SJSU Student RSCA Grant Initiative 2022

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

Table 1. Characteristics of Study Participants*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, years</td>
<td>45.0 (9.4)</td>
<td>7.0 (9.7)</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Satter</td>
<td>1.9 (1.4)</td>
<td>6.1 (0.8)</td>
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<tr>
<td>Non-foreign</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Hispanic</td>
<td>490 (89.5)</td>
<td>74 (13.7)</td>
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<tr>
<td>Non-Hispanic, White</td>
<td>180 (33.5)</td>
<td>42 (7.9)</td>
</tr>
<tr>
<td>Food insecure</td>
<td>320 (59.3)</td>
<td>110 (20.4)</td>
</tr>
<tr>
<td>Prior to COVID-19</td>
<td>230 (42.6)</td>
<td>100 (18.5)</td>
</tr>
<tr>
<td>SNAP</td>
<td>300 (55.6)</td>
<td>120 (22.2)</td>
</tr>
</tbody>
</table>

Results II

- Food insecurity in Bay Area
- Food Assistance Use in Bay Area

Results III

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

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


Acknowledgment

We want to thank NFACT Bay Area team for collecting this data and SJSU RSCA Grant Initiative for supporting this research