

# Impact of University Dining Hall on Fruit and Vegetable Consumption among First-year Undergraduate Students

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Public Health

## INTRODUCTION

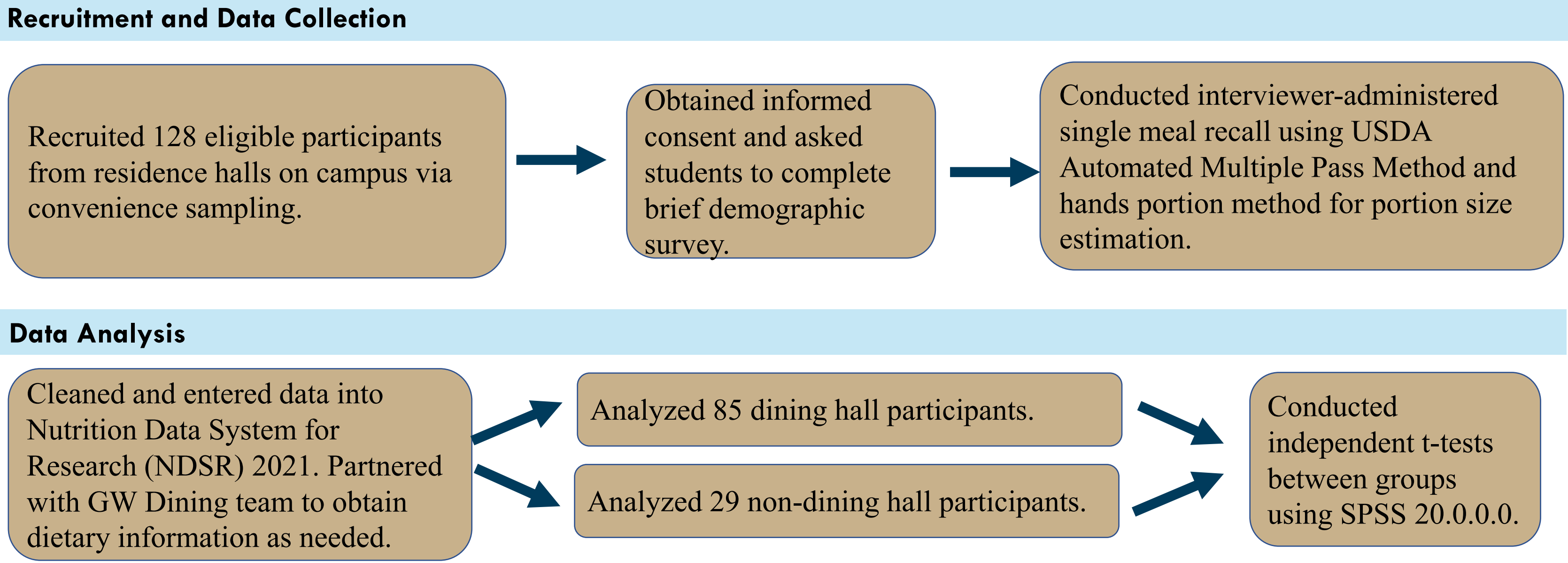
- Americans only meet about half of the dietary recommendations set forth by the Dietary Guidelines for Americans since the early 2000s. Total fruit and total vegetable (FV) intakes are especially low among young adults ages 18-24.<sup>1</sup>
- Young adulthood, a unique developmental phase characterized by increased autonomy, is an important time for establishing long-term dietary patterns.<sup>2</sup>
- Many young adults are also college students who face competing demands including academics, work, and extracurriculars.<sup>3</sup>
- Students may choose to purchase conveniently, calorically dense foods which can lead to poor eating behaviors and, consequently, diet-related chronic diseases.<sup>1</sup>
- The university dining environment can promote or deter healthy eating and buffet style dining halls are reported to have mixed effects for encouraging healthful diets.<sup>2,3,4</sup>



## OBJECTIVE/STUDY POPULATION

To investigate the impact of a new, “all-you-can-eat” university dining hall on fruit and vegetable consumption among first-year students at The George Washington University located in Washington D.C.

## METHODS



## RESULTS

**Mean servings of fruit and vegetables intake at dinner among students who ate dinner at Thurston Dining Hall compared to those who dined elsewhere**

|  | Dining Hall | Non-Dining Hall | p-value |
|--|-------------|-----------------|---------|
| Total fruit and vegetable <sup>a</sup>   | 2.7 (2.1)   | 1.7 (1.3)       | 0.005*  |
| Total fruit <sup>b</sup>   | 0.2 (0.7)   | 0.1 (0.6)       | 0.520   |
| Total fruit excluding fruit juice <sup>c</sup>   | 0.1 (0.6)   | 0.1 (0.5)       | 0.687   |
| Total vegetable <sup>d</sup>   | 2.4 (2.0)   | 1.6 (1.3)       | 0.008*  |
| Total vegetable excluding vegetable juice <sup>e</sup>   | 2.4 (2.0)   | 1.6 (1.3)       | 0.009*  |
| Total vegetable excluding vegetable juice, potatoes, and other starchy vegetables <sup>f</sup> | 2.0 (1.8)   | 1.2 (1.2)       | 0.007*  |

<sup>a</sup>Includes citrus juice, fruit juice excluding citrus juice, citrus fruit, fruit excluding citrus fruit, avocado and similar, fried fruits, dark green vegetables, deep yellow vegetables, tomato, white potatoes, fried potatoes, other starchy vegetables, other vegetables, fried vegetables, and vegetable juice  
<sup>b</sup>Includes citrus juice, fruit juice excluding citrus juice, citrus fruit, fruit excluding citrus fruit, avocado and similar, fried fruits  
<sup>c</sup>Includes citrus fruit, fruit excluding citrus fruit, fried fruits  
<sup>d</sup>Includes avocado and similar, dark green vegetables, deep yellow vegetables, tomato, white potatoes, fried potatoes, other starchy vegetables, other vegetables, fried vegetables, and vegetable juice  
<sup>e</sup>Includes avocado and similar, dark green vegetables, deep yellow vegetables, tomato, white potatoes, fried potatoes, other starchy vegetables, other vegetables, and fried vegetables  
<sup>f</sup>Includes avocado and similar, dark green vegetables, deep yellow vegetables, tomato, other vegetables, and fried vegetables.  
 \*Statistically significant at p<0.05.

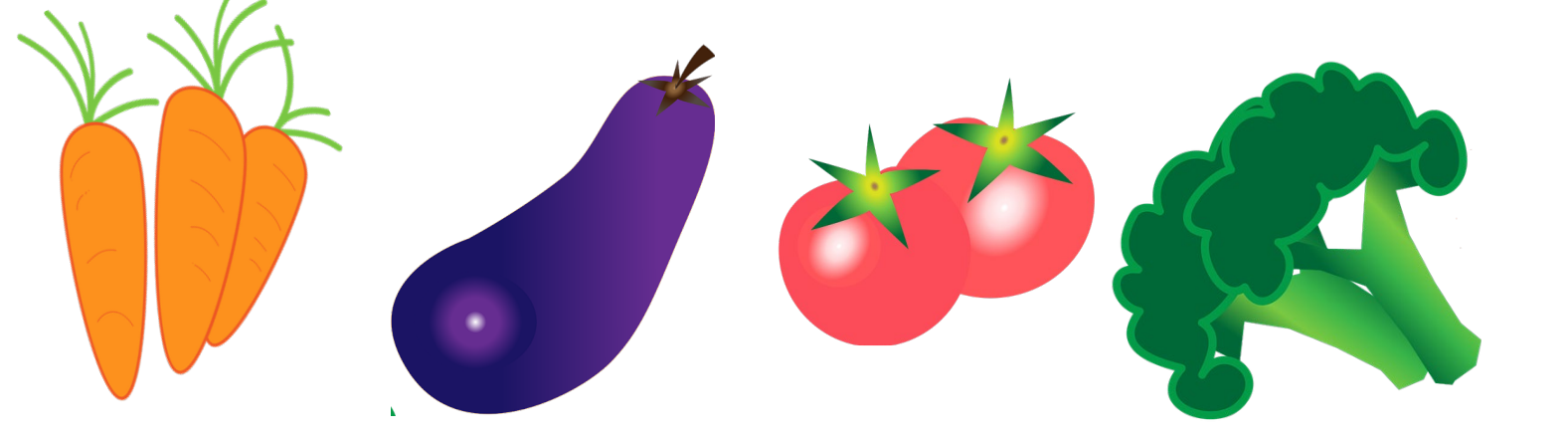
## DISCUSSION

Compared to students who ate elsewhere on campus, students who ate dinner at the dining hall had:

- Greater total FV consumption
- Greater total vegetable consumption
- Greater total vegetable consumption excluding vegetable juice, potatoes, and other starchy vegetables

Our findings indicate that an all-you-can eat style dining hall promotes fruit and vegetable consumption among college students.

However, further research is needed to understand impacts of the dining hall on energy intake and the quality of the overall diet, seeing as the present study relied on data collected during a single meal focused specifically on fruit and vegetable intake.



## REFERENCES

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