

Assessment of Consumption and Nutritional Intake of Food Box Program During COVID-19

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Abstract

- National surveys in the United States have found that food insecurity during the COVID-19 pandemic has increased dramatically.¹
- Food boxes have become a lifeline for millions of food insecure Americans since the start of the COVID-19 pandemic.²
- Past studies have measured the dietary impact of fruit and vegetable only food box programs and the efficiency of rapid food box deployment.^{1,3}
- No study has measured the preferences, household size, food waste, and nutrition impact on individuals receiving a food box.
- To understand the nutritional value of food box programs, there is a critical need for research into recipient consumption and nutritional impact.

Objective

Understand recipient preference, consumption, nutritional intake, and food waste of food box contents to inform compositions of future food boxes for optimal nutrition.

Methods

- A mixed methods study of 391 food box recipients was conducted across New York City boroughs of Queens, Bronx, Manhattan, and Brooklyn
- Key informants were used to identify communities with the greatest amount of food insecurity.
- A mobile app survey was conducted by WCK staff to participants waiting in line to receive a food box.
- Food boxes contained either 1) fresh fruits and vegetables only, or 2) fresh produce and dairy.
- Results of the survey were imported into a data frame and analyzed.
- The data frame's variables of interest included: age of the participants, the borough they lived in, household size, sex, what item(s) in the food boxes that were and were not preferred, how much of the box they consumed, reason for items not consumed.

Results

- Of the 391 survey participants, the contents of the food boxes reached approximately 1,398 unique individuals.
- 95.3% of recipients received more than 1 box of food.
- Across all boroughs, average household size was 3.8 people with the food box lasting 4 days.
- Of the 391 participants, 90% (n=353) consumed all of the box's contents.
- 99% of participants who received a box with dark leafy greens consumed them, denoting significant intake of micronutrients in these households. (see figure 1)
- Milk and cheese were shown to be the least preferred item in the box (n=9) due to spoilage.
- Of the box's contents, apples, oranges, and corn were the most preferred fruit and vegetable.
- Removing dairy products reduced food waste by 47,000 pounds

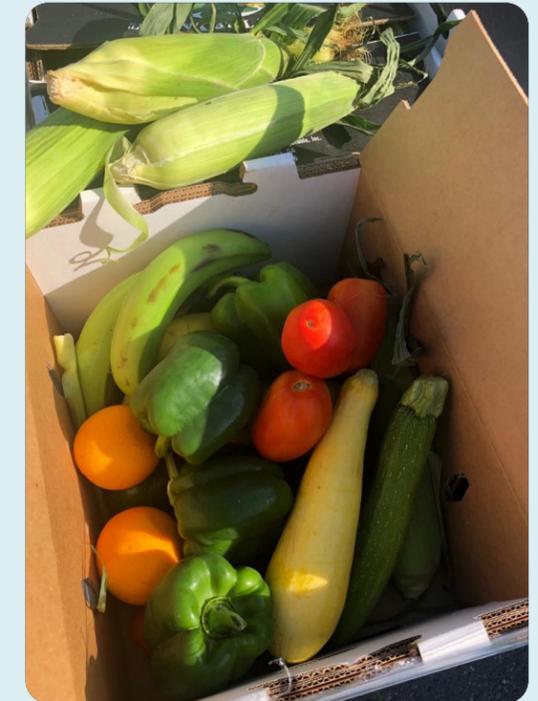
Conclusion

- The high percentage of WCK food boxes completely consumed suggests that these boxes are an effective intervention in improving nutrition for recipients. These findings have important implications for shaping nutritional guidance of future food boxes programs.
- Boxes containing dark greens have a high rate of consumption and should be strongly considered when procuring vegetables.

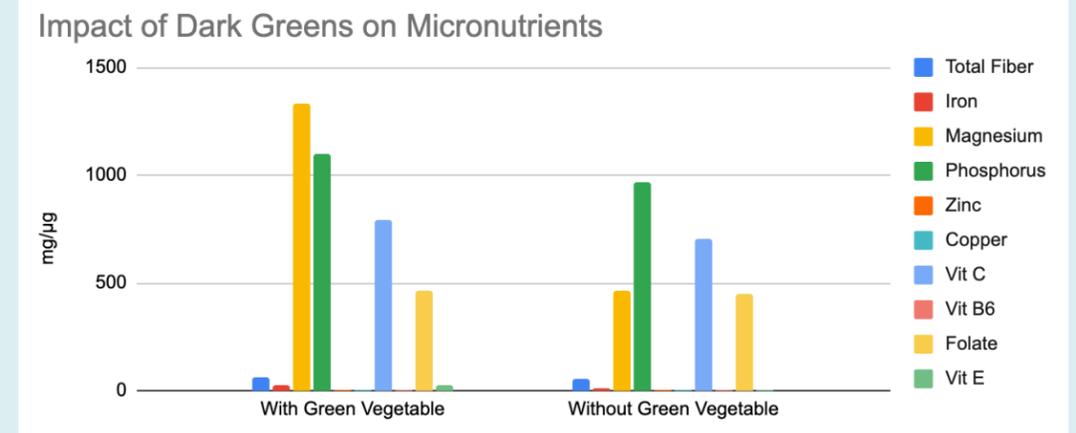
Box 1



Box 2



Impact of Dark Greens on Micronutrients



REFERENCES

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