

The Impact of CalFresh on College Students' Diets

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Introduction

Objective: Does receiving money from CalFresh improve college students' fruit and vegetable intake, fast food intake, and sugar sweetened beverage intake?

- College students have very nutrient poor diets consisting of processed foods, fast-foods, sugar sweetened beverages, and a lack of fruits and vegetables¹⁻²
- Students face many barriers to healthy eating including a lack of money and time, being too busy to prioritize healthy eating, living in a largely social environment with a lack of parental influence, and high stress levels³
- Diet is an important indicator of health status where a low-quality diet can increase the risk for developing chronic diseases⁴
- CalFresh Foods (known federally as the Supplemental Nutrition Assistance Program or SNAP) is an available resource for students to provide them extra money to spend on groceries
- If CalFresh can demonstrate to improve students' eating patterns, this study can provide additional support to increase CalFresh outreach on college campuses

Data Collection Methods

- Cross-sectional study with 2111 student participants
- Self reported survey data was collected in March 2022 to April 2023 from 12 Colleges (5 Community Colleges, 6 CSU campuses, and 1 UC campus) by the Center for Healthy Communities (CHC)
- Target population: Low-income students in programs designed by schools to provide additional resources for low-income and/or first-generation students (specifically, students in an Educational Opportunity Program or Educational Opportunity Program and Services)
- Students in these programs are more likely to currently be using CalFresh Food benefits since they have low-income
- Surveys were distributed through email to EOP/EOPS students and offered a \$25 gift card as an incentive

Table 1: Participant Demographics

Characteristic	% or median	n (2111 total)
Female	80%	1,643
Hispanic	69%	1,436
Median Age	22 years	2111
CCC Students	33%	690
CSU Students	59%	1,238
UC Students	8%	182
CalFresh Users	32%	528
Non CalFresh Users but Likely Eligible	48%	791
Non CalFresh Users but Likely NOT Eligible	20%	340

Data Analysis

CalFresh Use:

- The independent variable under investigation was CalFresh Food Benefits use
- Students were asked if they are currently using CalFresh Food benefits
- CalFresh use was divided into 3 groups: CalFresh Users; Non CalFresh users but likely eligible; and Non CalFresh users but likely NOT eligible
- CalFresh eligibility was determined using income, household size, citizenship, and age (18 to 49-year-olds are eligible to apply as students)

Covariates:

- The following covariates were controlled for in all 3 models: gender, race/ethnicity, age, hours worked per week, food insecurity, food storage access, health consciousness, kitchen access, confidence in cooking, and living with parents/family

Fruit and Vegetable Intake Model:

- Students were asked about their daily fruit and vegetable intake with the following response choices: "Zero servings," "1-2 Servings," "3-4 servings" and "5 or more servings"
- Only 31 students selected "5 or more servings" so that level was combined with the "3-4 servings" group to form a "3 or more servings" group
- An ordinal logistic regression model was used with the main independent variable as CalFresh use and the dependent variable as daily fruit and vegetable intake

Fast-Food Intake Model:

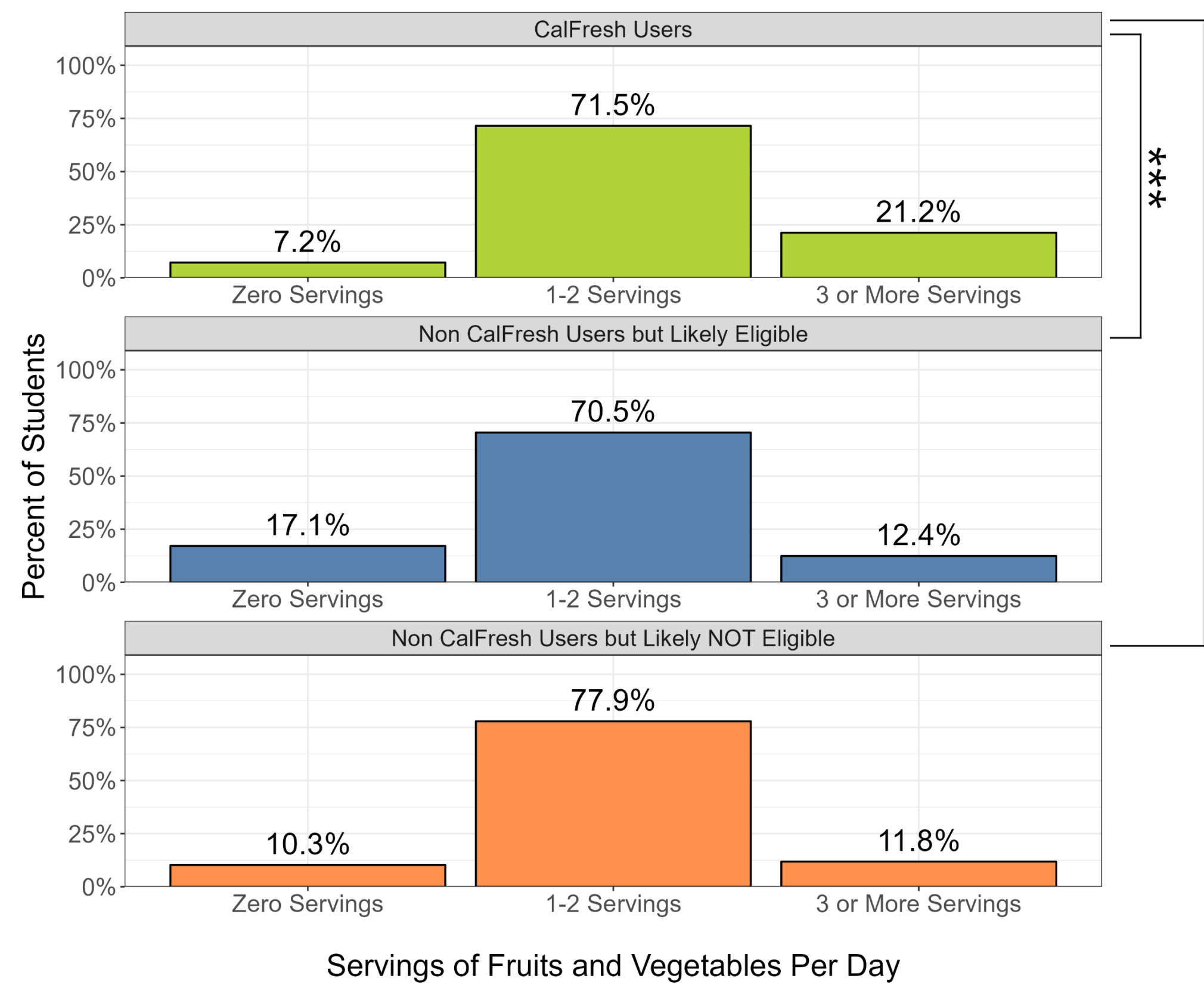
- Students were asked about their weekly fast-food intake in ranges such as "1-2 meals," and "3-4 meals"
- The variable was transformed into a numeric variable where the bottom end of the range was used. For example, the "1-2 meals" group was treated as 1 meal
- A log transformation linear regression model was used with the main independent variable as CalFresh use and the dependent variable as fast-food intake

Sugar Sweetened Beverage Intake Model:

- Students were asked about their daily sugar sweetened beverage intake in ranges such as "1-8 ounces," "9-16 ounces," and "64 or more ounces"
- The variable was transformed into a numeric variable where the bottom end of the range was used. For example, the "9-16 ounces" group was treated as 9 ounces
- A log transformation linear regression model was used with the independent variable as CalFresh use and the dependent variable as sugar sweetened beverage intake

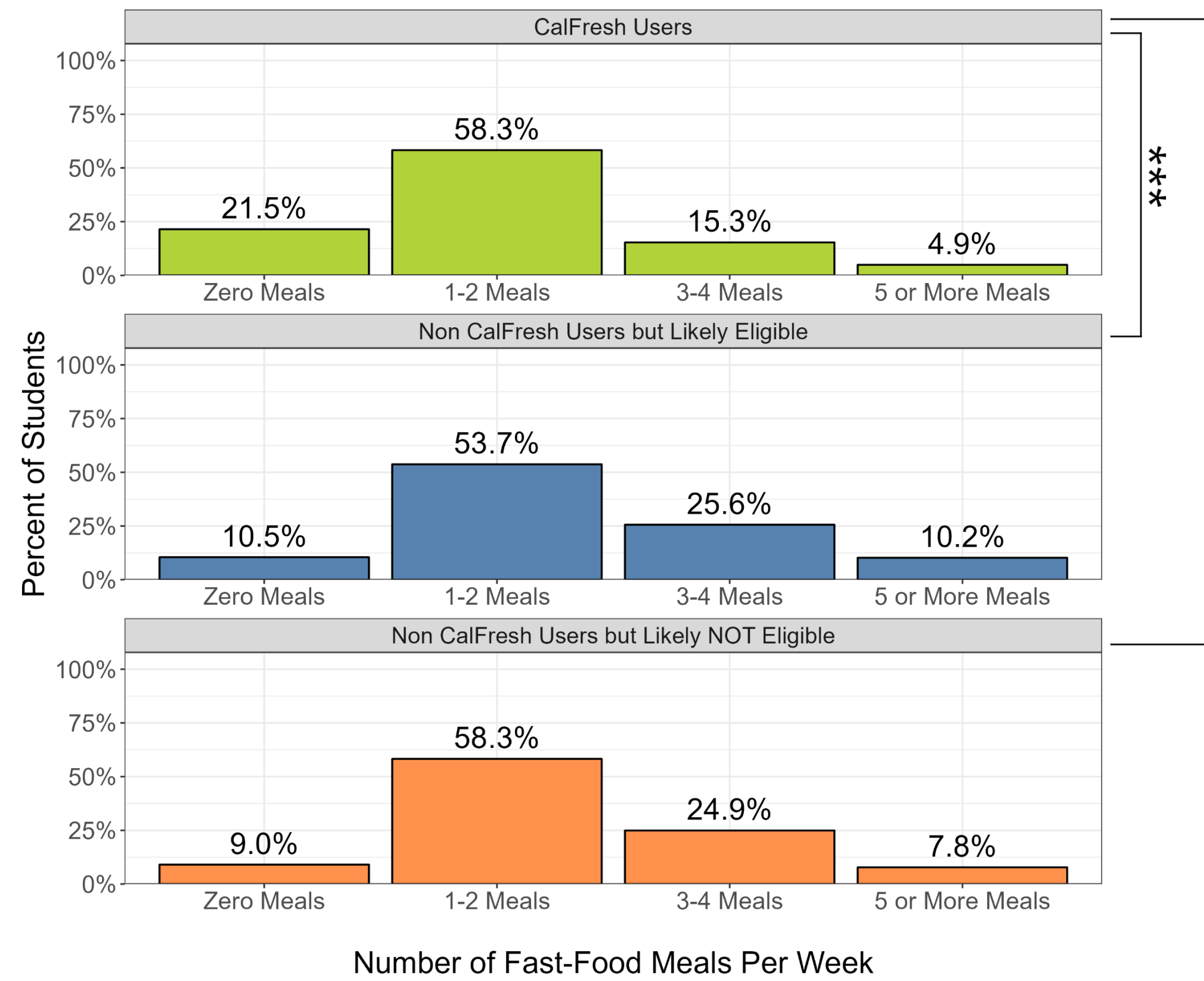
Results

Figure 1: Daily Fruit and Vegetable Intake



- The odds of eating more fruits and vegetables in the non CalFresh users but likely eligible group was 0.48 times lower compared to those who are currently using CalFresh, after controlling for covariates (95% CI: 0.35 – 0.66, $p < 0.001$)
- The odds of eating more fruits and vegetables in the Non CalFresh users but likely NOT eligible group was 0.60 times lower compared to those who are currently using CalFresh, after controlling for covariates (95% CI: 0.41 – 0.88, $p = 0.009$)

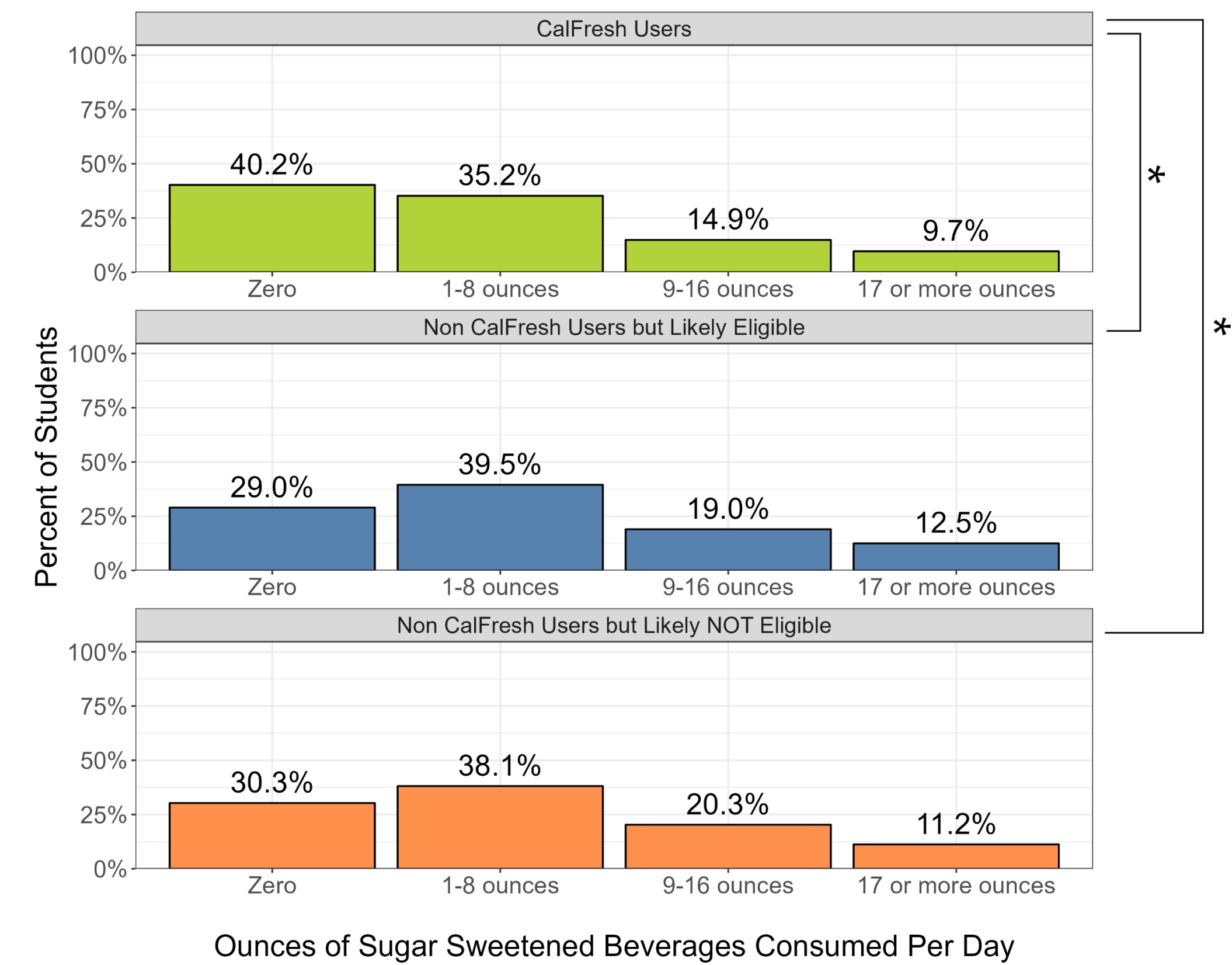
Figure 2: Fast-Food Intake



- Non CalFresh users but likely eligible students ate 46% more fast-food meals compared to students currently using CalFresh, after controlling for covariates (95% CI: 17% – 58%, $p < 0.001$)
- Non CalFresh users but likely NOT eligible students ate 45% more fast-food meals compared to students currently using CalFresh, after controlling for covariates (95% CI: 20% – 74%, $p < 0.001$)

Results (continued)

Figure 3: Daily Sugar Sweetened Beverage Intake



- Non CalFresh users but likely eligible students drank 42% more sugar sweetened beverages compared to students currently using CalFresh, after controlling for covariates (95% CI: 6% – 91%, $p = 0.018$)
- Non CalFresh users but likely NOT eligible students drank 59% more sugar sweetened beverages compared to students currently using CalFresh, after controlling for covariates (95% CI: 11% – 128%, $p = 0.012$)

Discussion

- After controlling for covariates, college students currently using CalFresh ate significantly more fruits and vegetables, ate significantly less fast-food, and drank significantly less sugar sweetened beverages compared to both Non CalFresh groups
- However, regardless of CalFresh use, college students are still frequently consuming fast-food and sugar sweetened beverages and are still eating far below the recommended intake of 5 or more servings of fruits and vegetables per day
- The findings of this study suggest that CalFresh use may help improve college students' diets if they are eligible where one study suggests that only 18% of eligible students are participating in CalFresh Food⁵
- Other nutrition interventions should also be considered to help support those who are not eligible for CalFresh

References

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