

What Our Neighborhoods Tell Us About Food Insecurity and Food Assistance Use

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Abstract

Background: The U.S. Department of Agriculture (USDA) defines food insecurity as a lack of consistent access to enough food for an active and healthy life, specifically due to a lack of available financial resources at the household level. The COVID-19 pandemic significantly worsened the situation across the US, and more so in the San Francisco Bay Area, where food insecurity rates increased from 20% to 33% since the pandemic. This study focused on exploring a relation between the Healthy Places Index (HPI) and food insecurity in the Bay Area.

Methods: The sample included 540 participants, who were 18 years of age or older living in the 9 Bay Area counties and Santa Cruz County. After studying descriptive statistics of the participants, ANOVA was used to determine the average HPI score difference for food secure vs insecure groups and food assistance use prior vs since COVID pandemic. CHI-square tests were conducted to determine the relation between HPI quartiles and food insecurity and food assistance use.

Results: Food insecurity increased from 21% to 33% and food assistance use increased from 21 to 32%. There was an increase in food assistance across all programs, including the federal Supplemental Food Assistance Program (SNAP), school, food pantry, except WIC. Logistic regression modeling showed that HPI score and HPI quartiles can predict food insecurity but not food assistance use, both prior and since pandemic. Among barriers to food assistance programs, most participants rated 'do not qualify: too many assets', 'worried about paperwork', and 'do not want to rely' as most important; while different meal hours, more food, lesser cost, program information, extra money, and trust in food, delivery, and store as helpful factors.

Research Questions & Project Activities

Objective 1: Impact of COVID-19 on food insecurity and food assistance program use in Bay Area

Objective 2: HPI score can predict the neighborhoods with higher chances of food insecurity and food assistance utilization

- NFACT Data:
 - Online survey --> Aug to Nov 2020
 - Participants 18 years old or above
 - 540 responses
- SAS OnDemand to code variables and analyze data
- Average HPI score by Zip codes
- Statistical testing: Logistic regression

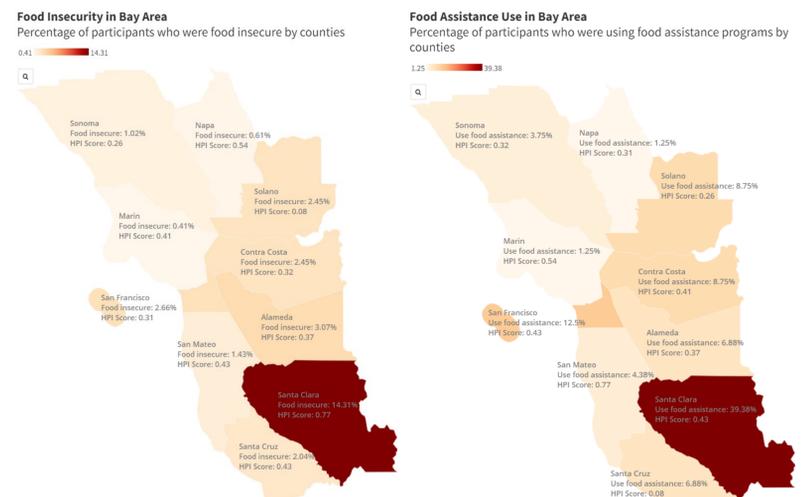
Results

Table 1. Characteristics of Study Participants*

Total number of participants	540	Education Status	
Age, years	43.93 (14.98)	Associates or lesser	201 (37.50)
HPI score	0.4344 (0.3799)	College Degree	142 (26.49)
		Advanced Degree	193 (36.01)
Gender		Income Categories	
Female	441 (81.67)	Low-income	122 (23.83)
Male	83 (15.37)	Middle-income	252 (49.22)
Transgender	1 (0.19)	High-income	138 (26.95)
Non-binary/Others/Missing	16 (2.96)	Family Composition	
Race/Ethnicity		No children	107 (19.81)
Hispanic	145 (27.15)	Children 0-17 years	228 (42.22)
Non-Hispanic Whites	234 (43.82)	Missing responses	205 (37.96)
Non-Hispanic Blacks	9 (1.69)	Food insecurity	
Asian	91 (17.04)	Prior to COVID pandemic	103 (20.52)
Native American/Others/Missing	55 (10.30)	Since COVID pandemic	169 (33.14)
Job Loss During Pandemic		Food Assistance Programs	
No	148 (27.41)	Prior to COVID pandemic	114 (21.11)
Yes	392 (72.59)	Since COVID pandemic	173 (32.04)
HPI Rank			
<25th percentile	133 (24.91)		
25-50th percentile	132 (34.72)		
50-75th percentile	135 (25.28)		
>75th percentile	134 (25.09)		

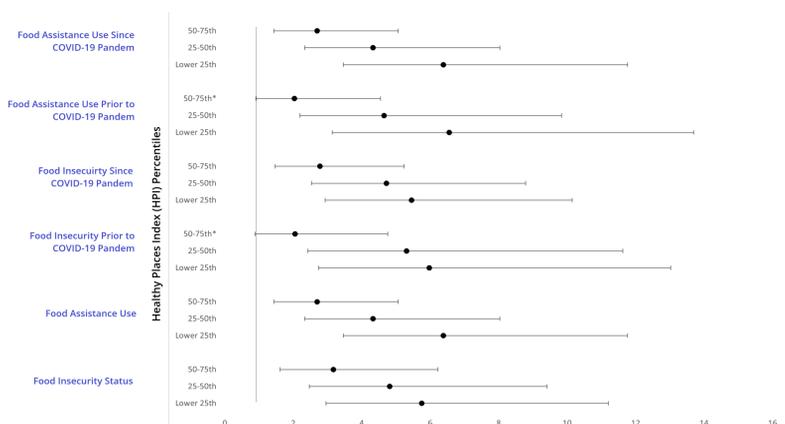
* Values for Continuous variables expressed as means (standard deviation)
 * Values for Categorical variables expressed as numbers (percentages)
 * For some variables, total does not count upto 100% due to missing responses

Results II



Results III

Chart 1. Odds Ratio and 95% Confidence Intervals (odds of Yes vs No for HPI percentile compared to Upper 25th percentile)



* Results were not significant with p-value >0.05

Key Findings

- The Healthy Places Index can predict food insecurity and food assistance use
- Results were not significant after adjusting for gender, race/ethnicity, income, education, and family composition

References

- California Healthy Places index. (2022). Retrieved March 15, 2022, from <https://healthyplacesindex.org/how-to/>
- Food Security in the US. USDA Economic Research Service. (2022, January 19). Retrieved March 15, 2022, from <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-u-s/>

Acknowledgment

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