation for participating in this research.

Please complete the questionnaire on your own, without discussing it with your friends. If you have any questions while completing the questionnaire, please contact the questionnaire administrator and he/she will discuss your question with you. If you have any further questions about the study, you may contact the researchers by email at [yungi.liu@csueastbay.edu](mailto:yungi.liu@csueastbay.edu) or phone at (510) 885-3188, or [mary.thomas@hayward-ca.gov](mailto:mary.thomas@hayward-ca.gov) or phone at (510) 583-4724. Questions about your rights as a study participant, or comments or complaints about the study, may also be addressed to the Office of Research and Sponsored Programs at (510) 885-4212.

If you are 18 years or older and have read and understood this consent form and agree to participate, please fill out the survey now. If you do not wish to participate, you may simply return the blank survey, with no penalty to yourself. If you do participate, **completion and**



**return of the survey indicates your consent to the above conditions.** Thank you in advance for your cooperation and support.

**California State University East Bay**  
**Verbal Consent**

Hello, my name is \_\_\_\_\_ and I am a student at CSUEB conducting a research study on littering and food scrap sorting.

The survey will take approximately 10 minutes of your time. Your participation is voluntary, and you may answer only those questions you want to answer. You may stop at any time during the course of the survey with no penalty.

Would you like to participate in the survey? Your answers will be kept confidential, and there is little or no risk or benefit to you in answering these questions.

“May I ask you a question to see if you are eligible to participate?”

If the answer is “Yes,”

Are you at least 18 years of age or older?

- ☐ Yes
- ☐ No

If subjects are eligible, let them know the actual research questions are about to begin now.

If the answer is “No,” say “Thank you for your time. Goodbye.”



## **Recruiting Script**

Hello, my name is \_\_\_\_\_. I am a student at CSUEB in the Communication Department. I am conducting research on littering and food scrap sorting in Hayward/the San Francisco Bay Area, and I am inviting you to participate because you live in Hayward/the San Francisco Bay Area.

Participation in this research includes taking a survey about your perceptions of littering and food scrap sorting, which will take approximately 10 minutes.

If you have any questions, I can be reached at \_\_\_\_\_ @ \_\_\_\_\_.



## Littering and Food Scrap Sorting Survey

### A. We are going to ask a few questions about littering in Hayward.

Please indicate the extent to which you agree or disagree with each of the following statements.

1. Littering is a problem in Hayward.

1	2	3	4	5	6	7
<b>Strongly Disagree</b>						<b>Strongly Agree</b>

2. I know people who litter.

1	2	3	4	5	6	7
<b>Strongly Disagree</b>						<b>Strongly Agree</b>

3. I understand why a person might litter.

1	2	3	4	5	6	7
<b>Strongly Disagree</b>						<b>Strongly Agree</b>

4. Why do you think people litter? (check all that apply)

- ☐ A lack of trash cans
- ☐ They don't care or laziness
- ☐ They don't know that it is a problem
- ☐ There is already so much litter, they don't think one more piece matters
- ☐ Peer pressure (they don't want to look like they care in front of their friends)
- ☐ Other (please specify)

5. Of the reasons above, what do you think is the main reason that people litter?

- ☐ A lack of trash cans
- ☐ They don't care or laziness



- ☐ They don't know that it is a problem
- ☐ There is already so much litter, they don't think one more piece matters
- ☐ Peer pressure (they don't want to look like they care in front of their friends)
- ☐ Other (please specify)

**I am going to read you a series of messages targeted at people who litter. Please tell me if these messages have big impact on you, some impact, or no impact.**

6. "Litter on the street eventually ends up in the bay and harms marine life"  
(1) **Big impact** (2) **Some impact** (3) **No impact**
7. "Cleaning up litter in Hayward costs taxpayers millions of dollars"  
(1) **Big impact** (2) **Some impact** (3) **No impact**
8. "Litter makes a community less desirable and lowers property values"  
(1) **Big impact** (2) **Some impact** (3) **No impact**
9. "Litter attracts pests like rats and roaches"  
(1) **Big impact** (2) **Some impact** (3) **No impact**
10. "Litter is harmful to the health of the children that live in a neighborhood"  
(1) **Big impact** (2) **Some impact** (3) **No impact**
11. "90% of Hayward residents think it is wrong to litter"  
(1) **Big impact** (2) **Some impact** (3) **No impact**

**B. We are going to ask a few questions about sorting food scraps.**

12. For this survey, we are going to use the term "food scraps," which means all the leftover scraps you have after cooking or eating and any food that has gone bad. Have you heard the term "food scraps" before?  
  - ☐ Yes
  - ☐ No



13. For this survey, we are going to use the term “food soiled paper,” which means all the paper, napkins and cardboard that has touched food, like a pizza box or used paper plate. Have you heard the term “food soiled paper” before?
- ☐ Yes
- ☐ No
14. Do you have your own trash carts or do you share your carts with your neighbors?
- ☐ Own
- ☐ Share
15. Do you have a green organics cart?
- ☐ Yes
- ☐ No (skip to question 17)
16. How often do you put your food scraps and food soiled paper in the green cart?
- ☐ Always
- ☐ Most of the time
- ☐ Sometimes
- ☐ Never (skip to question 18)
17. If you had access to a green cart, how likely would you be to sort out your food scraps and food soiled paper to put in the green cart?
- ☐ Very likely
- ☐ Somewhat likely
- ☐ Not likely
18. When you sort your food scraps and food soil paper, why do you do it? (skip if they do not sort; check all that apply)
- ☐ It is good for the environment
- ☐ It is the way I was told to do it
- ☐ It helps cut my garbage bill
- ☐ Other (please specify)
19. When you do not sort your food scraps, what are the main barriers? (check all that apply)
- ☐ I don't have a green cart
- ☐ I didn't know that food scraps and food soiled paper should go in the green cart
- ☐ It smells
- ☐ It attracts bugs
- ☐ It's overwhelming because I don't know what items go in which carts



- ☐ It's inconvenient – I don't have time  
☐ Other (please specify)

20. Do you have a kitchen pail for collecting food scraps?

- ☐ No  
☐ Yes

21. Did you know that you can get a kitchen pail for free as part of your garbage service?

- ☐ No  
☐ Yes

**I am going to read you a series of messages about sorting food scraps. Please tell me if these messages have big impact on you, some impact, or no impact.**

22. “Sorting your food scraps keeps waste out of our landfills”  
**(1) Big impact (2) Some impact (3) No impact**

23. “Sorting your food scraps can help you save money on your garbage bill by downsizing your trash cart”  
**(1) Big impact (2) Some impact (3) No impact**

24. “Sorting your food scraps reduces climate change”  
**(1) Big impact (2) Some impact (3) No impact**

25. “Sorting your food scraps helps California maintain its rich top soil because the food scraps are composted and used at farms”  
**(1) Big impact (2) Some impact (3) No impact**

26. “80% of Hayward residents sort their food scraps”  
**(1) Big impact (2) Some impact (3) No impact**

**C. Finally, we would like to know some general information about you.**

27. How many people, including yourself, live in your household? \_\_\_\_\_



28. What is the primary language in your household?

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29. Where do you most often get news and information? (check all that apply)

- ☐ Television
- ☐ Radio
- ☐ Printed Newspapers
- ☐ Printed Magazines
- ☐ Websites
- ☐ Social Media
- ☐ Friends and family
- ☐ Other (please specify)

30. Which social media do you use frequently? (check all that apply)

- ☐ Facebook
- ☐ Twitter
- ☐ Pinterest
- ☐ Instagram
- ☐ YouTube
- ☐ Other (please specify)
- ☐ None

31. Have you ever visited the City of Hayward's website?

- ☐ Yes
- ☐ No

**Thank you for participating in this survey!**





## RESULTS

### Data Analysis Results

#### Littering and Food Scrap Sorting Survey

##### A. We are going to ask a few questions about littering in Hayward.

Please indicate the extent to which you agree or disagree with each of the following statements.

1. Littering is a problem in Hayward.

[Strongly Disagree]							[Strongly Agree]
1	2	3	4	5	6	7	
6.4%	6.4%	16.4%	13.6%	26.4%	15.5%	15.5%	

2. I know people who litter.

[Strongly Disagree]							[Strongly Agree]
1	2	3	4	5	6	7	
12.7%	13.6%	10.9%	13.6%	15.5%	7.3%	26.4%	

3. I understand why a person might litter.

[Strongly Disagree]							[Strongly Agree]
1	2	3	4	5	6	7	
20.9%	16.4%	10.0%	16.4%	11.8%	9.1%	15.5%	

4. Why do you think people litter? (check all that apply)

19.9% – A lack of trash cans  
 35.0% – They don't care or laziness  
 16.5% – They don't know that it is a problem  
 21.4% – There is already so much litter, they don't think one more piece matters  
 5.6% – Peer pressure (don't want to look like they care in front of their friends)  
 1.5% – Other | [0.4% - Won't get in trouble] [1.1% – Not Specified]

5. Of the reasons above, what do you think is the main reason that people litter?

18.0% – A lack of trash cans  
 55.0% – They don't care or laziness  
 13.5% – They don't know that it is a problem  
 9.9% – There is already so much litter, they don't think one more piece matters  
 1.8% – Other (Not Specified)  
 0.9% – Other (Won't get caught)  
 0.9% – Peer pressure (they don't want to look like they care in front of their friends)



6. "Litter on the street eventually ends up in the bay and harms marine life"  
64.2% – Big impact    30.3% – Some impact    5.5% – No impact
7. "Cleaning up litter in Hayward costs taxpayers millions of dollars"  
45.5% – Big impact    38.2% – Some impact    16.4% – No impact
8. "Litter makes a community less desirable and lowers property values"  
63.6% – Big impact    27.3% – Some impact    9.1% – No impact
9. "Litter attracts pests like rats and roaches"  
74.5% – Big impact    20.9% – Some impact    4.5% – No impact
10. "Litter is harmful to the health of the children that live in a neighborhood"  
66.4% – Big impact    27.3% – Some impact    6.4% – No impact
11. "90% of Hayward residents think it is wrong to litter"  
41.3% – Big impact    36.7% – Some impact    22.0% – No impact

**B. We are going to ask a few questions about sorting food scraps.**

12. For this survey, we are going to use the term "food scraps," which means all the leftover scraps you have after cooking or eating and any food that has gone bad. Have you heard the term "food scraps" before?  
86.4% – Yes  
13.6% – No
13. For this survey, we are going to use the term "food soiled paper," which means all the paper, napkins and cardboard that has touched food, like a pizza box or used paper plate. Have you heard the term "food soiled paper" before?  
38.5% – Yes  
61.5% – No
14. Do you have your own trash carts or do you share your carts with your neighbors?  
69.4% – Own  
30.6% – Share



15. Do you have a green organics cart?

55.2% – Yes

44.8% – No (skip to question 17)

16. How often do you put your food scraps and food soiled paper in the green cart?

33.9% – Always

12.5% – Most of the time

30.4% – Sometimes

23.2% – Never (skip to question 18)

17. If you had access to a green cart, how likely would you be to sort out your food scraps and food soiled paper to put in the green cart?

48.4% – Very likely

35.8% – Somewhat likely

15.8% – Not likely

18. When you sort your food scraps and food soil paper, why do you do it? (skip if they do not sort; check all that apply)

51.5% – It is good for the environment

29.7% – It is the way I was told to do it

15.8% – It helps cut my garbage bill

1.0% – Other (Social Responsibility)

1.0% – Other (City Ordinance)

1.0% – Other (Not Specified)

19. When you do not sort your food scraps, what are the main barriers? (check all that apply)

21.8% – I don't have a green cart

14.6% – I didn't know food scraps and food soiled paper should go in the green cart

14.1% – It smells

15.0% – It attracts bugs

11.2% – It's overwhelming because I don't know what items go in which carts

21.4% – It's inconvenient – I don't have time

1.4% – Other (Not Specified)

0.5% – Other (Run out of room)

20. Do you have a kitchen pail for collecting food scraps?

69.1% – No

30.9% – Yes



21. Did you know that you can get a kitchen pail for free as part of your garbage service?

80.0% – No

20.0% – Yes

I am going to read you a series of messages about sorting food scraps. Please tell me if these messages have big impact on you, some impact, or no impact.

22. “Sorting your food scraps keeps waste out of our landfills”

42.2% – Big impact    47.7% – Some impact    10.1% – No impact

23. “Sorting your food scraps can help you save money on your garbage bill by downsizing your trash cart”

56.4% – Big impact    33.6% – Some impact    10.0% – No impact

24. “Sorting your food scraps reduces climate change”

40.9% – Big impact    41.8% – Some impact    17.3% – No impact

25. “Sorting your food scraps helps California maintain its rich top soil because the food scraps are composted and used at farms”

48.1% – Big impact    43.5% – Some impact    8.3% – No impact

26. “80% of Hayward residents sort their food scraps”

27.8% – Big impact    44.4% – Some impact    27.8% – No impact

**C. Finally, we would like to know some general information about you.**

27. How many people, including yourself, live in your household? \_\_\_\_\_

1 – 2.7%

2 – 20.9%

3 – 15.5%

4 – 25.5%

5 – 18.2%

6 – 11.8%

7 – 3.6%

8 – 1.8%

Mean: 3.95



28. What is the primary language in your household?

79.1% - English

13.6% - Spanish

0.9% respectively - Cantonese, Pashto, Sinhalese, Tagalog, Tamil, Telugu, Urdu, Vietnamese

29. Where do you most often get news and information? (check all that apply)

20.6% – Television

11.1% – Radio

4.3% – Printed Newspapers

2.5% – Printed Magazines

20.3% – Websites

23.7% – Social Media

16.6% – Friends and family

0.6% – Other (Not Specified)

0.3% – Other (Teachers)

30. Which social media do you use frequently? (check all that apply)

29.9% – Facebook

15.0% – Twitter

6.3% – Pinterest

22.8% – Instagram

18.5% – YouTube

1.5% – Other (Snapchat)

0.5% – Other (G-Mail)

1.5% – Other (Not Specified)

3.9% – None

31. Have you ever visited the City of Hayward's website?

23.9% – Yes

76.1% – No

**Thank you for participating in this survey!**



## CONCLUSION

### **Key Findings**

#### **Section A**

Littering is perceived as a problem in Hayward

13.6% neutral

26.4% agree slightly

15.5% agree

15.5% agree strongly

Laziness and lack of caring are perceived as the main reasons for litter.

Chosen by 55.0% of respondents

Respondents were most impacted by:

Harm to marine life (64.2% big impact, 30.3% some impact)

Cost to taxpayers (45.5% big impact, 38.2% some impact)

Lowered property values (63.6% big impact, 27.3% some impact)

Attracting Pests (74.5% big impact, 20.9% some impact)

Harm to children (66.4% big impact, 27.3% some impact)

#### **Section B**

86.4% of respondents **had** heard the term “food scraps.”

61.5% of respondents **had not** heard the term “food soiled paper.”



55.2% of respondents have a green organics cart.

48.4% of those without would be very likely to use if they had one.

35.8% of those without would be somewhat likely to use if they had one.

“How often do you put your food scraps away in the green cart?”

33.9% – Always

30.4% – Sometimes

23.2% – Never

People sort food scraps because:

51.5% – It is good for the environment.

29.7% – It is the way I was told to do it.

15.8% – It helps cut my garbage bill.

People do not sort because

21.8% – Do not have a green cart.

21.4% – It’s inconvenient-I don’t have time.

15.0% – It attracts bugs.

14.6% – Didn’t know food scraps and food soiled paper should go in the green cart.

14.1% – It smells.

11.2% – Overwhelming because I don’t know which item goes in which cart.

69.1% of respondents **did not** have a kitchen pail.

80.0% of respondents **did not** know that kitchen pails are free as part of garbage services.



Respondents were most impacted by:

Sorting food keeps waste out of landfills (42.2% big impact, 7.7% some impact)

Sorting can save on garbage bills (56.4% big impact, 33.6% some impact)

Sorting food scraps reduces climate change (40.9% big impact, 41.8 some impact)

Sorting food scraps help maintain top soil (48.1% big impact, 43.5% some impact)

## **Section C**

Average household size: 3.95 people

Primary household language

79.1% – English

13.6% – Spanish

Sources of news and information

23.7% – Social Media

20.6% – Television

20.3% – Websites

16.6% – Friends and Family

Social media usage

29.9% – Facebook

22.8% – Instagram

18.5% – YouTube

15.0% – Twitter

6.3% – Pinterest





76.1% of respondents **had not** visited the City of Hayward's website.

### **Students' Reflections on the Learning Experience**

For most of the students this was their first real world experience with quantitative research. This was the first opportunity for many to become acquainted with the terms and methods utilized in quantitative research. Many reported that this was their first time really utilizing programs such as Excel or SPSS, and saw the value that these skills could have in future academic and career endeavors.

Several students reported an increased confidence in their communication skills as a result of administering this questionnaire. They said that it was initially uncomfortable for them to approach strangers and ask for their time, but they worked through it as they had no other option. These students reported more success gaining participants when they had a script or gave statistics and information regarding the issues.

Many students discovered that people can be impatient or resistant when it comes to surveys. Many people reported trouble gaining participants, and learned that persistence is crucial when it comes to recruiting strangers in person.

Several students reported an increased awareness of waste management. One student mentioned learning that the green cart could be used for food scraps, and that food pails were free as part of waste services. One reported that this was their first time hearing the term "food scraps" or "food soiled paper." Many were surprised to learn that Hayward had such robust waste-management programs.

Students also learned from their individual datasets. Nearly every student reported laziness as the primary perceived cause of litter, which was the primary cause in the aggregated data as well.

One student was very surprised to see that their friends who took the survey had different views than they did regarding litter. They say this illustrated first-hand the value of survey research- without the data from this questionnaire, this student says they would have falsely assumed their friends' opinions on the issues.



## **Recommendations For Future Projects**

### **Suggestions for Researchers**

Several researchers reported participant impatience at the length of the questionnaire, and participant confusion due to switching scales. To alleviate participant impatience, researchers recommended shortening the survey. To reduce confusion, researchers recommended keeping similar scales together in future questionnaires.

Several researchers also reported issues with getting responses from people on the street or on campus. One researcher contradicted this, finding participant recruitment easy, as they utilized telephone and e-mail for their surveys. Researchers who had trouble recruiting participants found more success when they had a script ready or presented some information on the topic.

Many researchers came up with community-based recommendations. Some recommended including local statistics on litter and its effects and also listing fines for littering and dumping. One researcher noted that homeowners seemed more interested in the topic than non-owners and wondered if different tactics might be useful when attempting to reach owners or non-owners. One researcher noted the fact that businesses, schools, and organizations produce more litter than families and so recommended targeting these groups for future research.

### **Proposed Questions for Future Questionnaires**

Researchers were asked to recommend closed-answer questions for future surveys. Here are some of the most salient and most-recommended questions.

- Do you feel that Hayward provides adequate resources for residents who want to sort waste?
- Are there enough trash cans in Hayward?
- Is it OK to litter when there are no receptacles around?
- Do you know that the fine for littering is 1,000 dollars?
- Do you clean up after people who litter?
- Would you follow social media groups that focus on waste management?



- Would you be interested in participating in community cleanup events?
- Demographics: Age, ethnicity
- Do you rent or own?