



Feed me!!

Food insecurity and the knowledge and use of UCSD's food security safety net among public health students, February 2024

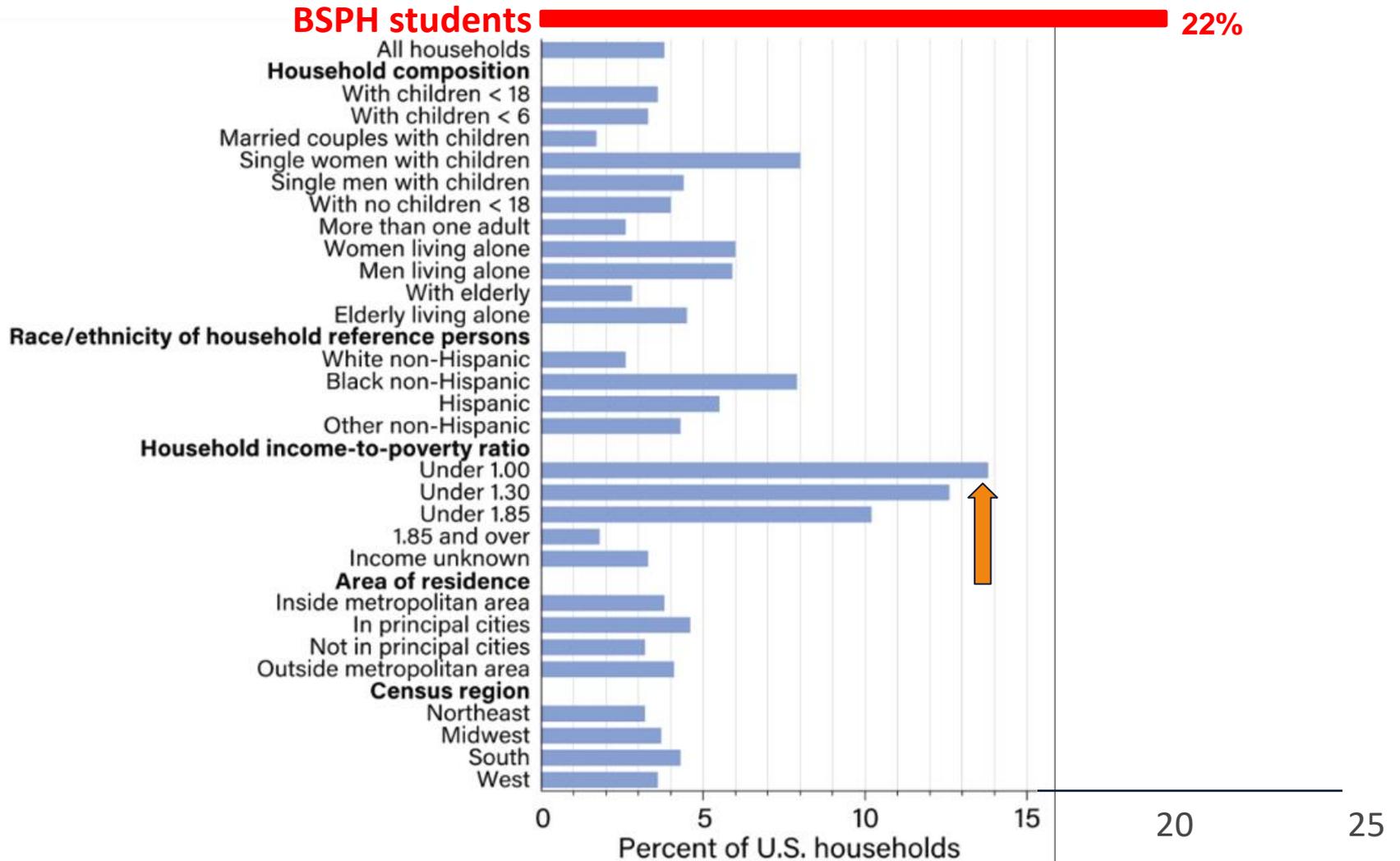
FMPH 196AH BSPH honors Practicum students
March 12, 2024

Why this topic?

- Last year's BSPH honors practicum survey of senior capstone students included food security module
- Found overall food insecurity level based on USDA 6-item questionnaire was 38%, with 22% in the most extreme category of very low food security
- Similar to UC- and UCSD-wide biennial UCUES survey results BUT more than 5 TIMES higher than for California as a whole
- Found strong association with student financial status and that food-insecure students had poorer academic performance

Why this topic?

Prevalence of very low food security, by selected household characteristics, 2021



Why this topic?

Project for this year's cohort

- Assess current levels of food insecurity and delve further into economic risk factors for very low food security
- Deep-dive into students' knowledge and use of the food security safety net at UCSD
- Examine obstacles, including beliefs about programs, to greater use of the safety-net programs

Four team projects focusing on different safety net components

- CalFresh (Fauci Fan Club)
- The Triton Food Pantry (Egg-cellent Evaluators)
- The Food Recovery Network (S.T.A.R)
- Other safety-net resources (iTable, YesFood, emergency grocery gift cards, emergency Triton cash) + interest in Dining Dollar donations (Fantastic Five)

Survey objectives: learning exercise for students + produce useful data for the Basic Needs Center

- Learn to work effectively in teams
- Provide an A-Z experience in conducting an evaluation
 - Construct logic models
 - Work with stakeholders to develop evaluation questions
 - Design a survey instrument to answer these questions
 - Collect and analyze quantitative and qualitative data
 - Synthesize and present findings to key stakeholders and scientific audience

The study population

- Senior public health capstone students (N=235)
- Students in FMPH 40 (N=88) and FMPH 50 (N=188) to capture students in their first years at UCSD and limited number of non-majors

A bit on the methods

- Questionnaire created in Qualtrics (7-10 minutes)
- Close-ended questions on each safety-net program
- Free-listing on CalFresh, Food Pantry, Food Recovery Network
- Distributed via direct emails + announcements in FMPH 40, 50, and all BSPH capstone sections
- Repeated reminders over 10 days
- Extra credit given by profs for individual and/or overall participation above a certain threshold (usually 90%)
- 76% response rate!
- Analyses in EpiInfo according to teams' analysis plans

A few additional methodologic notes

- Primarily descriptive with some bivariate analyses (no multivariate yet!)
- Denominators vary (no forced responses, skip patterns)
- Focus on VERY LOW food security, which requires 5-6 positive responses to USDA 6-item questionnaire

A profound thank you in advance to.....

- Our stakeholders: Alicia Magallanes and Sarah Feteih of the Basic Needs Center
- My fellow BSPH professors: Cheryl Anderson, Divya Reddy, Britta Larson, Becky Marquez, France Nguyen-Grozavu, Sally Romero, Matt Stone, Ann White, Chris Zoumas
- Rebecca Fielding-Miller for teaching my students a great new qualitative technique
- The 370 students who participated in the survey
- Dina Rodgers and Richard Garfein for great their behind-the-scenes support and advice
- My amazing BSPH honors practicum students who have worked day and night to put together their presentations for today.

Today's presentations

- Characteristics of the study population (S.T.A.R.)
- Food insecurity prevalence and risk factors (Egg-cellent Evaluators)
- CalFresh (Fauci Fan Club)
- The Triton Food Pantry (Egg-cellent Evaluators)
- Food Recovery Network (S.T.A.R.)
- Emergency safety net programs and Dining Dollars (Fantastic Five)
- Q and A

Characteristics of Survey Respondents

Team A (Egg-cellent Evaluators): Kat Ehlen, Natalie Kaplanyan, Jenny Kezios, Purba Khan, and Daisy West

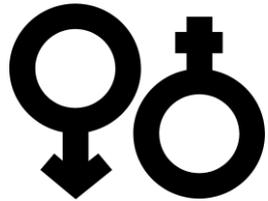
Demographic Characteristics

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Survey respondent characteristics

Total response rate: 76%, 370/486



Female
80%



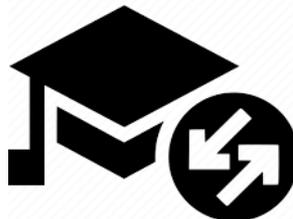
First
generation
55%



GPA >3.5
53%



On-campus
residents
48%



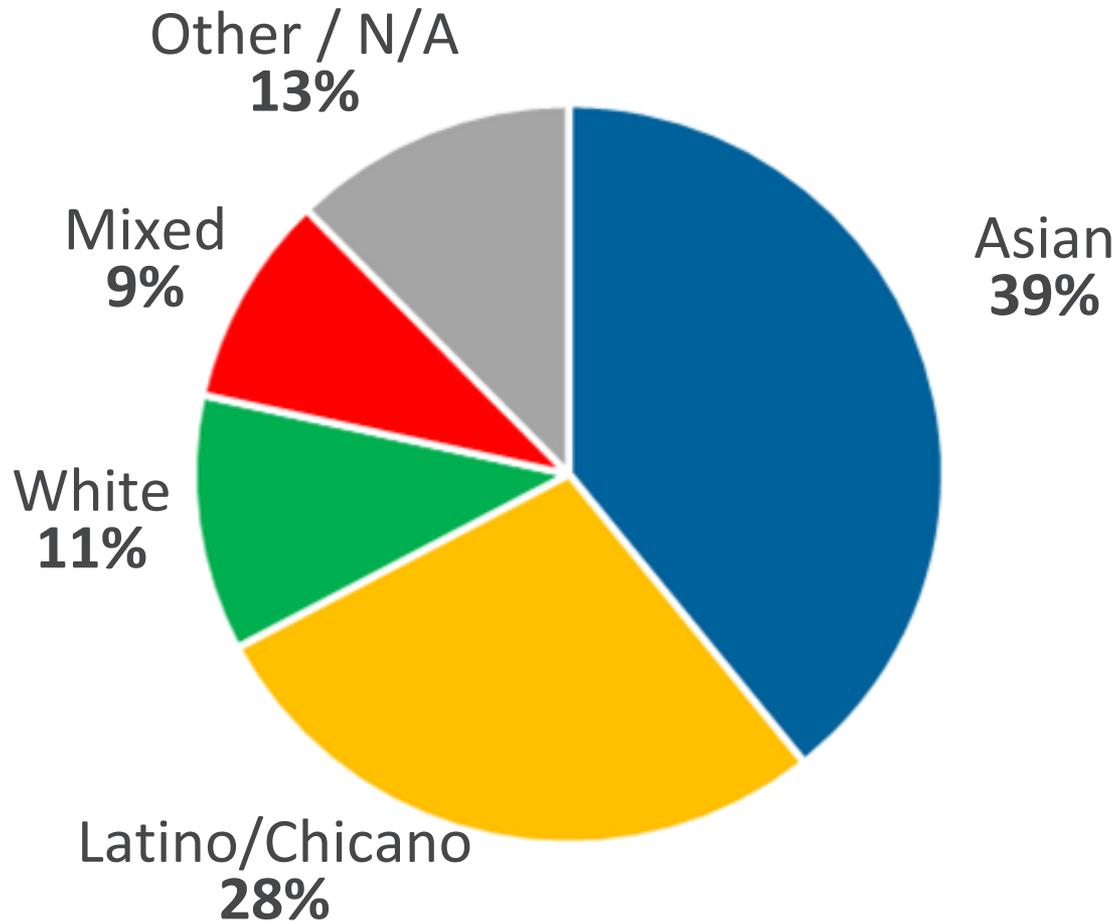
Transfer
27%



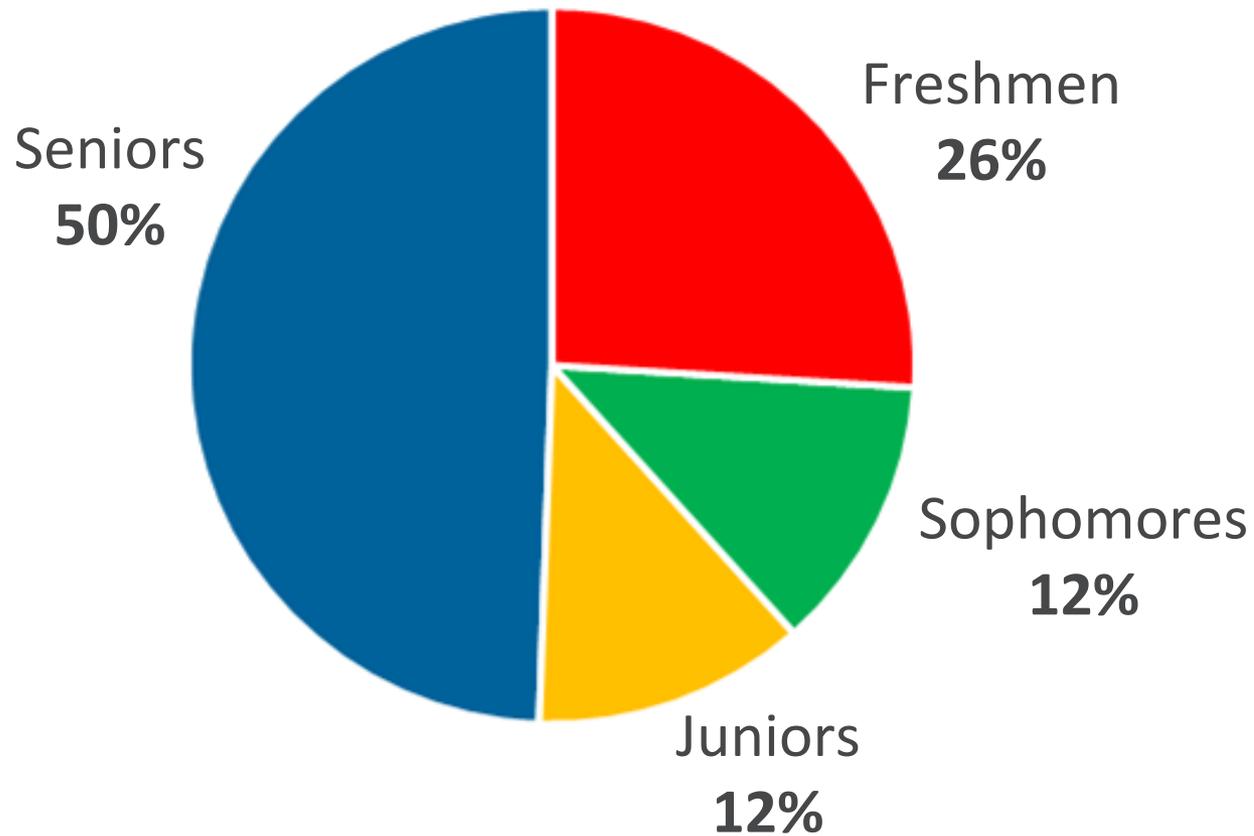
International
3%

Note: 85% of survey respondents are BSPH majors

Race/Ethnicity of survey respondents



Grade level of survey respondents



Financial characteristics of survey respondents



Financial Aid
75%



Paid Job
46%



Working 20+
hours/week
10%



Financial
Worries
56%

Conclusions

- 76% response rate
- Survey population generally representative of BSPH major, but not representative of the UCSD population
- Higher representation of females and first generation students among survey respondents than UCSD population
- Lower representation of international students

STAR presents

Food Security

Shria Bulusu, Tomi Oginni, Amy Trinh, Rachel Kitay

Prevalence of food insecurity

USDA Food Security Questionnaire (1)

During the current 2023-24 academic year:

I was worried whether my food would run out before I got more.

- Often True
- Sometimes True
- Rarely True
- Never True

+ 1

44%

The food I bought just didn't last and I didn't have money to get more.

- Often True
- Sometimes True
- Rarely True
- Never True

+ 1

33%

Did you ever eat less than you felt you should because there wasn't enough money for food?

- Yes
- No

+ 1

42%

USDA Food Security Questionnaire (2)

During the current 2023-24 academic year:

Were you ever hungry but didn't eat because there wasn't enough money for food?

- Yes + 1
- No

28%

Did you ever cut the size of your meals or skip meals because there wasn't enough money for food?

- Yes + 1
- No

35%

You indicated that you had cut the size of your meals or skipped meals because there wasn't enough money for food. How often does this happen?

- Almost every month + 1
- Some months, but not every month
- Only 1 or 2 months

73% (97/124)

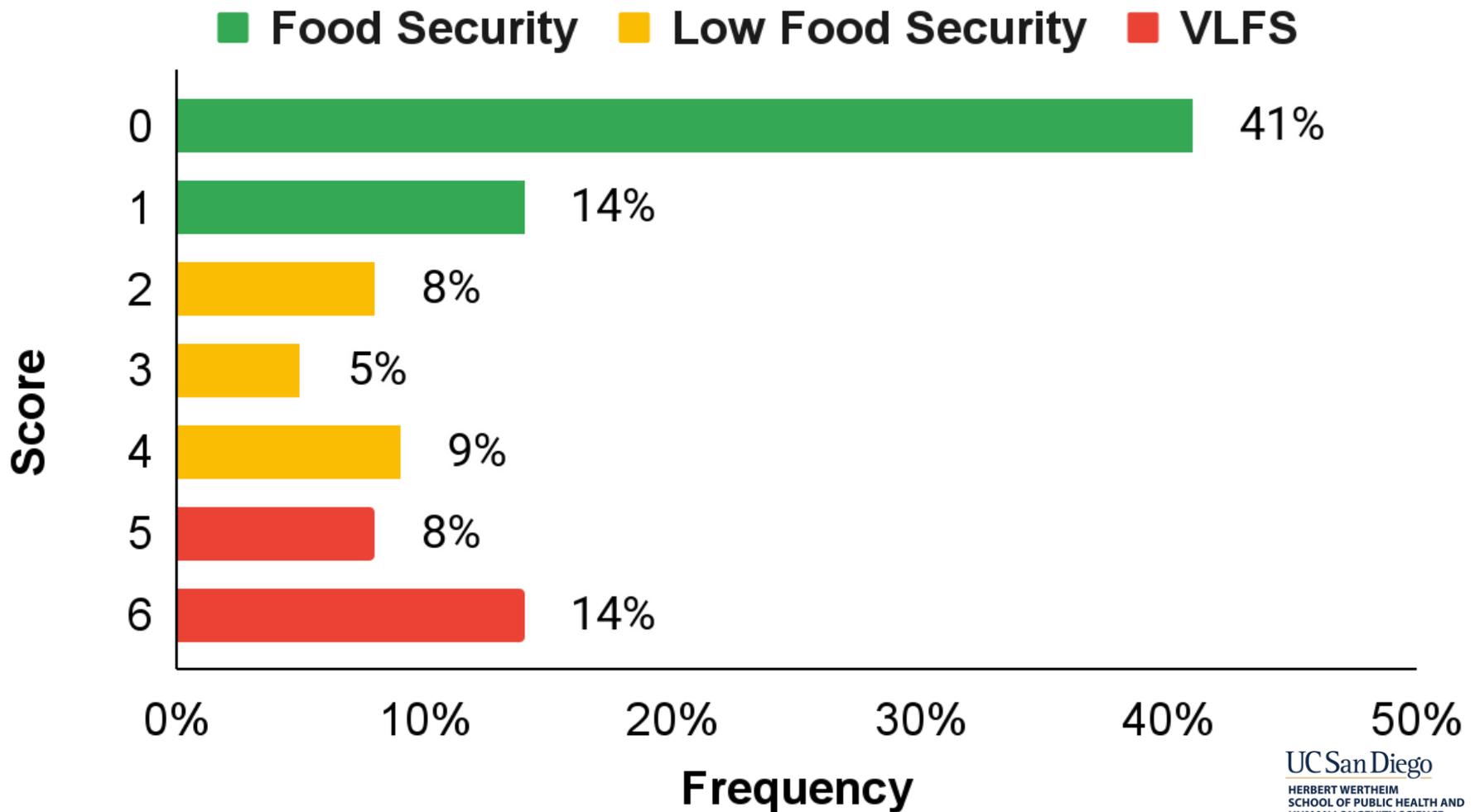
USDA food security definitions

Food Security: Scores of **0-1** indicate high or marginal food security

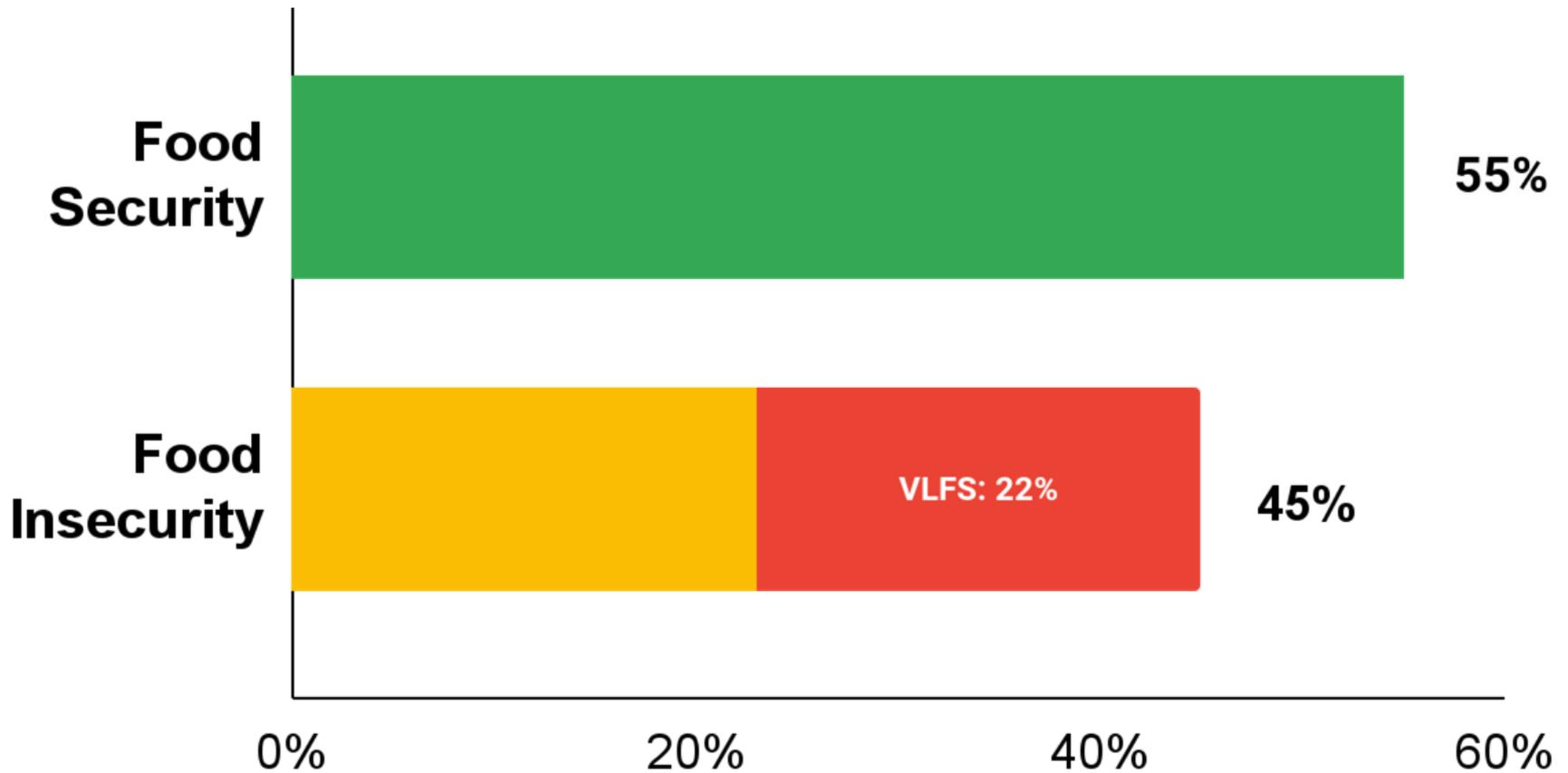
Food Insecurity: Scores of **2-6**

- **Low Food Security:** Scores of **2-4** indicate reduced quality, variety, or desirability of the diet
- **Very Low Food Security (VLFS):** Scores of **5-6** indicate disrupted eating patterns and reduced food intake

USDA questionnaire score distributions (n=348)

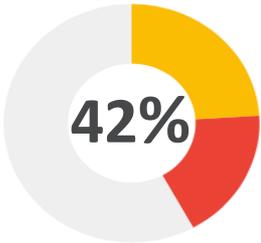


Food security status (n=348)

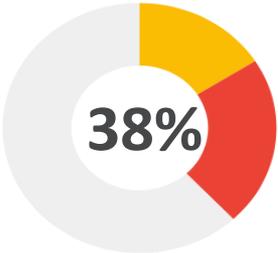


Context

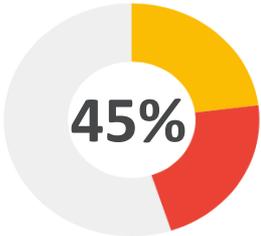
Food Insecurity at UCSD



2022 (UCUES Survey)

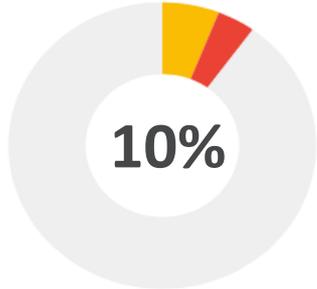


2023 (BSPH Survey)



2024 (BSPH Survey)

Food Insecurity in California

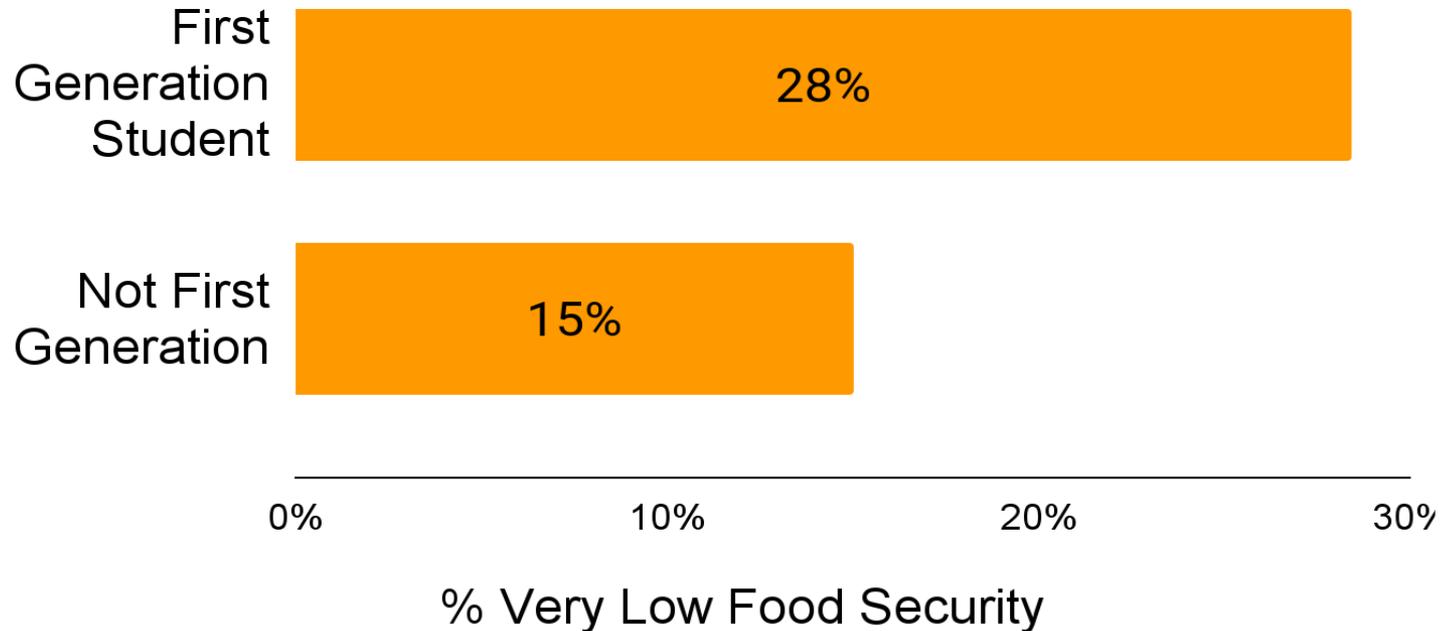


2019-2021

Rates of food insecurity at UCSD are **4.5 times** higher than in the general California population

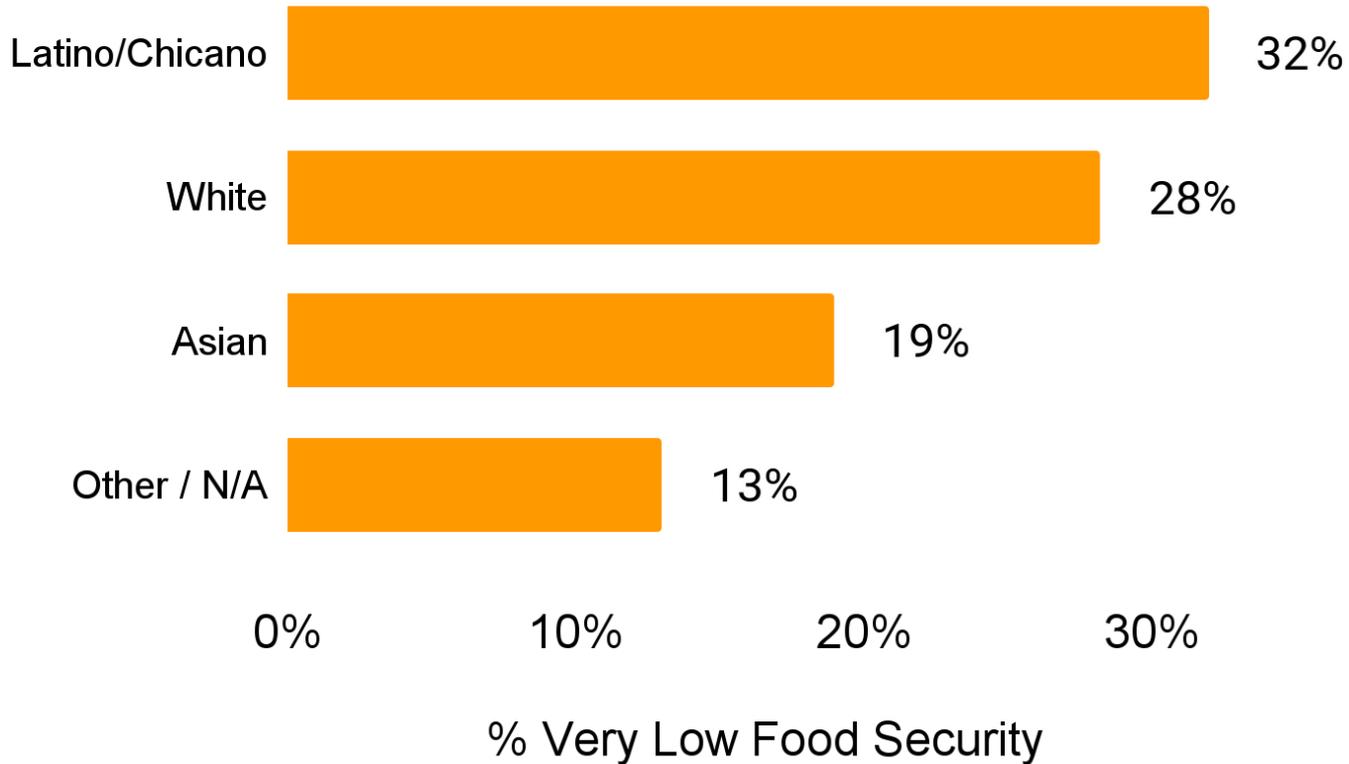
Demographic risk factors for very low food security

First generation students (n=348)



First-generation students were **1.9** times more likely to experience very low food security
 $p = 0.002$

Race/ethnicity (n=348)



$p=0.04$

Rates of very low food security did not differ significantly by:

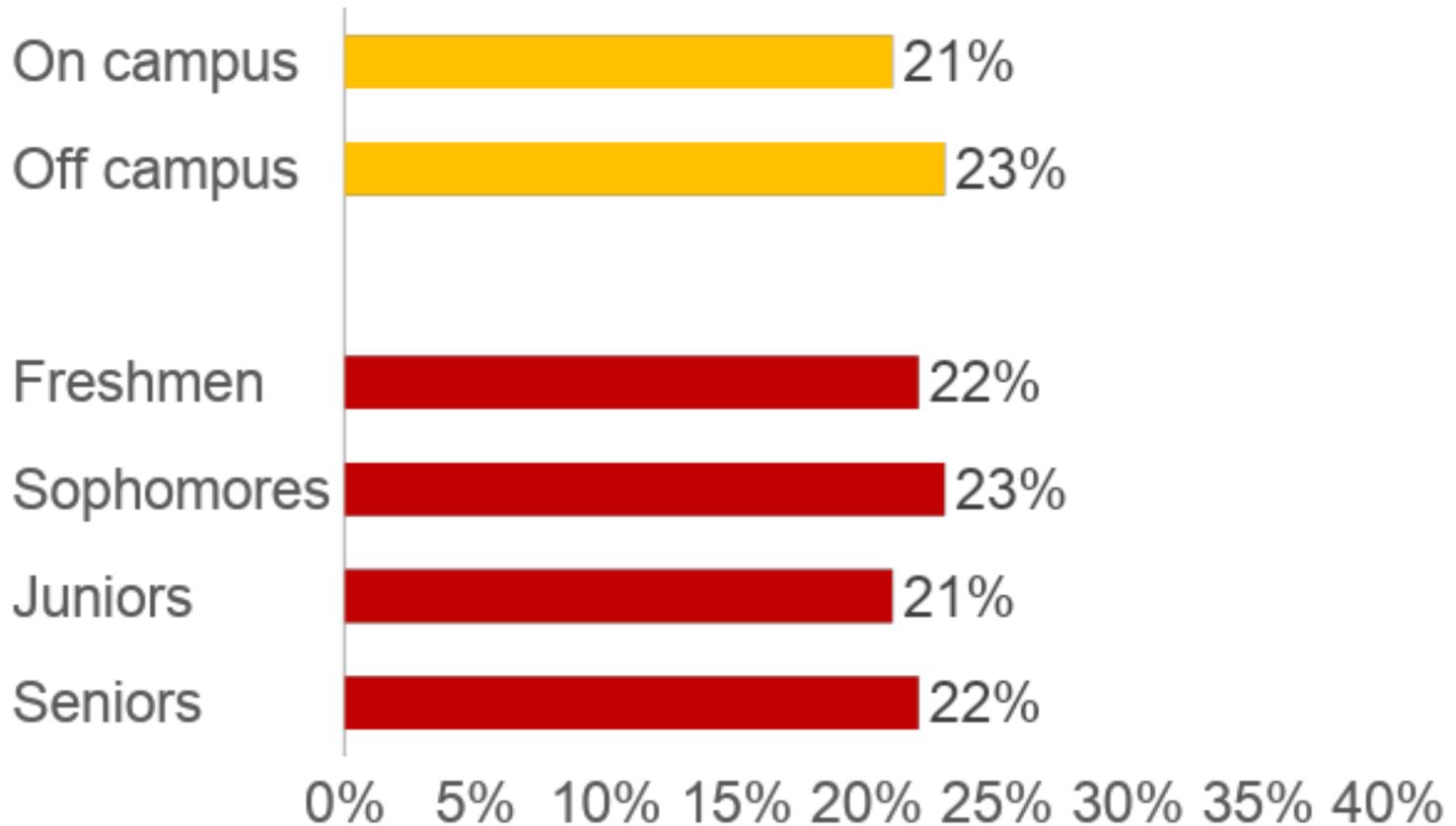
Gender

Transfer status

Residency on or off campus

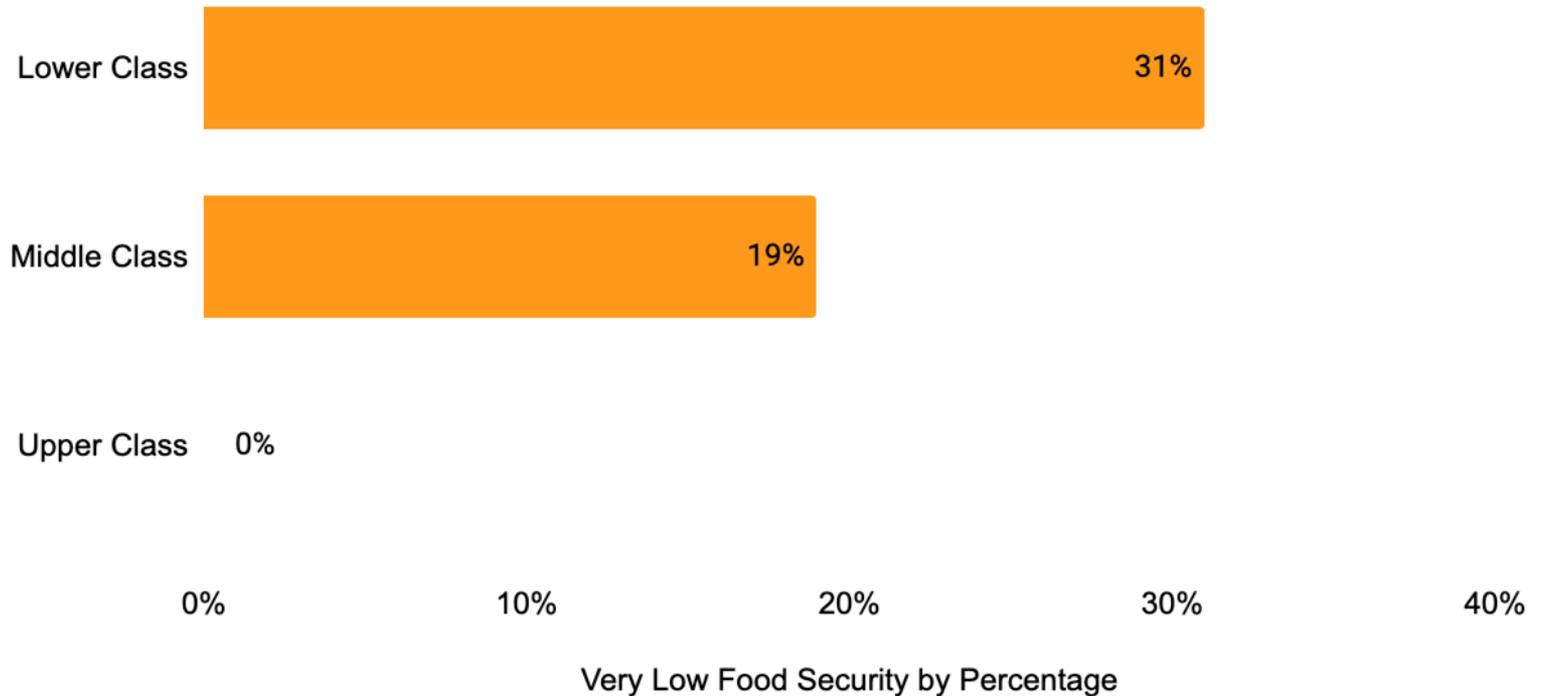
Graduation year

No difference by residence at UCSD or graduation year:



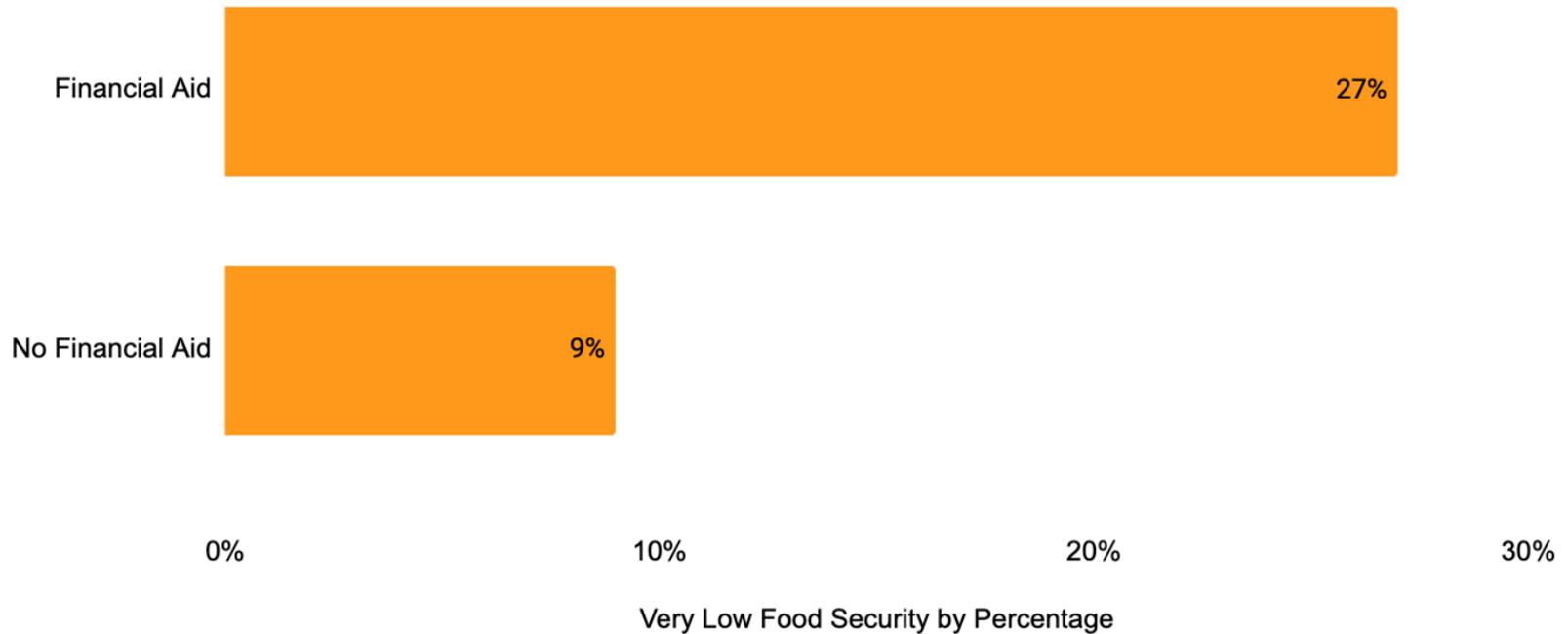
Financial risk factors for very low food security

Family income (n=348)



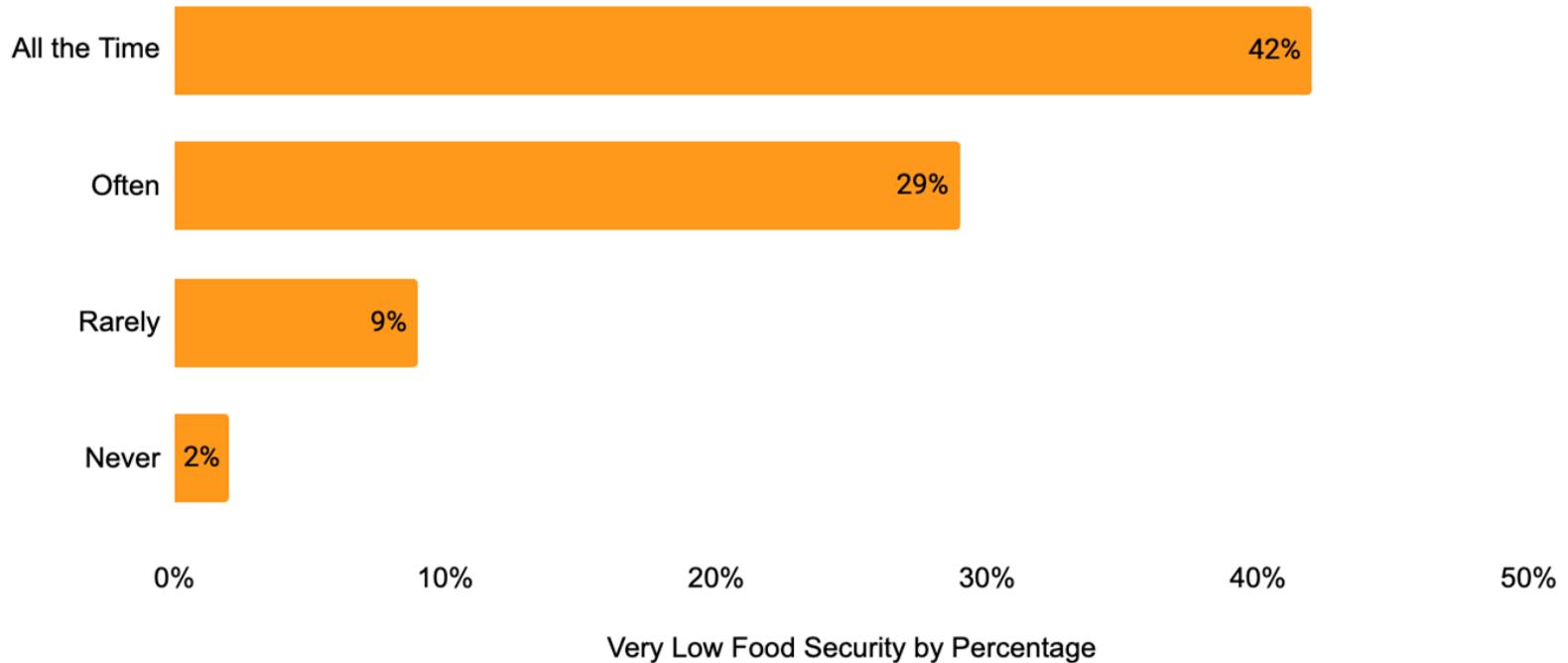
Students from families with lower income were at greater risk of having VLFS
 $p = 0.0005$

Financial aid status (n=346)



Students on financial aid were 3 times more likely to experience VLFS
 $p = 0.00006$

Concern Over Debt and Financial Circumstances (n=348)

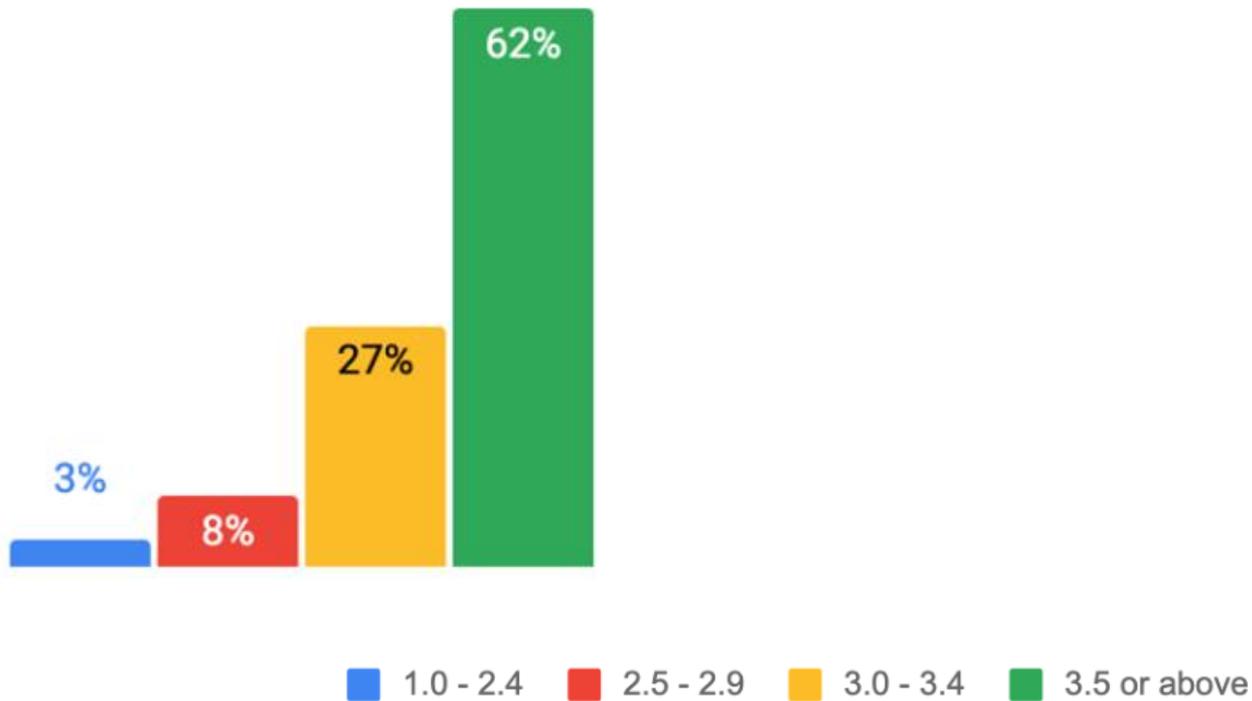


There was a strong association between the frequency of worry about debt and financial circumstances and VLFS
 $p < 0.00001$

The impact of very low food security

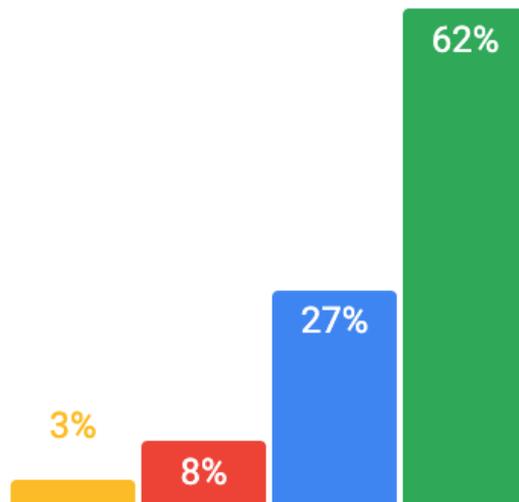
GPA and food security (n=344)

Food Secure/ Low Food Security

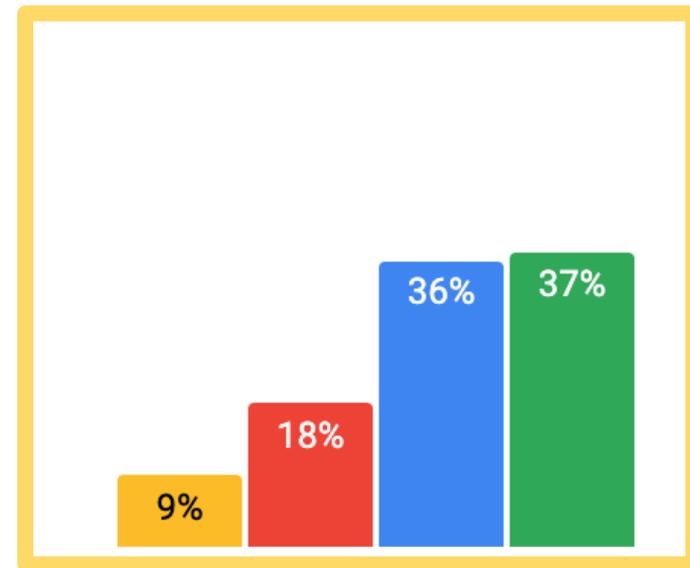


GPA and food security (n=344)

Food Secure/ Low Food Security



Very Low Food Security



■ 1.0 - 2.4 ■ 2.5 - 2.9 ■ 3.0 - 3.4 ■ 3.5 or above

**Students with VLFS less likely to attain a GPA of 3.5+,
p= 0.0002**

Recommendations

- Ongoing monitoring of VLFS rates
- Adequate financial aid to meet the cost of attending UCSD
- An increased focus on Basic Needs Hub services as a safety net for students

Thank you!

CalFresh

Fauci Fan Club:

Sarah Bonilla, Kristina Flores, Aliya Ghalili, Cali He, Kaleb Tesfai



What is CalFresh?



- California's version of the Federal Supplemental Nutritional Assistance Program (SNAP)
- Provides low-income individuals/families with an electronic benefits transfer (EBT) card to purchase groceries
- Eligible UCSD students can receive up to \$291/month
- UCSD student eligibility criteria:
 - US citizen AND San Diego resident AND have an individual monthly income below \$2430/month AND meets at least one additional criteria:
 - Awarded federal work-study
 - Works more than 20 hours/week
 - Belongs to an LPIE major (Local Programs that Increase Employability)
 - +Others



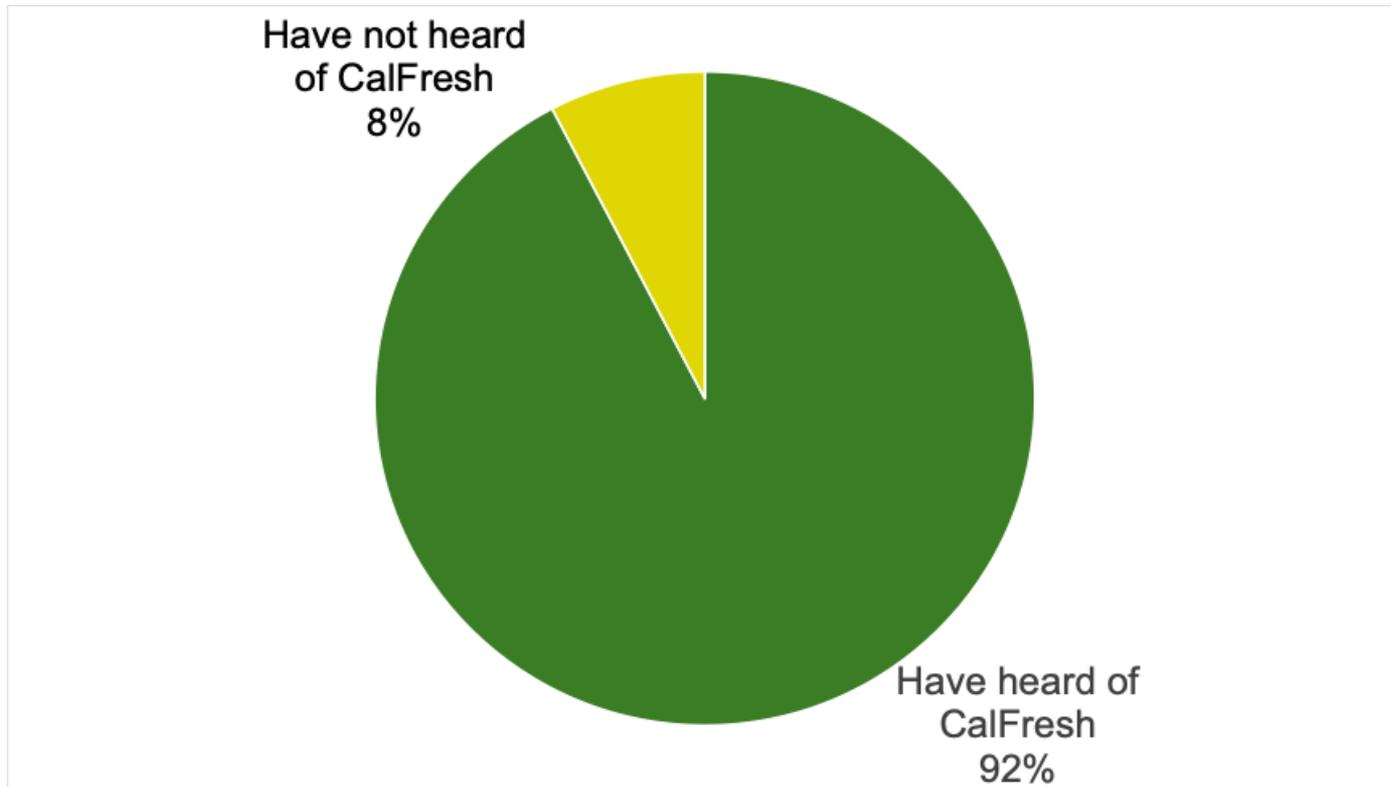
What is CalFresh?



- In-person or online application
- Requires submission of:
 - Proof of ID (driver's license, state ID)
 - Proof of income (work stubs, tax forms)
 - Financial aid award letter
 - College class schedule
- Application assistance available from:
 - UCSD Hub Basic Needs staff
 - County staff
- Renewal required every 6 months

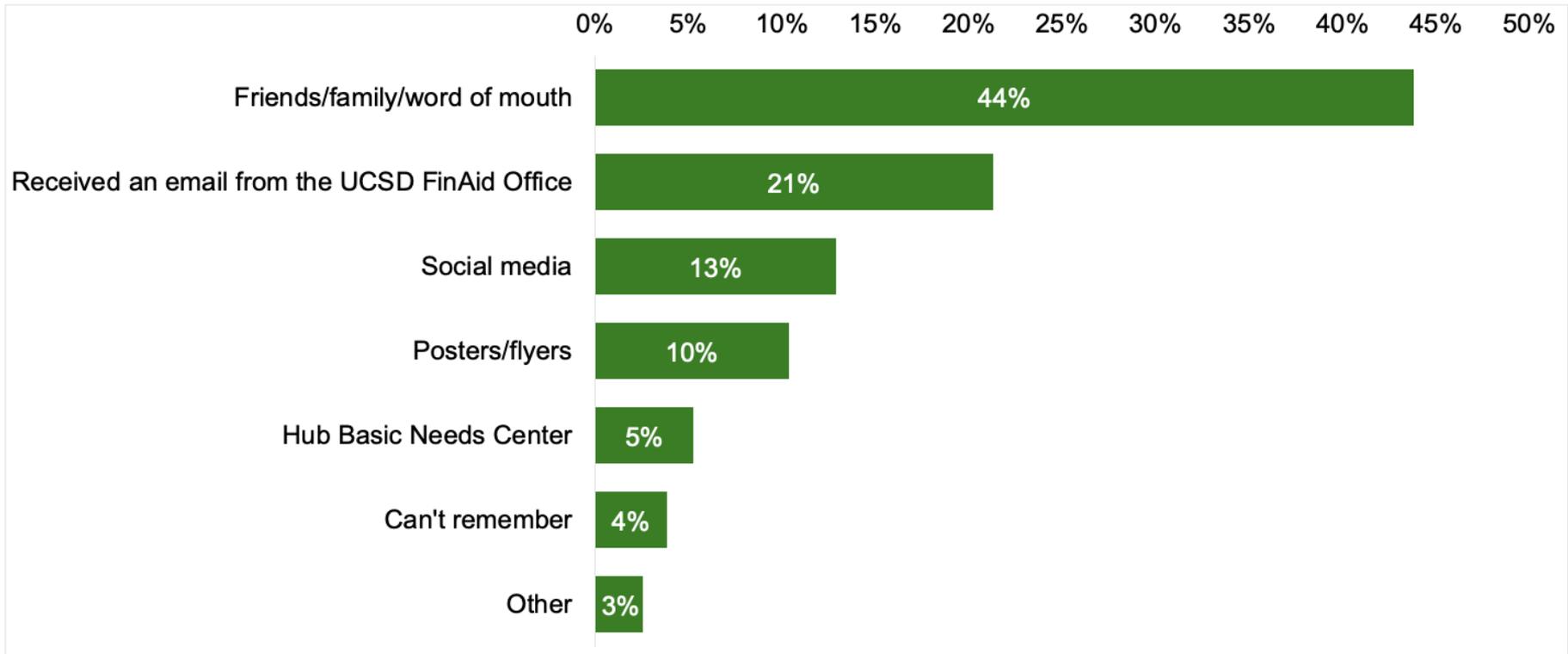
Objective 1: What percentage of students know about CalFresh, and where did they learn about it?

How many students have heard of CalFresh? (N=366)



92% of students had heard of CalFresh.

How did students hear about CalFresh?



Almost half (44%) of students heard of CalFresh through family/friends/word of mouth.

Objective 2:

What percent of survey respondents have applied for CalFresh?

What help did they receive in applying?

What percent of applicants were successfully enrolled?

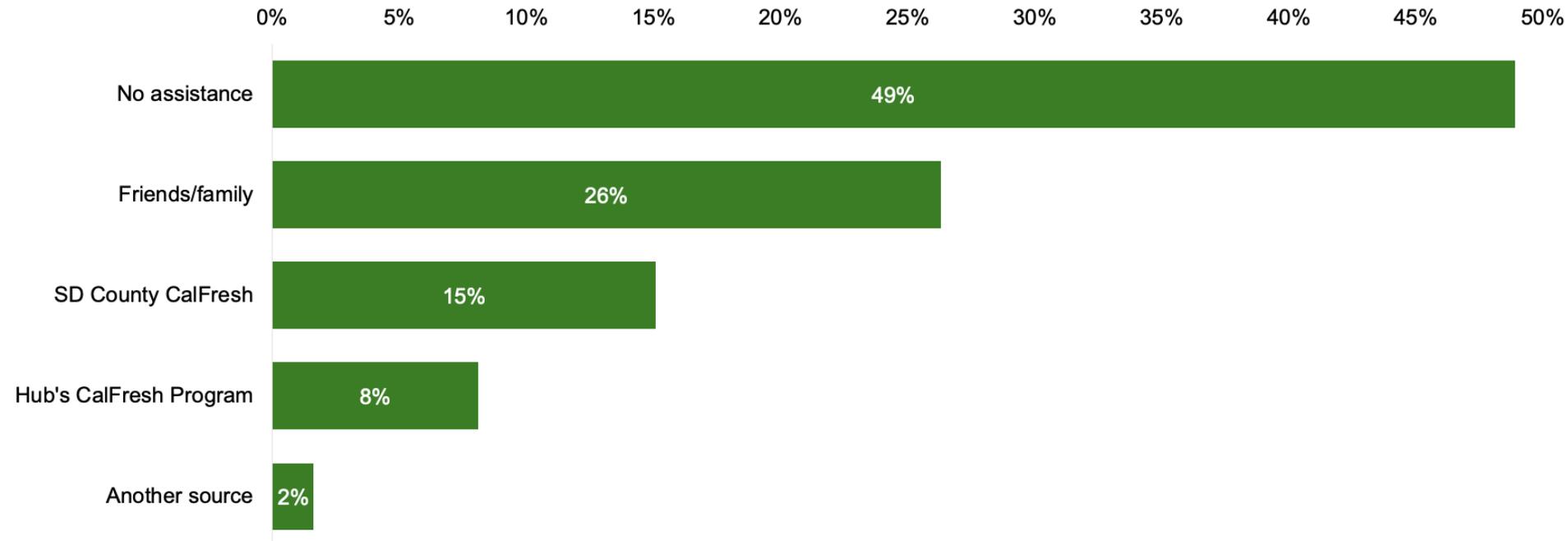
Did the assistance make a difference in successfully enrolling?

How many students have applied for CalFresh? (N=366)



46% of students have applied.

CalFresh Application Assistance Support



Almost half of CalFresh applicants did not receive help with their application, and a quarter of them received support from friends or family.

How many students are currently receiving CalFresh benefits? (N=366)



Acceptance rate among applicants = 47%

21% of all students are currently enrolled in CalFresh.

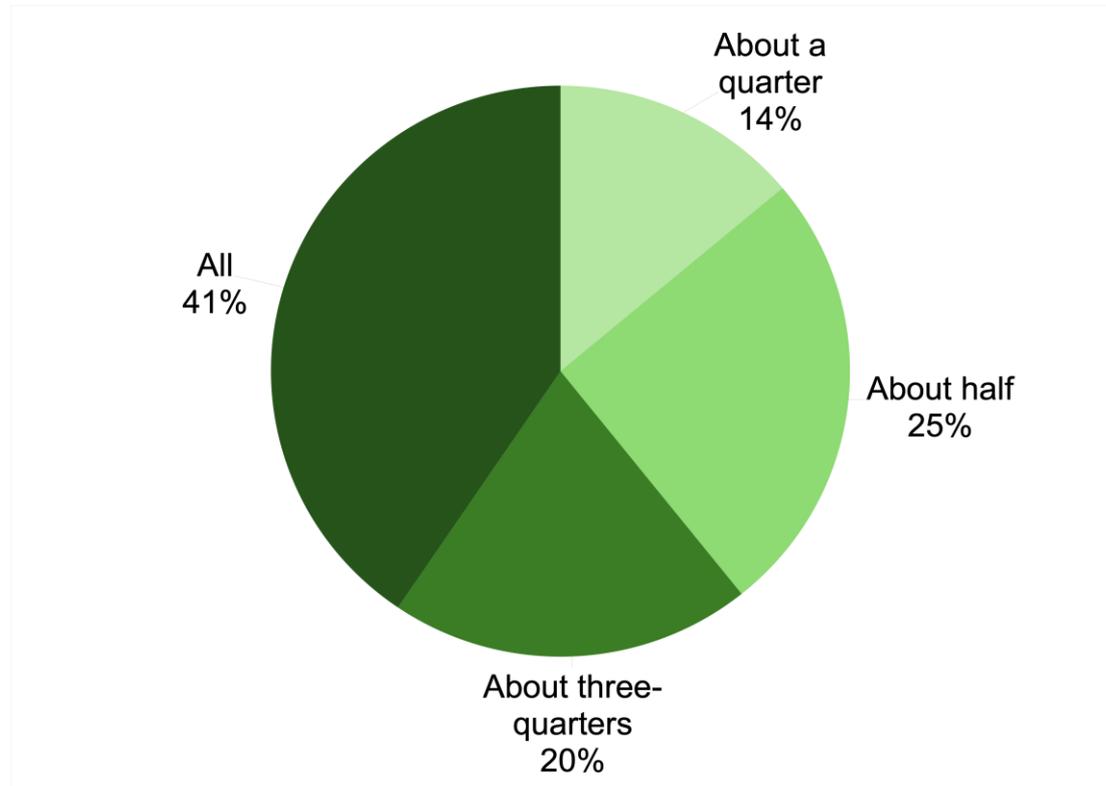
What is the impact of application assistance among students who applied for CalFresh? (N=130)*

Students who received assistance when applying for CalFresh are 1.5 times more likely to be currently receiving CalFresh benefits compared to students who did not receive assistance (74% vs. 49%, $p < 0.002$).

*Students who were previously on CalFresh excluded from analysis

Objective 4: To what extent has CalFresh helped support students who are enrolled?

To what extent does the amount of money a student gets from CalFresh cover their monthly grocery needs?



41% reported that CalFresh covered ALL of their grocery needs.

Objective 6: What percent of students may be eligible for CalFresh, and what are the obstacles to their enrollment?

How many students are eligible?

- Number of students who are CalFresh eligible difficult to assess
- To estimate, used available demographic data from survey
- Baseline:
 - In-state residence (proxy for citizenship/residency) + Pell Grant recipient (proxy for low income) AND Work-study student OR working >20 hours/week
- LPIE:
 - As above, + majoring in Public Health or other LPIE major

Estimates of potential eligibility

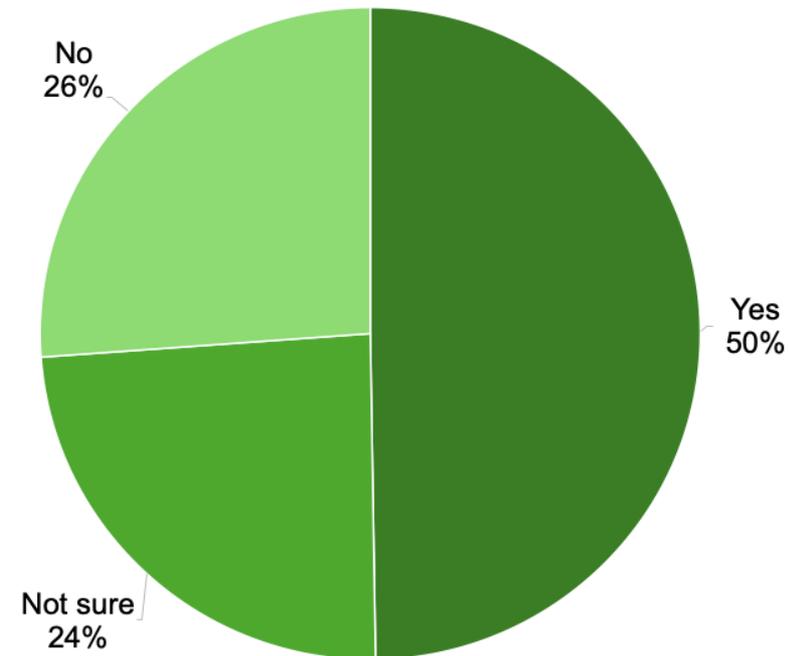
An estimated 21% of all public health students are potentially eligible for CalFresh based on state criteria.

**The public health major
LPIE designation nearly doubles
the percentage of eligible students
to 40%.**

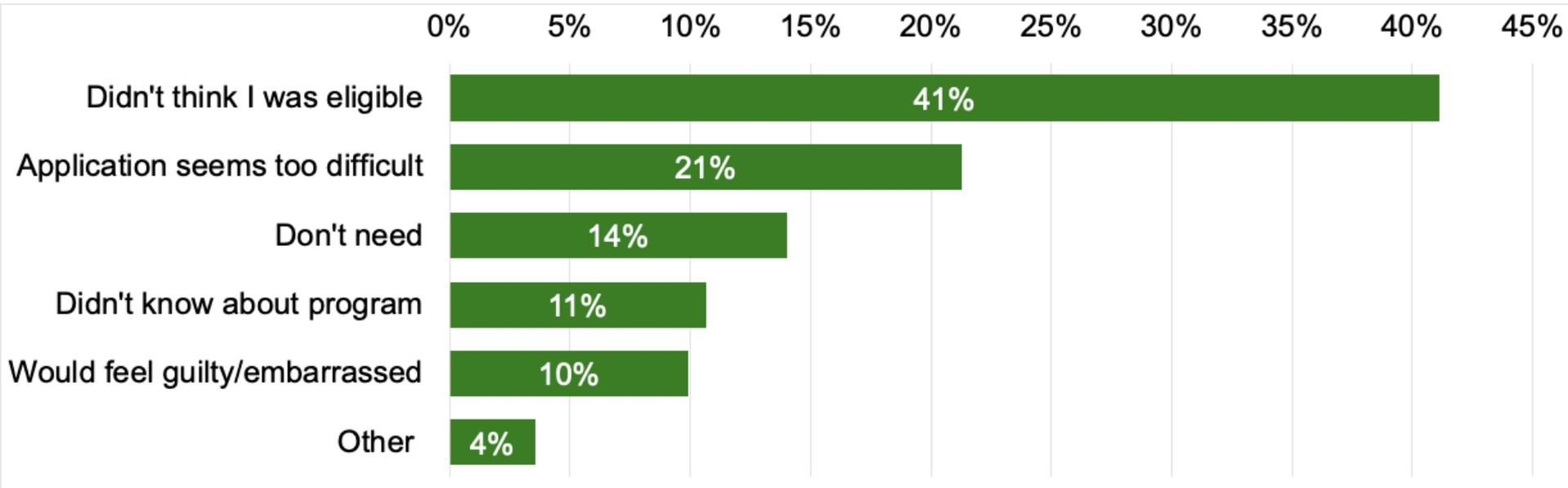
Obstacles to Enrollment

Obstacle 1: Do students even know they are eligible for CalFresh? (N=195)

- Students who hadn't heard of or who hadn't applied for CalFresh were provided with a CalFresh program description and its eligibility criteria.
- Asked whether they thought they might be eligible based on this information
 - Yes, I may be eligible
 - No, I don't believe I am eligible
 - I am not sure I meet eligibility criteria



Why hadn't these students applied?



Primary reasons are not knowing if they are eligible and the application seeming too difficult. Guilt and stigma not major issues.

Obstacle 2: Difficulties with the application process among students who have applied (N =130)

Issue	% agree/strongly agree
Difficulty getting SD County help	69%
Application process difficult	45%
Difficulty locating paperwork	42%

Do applicants feel guilty or embarrassed about applying for CalFresh? (N=130)

75% of those who had applied disagreed or strongly disagreed that they felt guilty or embarrassed about applying for CalFresh benefits.

“List up to three words that come to mind when you think about the CalFresh program for college students.”

A word cloud of responses to the survey question. The words are arranged in a non-linear fashion, with 'helpful' being the largest and most central word. Other prominent words include 'accessible', 'free', 'useful', 'beneficial', 'grateful', 'amazing', 'equity', 'food', 'nice', 'great', and 'necessary'. The colors of the words vary, including shades of orange, green, and maroon.

necessary free useful
great
helpful
amazing beneficial
equity grateful
food nice accessible

Concluding Remarks

Conclusions

1. **Almost all** students heard of CalFresh and **nearly half had** applied.
2. Approximately **20% of surveyed students are currently enrolled in CalFresh.**
3. CalFresh acceptance rate was **47%**, although students who received **application assistance had a higher acceptance rate (e.g. Hub support).**
4. Common barriers to applying to CalFresh include **not being aware they are eligible** and **difficulties with the application process.**
5. LPIE criteria inclusion nearly **doubles CalFresh eligibility.**

Recommendations

1. Increase student **awareness** of their eligibility
2. Assist UCSD departments with capstone or universal internship programs to apply for **LPIE designation**
3. **Effective application support** through UCSD the Hub Basic Needs Center and SD County CalFresh



Thank You!





Triton Food Pantry

The Egg-cellent Evaluators

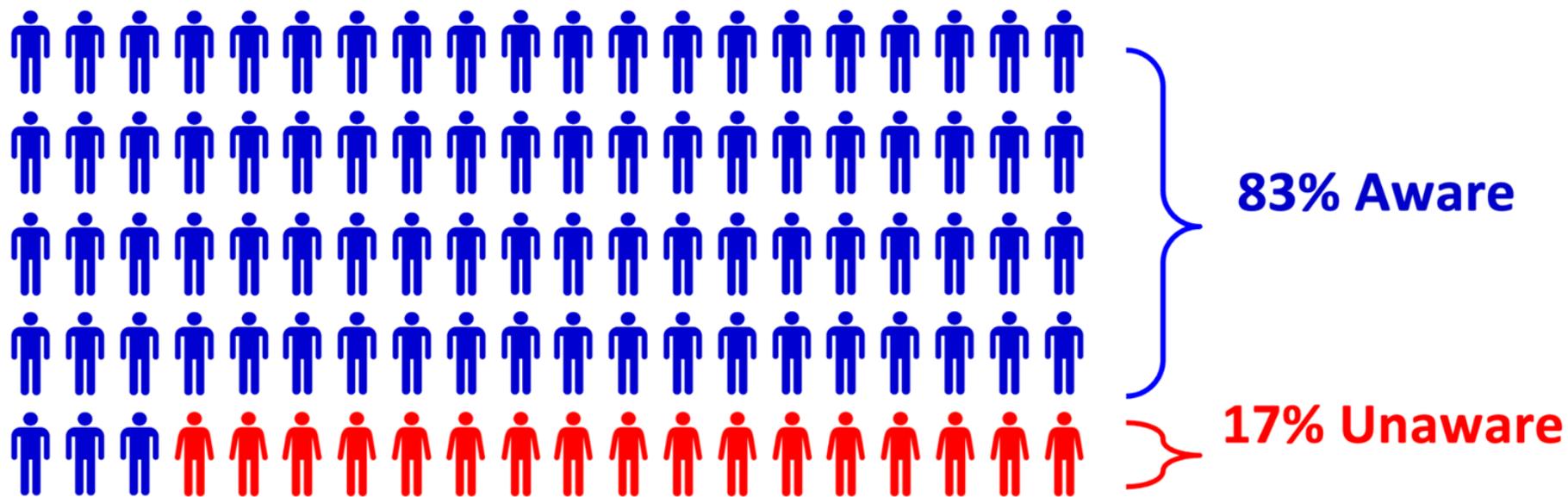
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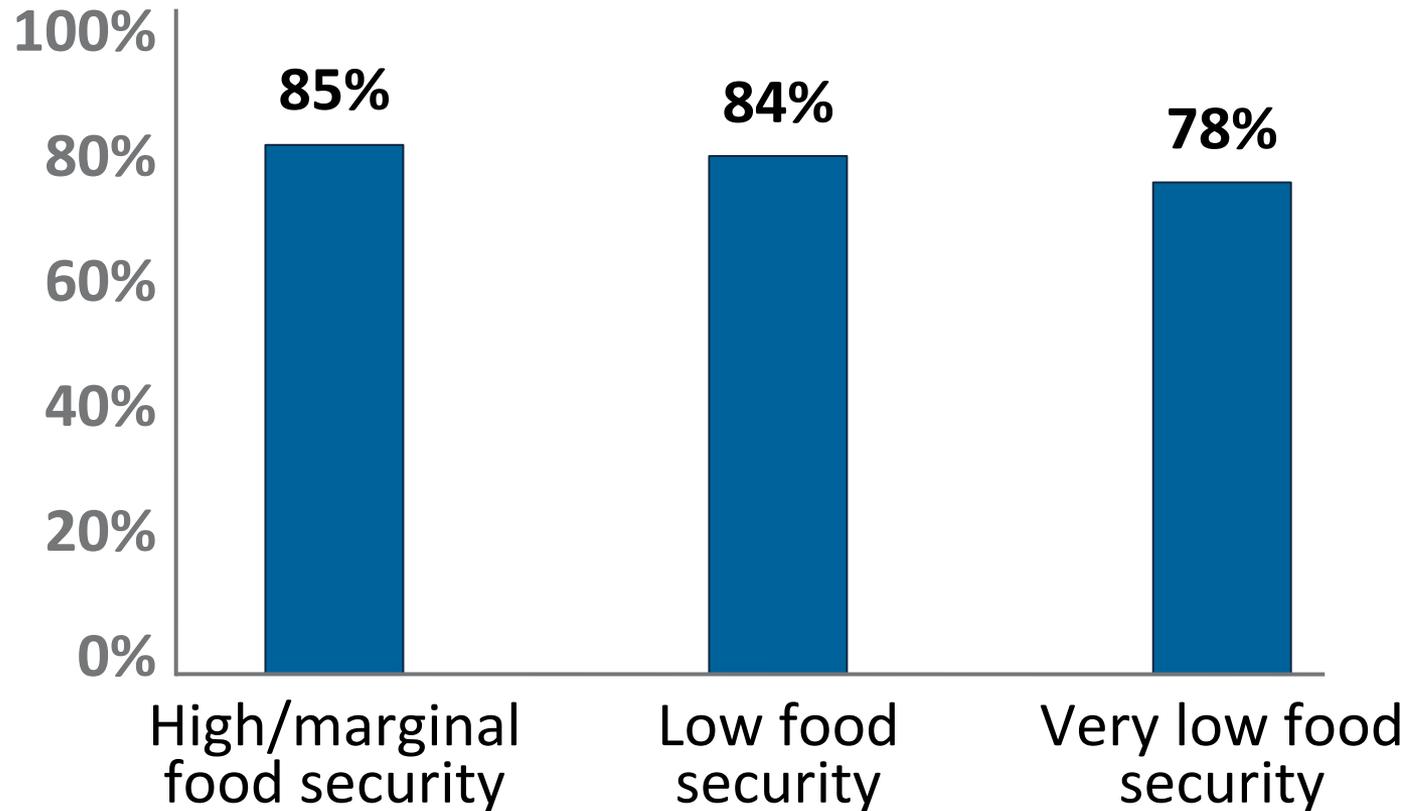
Objective 1: What percentage of students are aware of the TFP?

“Have you ever heard of the Triton Food Pantry?” (N= 370)



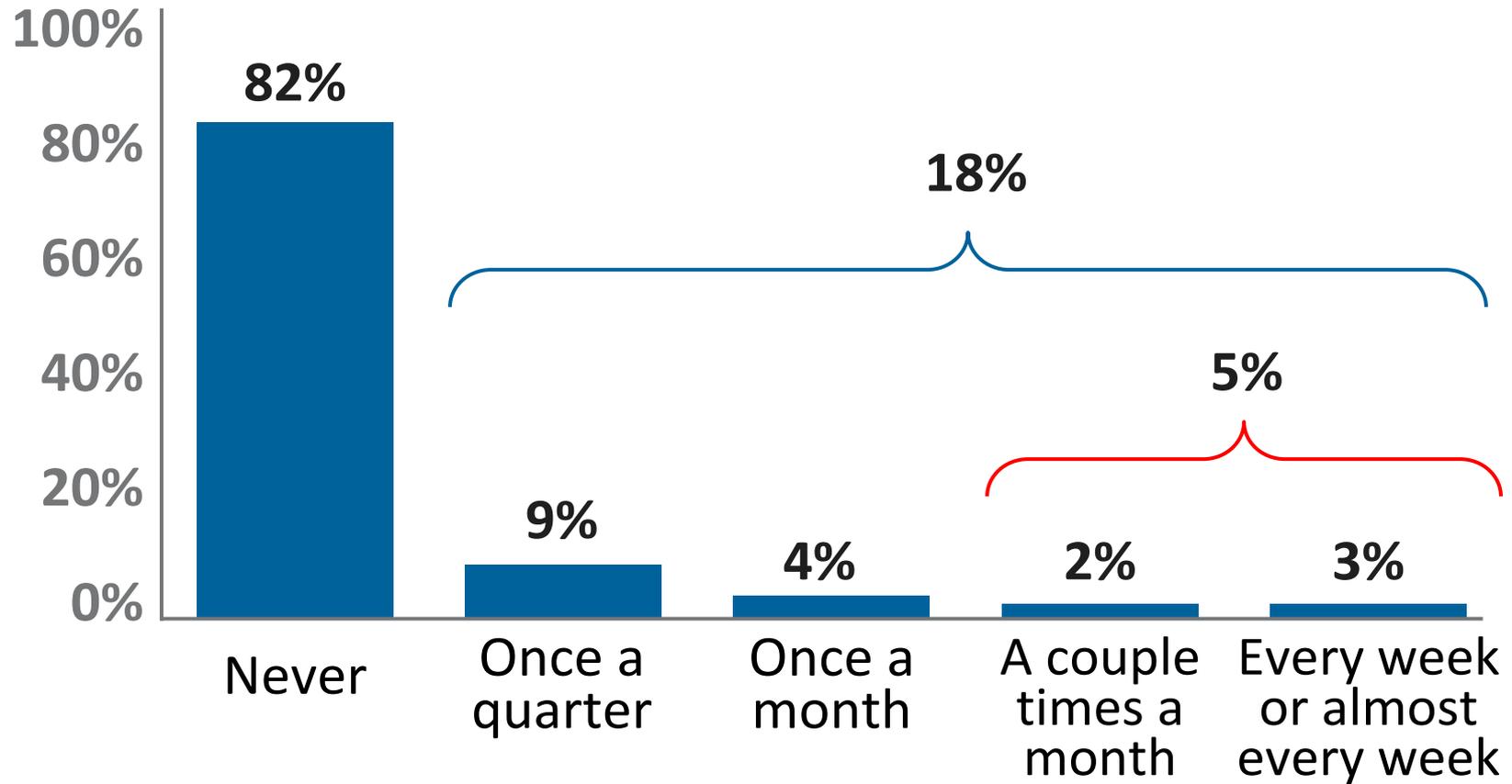
4 in 5 students are aware of the TFP

Does awareness differ by food security status? (N= 348)



Objective 2: Do students use the TFP, and if so, how often are they using it?

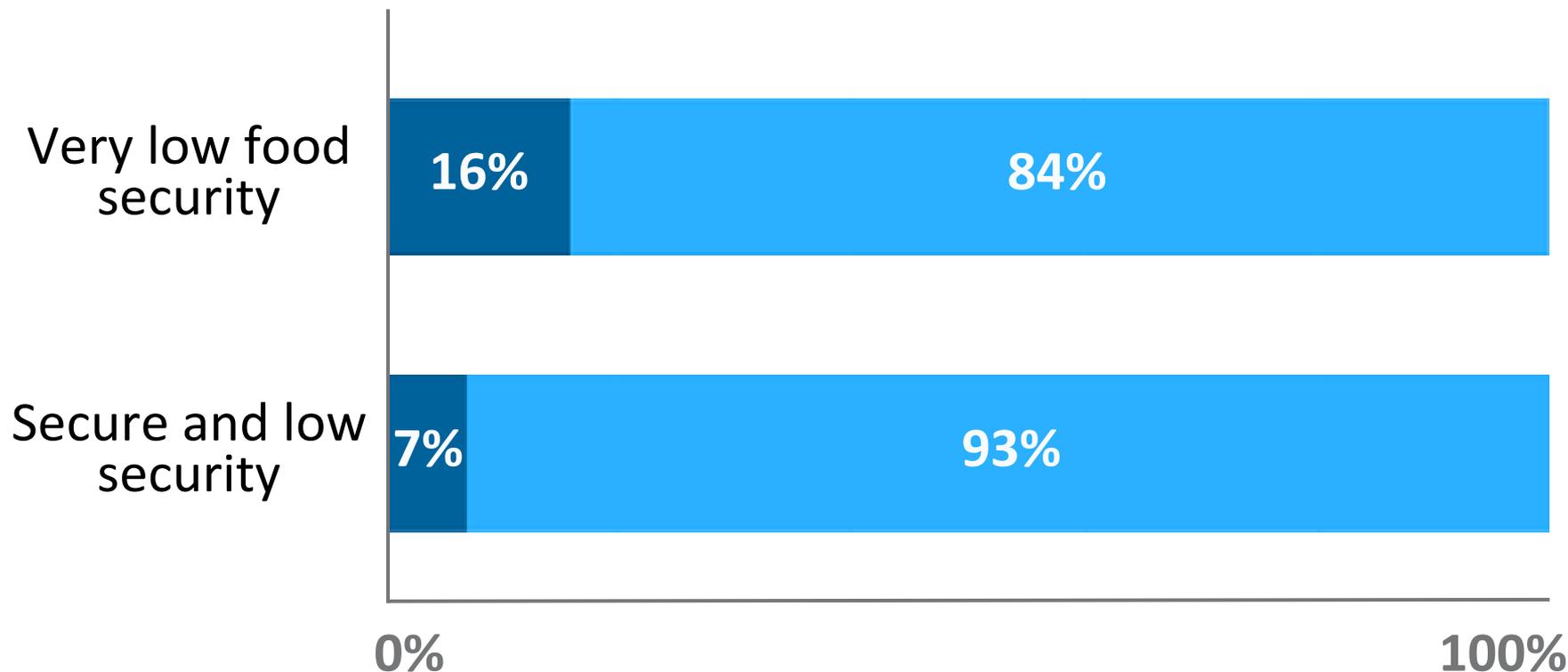
How often have students used the TFP during the current 2023-24 school year? (N= 299)



1 in 5 students have ever used the TFP

Objective 3: What are the characteristics of the frequent users of the Triton Food Pantry?

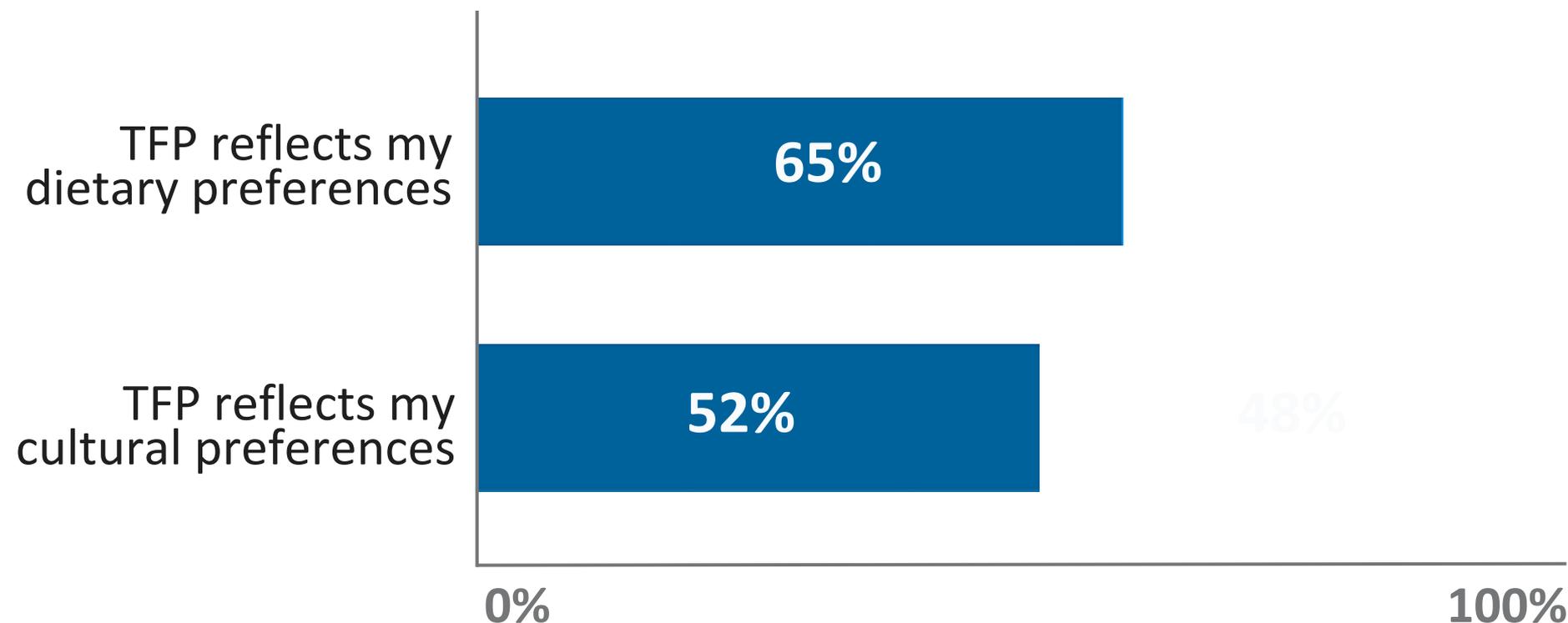
Are very low food security students more likely to use the TFP > once a month? N= 299



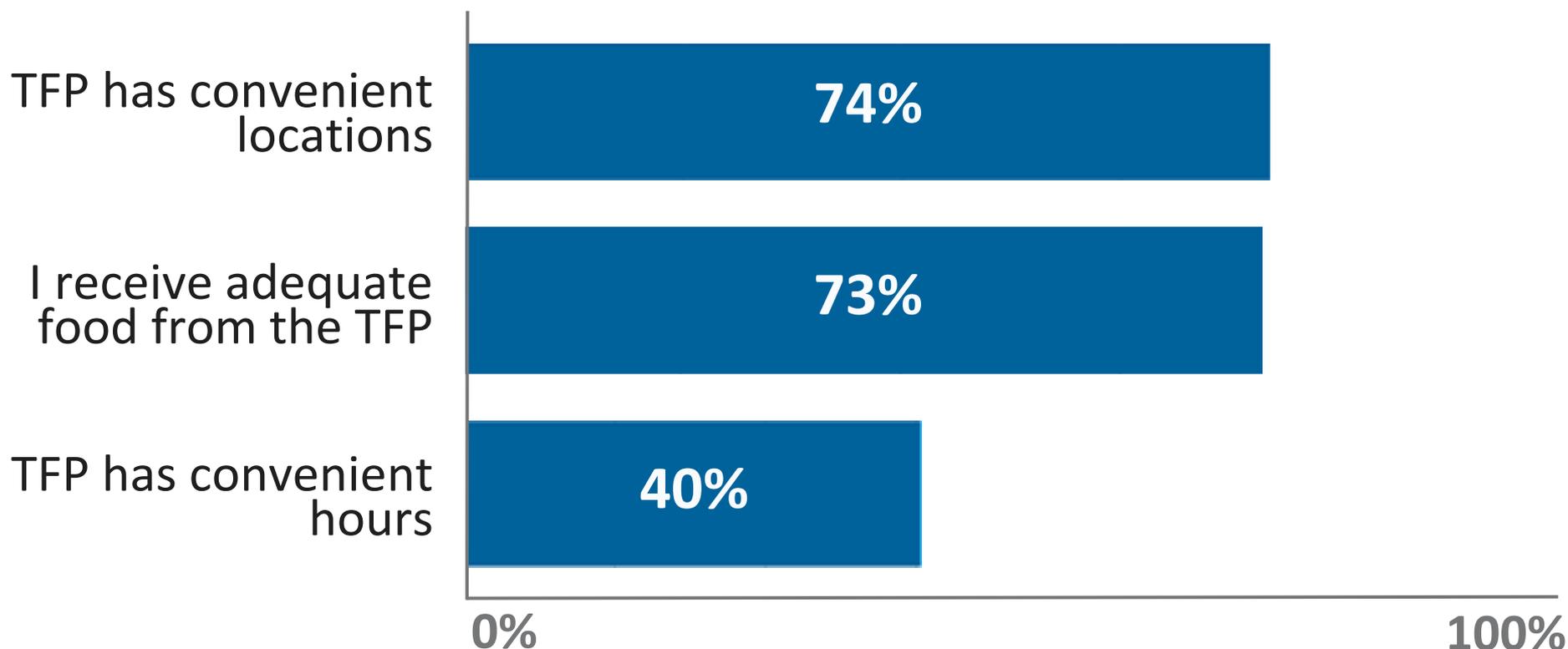
Students with very low food security were 2.3 times as likely to regularly use the TFP; $p = 0.023$

Objective 4: Among students who have used the TFP, what do they think of it?

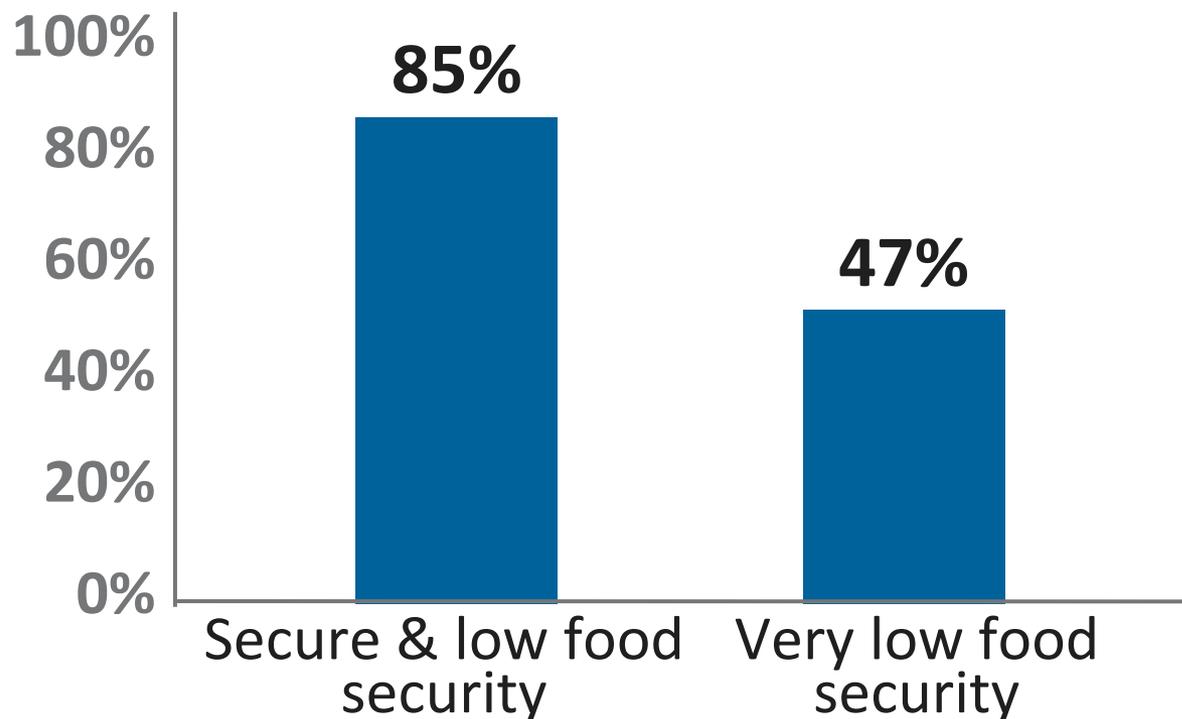
Percent of students who strongly agree or agree with the following statements: (N= 52)



Percent of students who strongly agree or agree with the following statements: (N= 52)

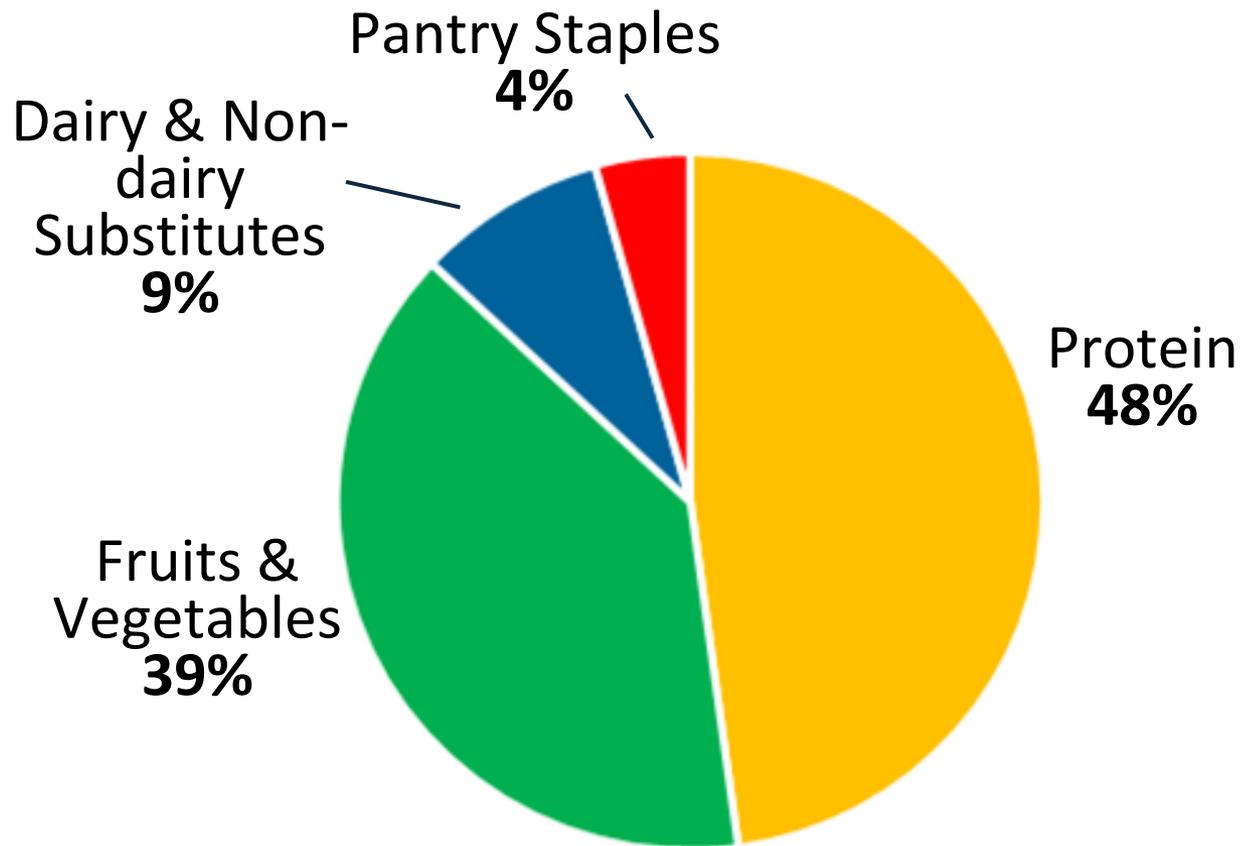


Percent of students who strongly agree or agree that they receive adequate food from TFP based on food security status (N= 51)



Students with very low food security were 0.6 times as likely to agree that they receive adequate food from TFP ($p=0.007$)

Items that students would MOST like to see more often at the TFP (N= 46)



Objective 5: What are students' perceptions about the Triton Food Pantry and its users, and does it differ between food secure and insecure students?

Perceptions of All Users



Perceptions by Food Security Status

Food Secure



A word cloud for 'Food Secure' featuring terms like 'free', 'helpful', 'important', 'accessible', 'resource', 'amazing', 'lines', 'restrictive', 'thankful', 'hours', 'busy', 'security', 'food', 'long', 'support', 'good', and 'lines'. The words are in various colors and sizes, with 'free' and 'helpful' being the largest.

support
resource
amazing
good lines
accessible
restrictive
long free thankful
security food hours busy
helpful
important

Food Insecure



A word cloud for 'Food Insecure' featuring terms like 'free', 'helpful', 'food', 'hungry', 'good', 'canned', 'students', 'healthy', and 'busy'. The words are in various colors and sizes, with 'free', 'helpful', and 'food' being the largest.

students healthy
canned helpful
free
hungry good food
busy

Conclusions

- TFP awareness is high, but usage is low.
- Food security status is not associated with TFP awareness.
- Regular use is 2.3 times higher among VLFS students, but does not exceed 20%.
- More than half of VLFS students feel that they are not receiving adequate food from the TFP.
- Students would like to see more culturally representative foods and convenient hours.
- Students would like to see protein foods more often.
- All students have similar positive perceptions of the TFP.

Recommendations

- Outreach
 - Use alternative channels to promote use (i.e. RAs, OLs...)
 - Notifications of approximate stock status
 - Target very low food secure students
- Understand the needs of TFP frequent users to increase awareness and use by VLFS students
 - Survey to meet cultural preferences
 - Allocate funds for protein foods and fruits/vegetables
- Increase accessibility
 - Simplify website
 - Increase TFP hours

Thank You!

UC San Diego

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HUMAN LONGEVITY SCIENCE**



**TRITON
FOOD
PANTRY**

STAR presents

Food Recovery Network

Shria Bulusu, Tomi Oginni, Amy Trinh, Rachel Kitay

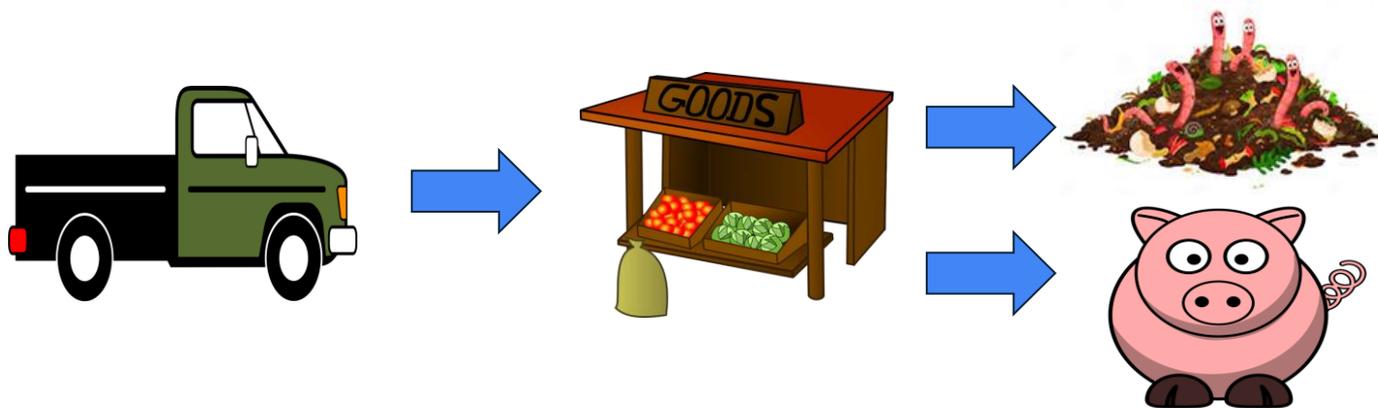
Food Recovery Network



- National organization with chapters across various universities
- UCSD chapter founded in 2016
- Focuses on eliminating food waste locally while serving as a supplementary access point for nutrition

How it works

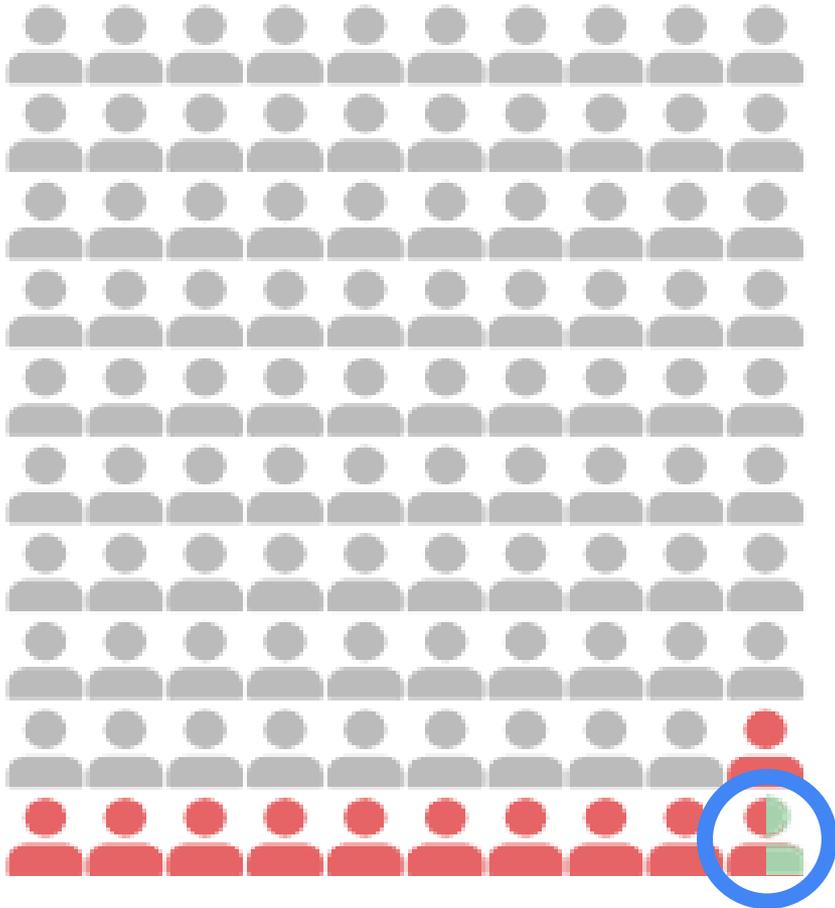
- Community Partners: HDH dining halls and markets, Target @ UCSD, local retailers and local farmers' markets
- Recovered up to 15,000 lbs of food per quarter
- Unused food diverted through San Diego Food Bank, Feeding San Diego, and local farms



Student awareness and perceptions



Awareness of the FRN (n=361)



- Only 11% of respondents were aware of the FRN
- Only 5% of those who were aware were using it (0.5% of total respondents)
- Many, however, may be using the FRN unknowingly due to some distributions being hosted at the Hub

Student Perceptions of the FRN

List three words that come to mind when you hear about food recovery.

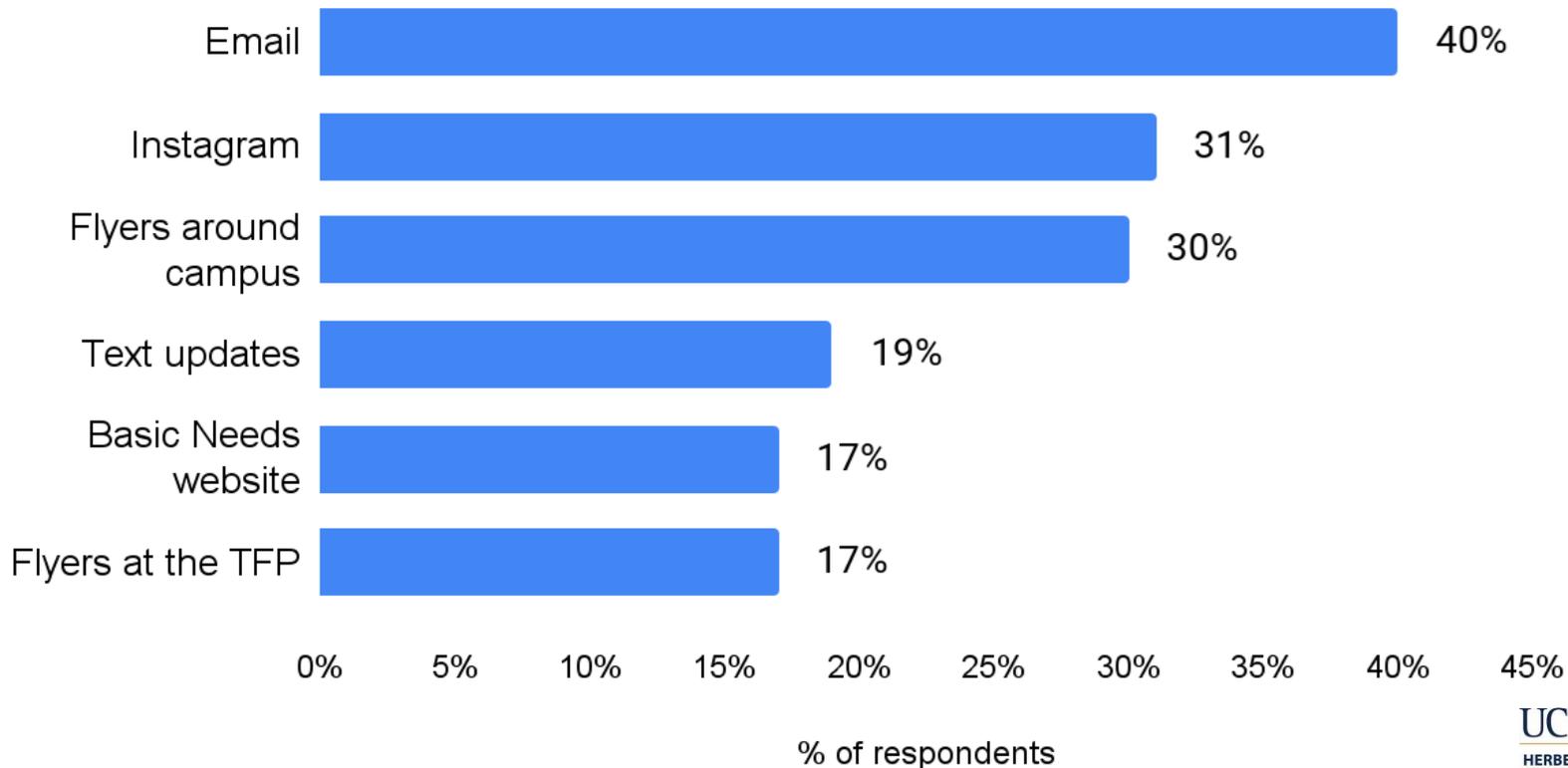
Students had a mostly positive outlook on the FRN after hearing what it was.

free
helpful
food smart
expired
positive
health hunger environmentally-conscious
repurposing-food-waste

Communication preferences

Student communication preferences (n=370)

Source (check all that apply)



Conclusions

- Only 11% of respondents knew of the FRN with even fewer reporting use of the service
- Students have positive outlooks of the FRN but are generally unaware of its existence

Food Recovery Network - Recommendations

- Appropriate branding of the FRN will assist in understanding the effectiveness of the program

Therefore:

- Increase outreach through email, Instagram, and flyers around campus
- Make students aware of the times and locations of food distributions and the types of food available

Thank you!

Safety-Net Programs and Dining Dollars

Fantastic Five

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Safety-net Programs

Background: Food safety-net programs

- CalFresh provides assistance to many food-insecure students but does not cover students who:
 - Face food emergencies
 - Are not US citizens (e.g., DACA, international)
 - Do not meet CalFresh income threshold or other requirements
- UCSD has several alternative safety-net resources
 - Emergency grocery gift cards
 - Emergency Triton Cash
 - iTable for international students
 - Yes Food for DACA students

Objective 1: Are students aware of the safety net programs at UCSD?

Are students aware of the safety-net programs at UCSD? (N=370)

Program	Aware, %
Emergency Triton Cash	11%
Emergency grocery gift cards	8%
Yes Food program	4%
iTable program	3%
Any program	20%

Only 1 in 5 students had heard of ANY of these programs

Are students aware of the safety-net programs at UCSD? (N=370)

Program	Aware, %
Emergency Triton Cash	11%
Emergency grocery gift cards	8%
Yes Food program	4%
iTable program	3%
Any program	20%

Only 1 in 5 students had heard of ANY of these programs

Objective 2: Have students used any of these programs?

Have students used any of these programs? (N =370)

Program	Aware, %	Used, %
Emergency Triton Cash	11%	1%
Emergency grocery gift cards	8%	1%
Yes Food program	4%	0%
iTable program	3%	1%
Any program	20%	3%

Only 1 in 30 students had used ANY of these programs

Dining Dollars

Dining plans at other California universities

- Meal swipes
 - Allocated number of swipes in a given period of time: per week/quarter/semester
 - Comparable to a debit card with a declining balance
- Swipe in for a given meal
 - Access to all-you-can-eat buffet
 - Must eat all food in the dining hall
 - To-go meals are prohibited
- Menu typically not released beforehand

HDH Dining Dollar Program

- No meal swipes; Dining Dollars associated with a real monetary value: \$1 Dining Dollar = \$1 USD
- A la carte meal and/or grocery purchase in 14 campus dining halls and markets
- Campus residents must purchase annual dining plan
 - Gold Plan (3 meals/day, 5 days a week)
 - Blue Plan (2 meals/day, 5 days a week)
 - Triton Plan (1 meal/day, 5 days a week)
- Designed for flexibility and choice; assumes students find other sources for remaining meals
- Meals covered by plans are only estimates; assumed \$26/day x 5 days with Gold Plan and \$16/day x 5 days with Blue Plan

HDH Dining Dollar Program

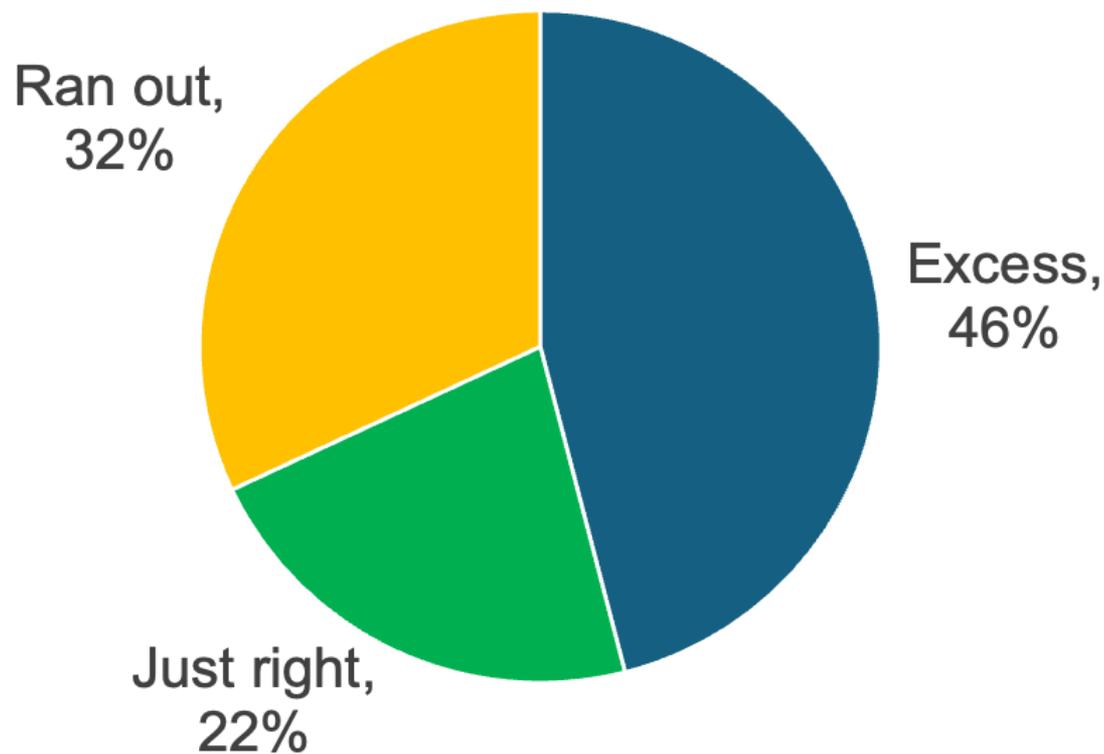
Breakfast \$4 – \$8	Lunch \$6 – \$10	Dinner \$8 – \$14
 <p>Bagel Bar</p>	 <p>Turkey Sandwich Waffle Fries</p>	 <p>Rotisserie Chicken Roasted Cauliflower Curried Vegetables</p>
 <p>Breakfast Scramble</p>	 <p>Grilled Lavash Wrap</p>	 <p>Pork Belly Ramen</p>
 <p>Yogurt Berry Bowl</p>	 <p>Cheeseburger French Fries</p>	 <p>Lilo Poke Bowl</p>

Please note that offerings are sample and are subject to change.

- Cost of individual entrées: \$4-\$14
- Estimate for three meals/day (entrée only): \$18-\$32
- Students often spend more: purchasing sides, extra protein, add-ons, beverages, dessert
- No discounted special of the day

Objective 3: To what extent do dining dollars cover the suggested number of weekly meals, and how do students pay for other meals?

Dining Dollar status at end of most recent year on campus (N = 139)



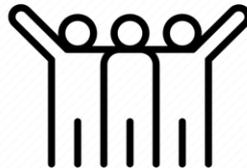
Where do students obtain additional meals? (N=159)

Bought food/groceries with my own money or money that my family gave me



67%

Friends/family provided me with meals/groceries



31%

Bought food/groceries using CalFresh benefits



29%

Used Triton Cash/bought more Dining Dollars



28%

Food from Food Pantry/Food Recovery Network



6%

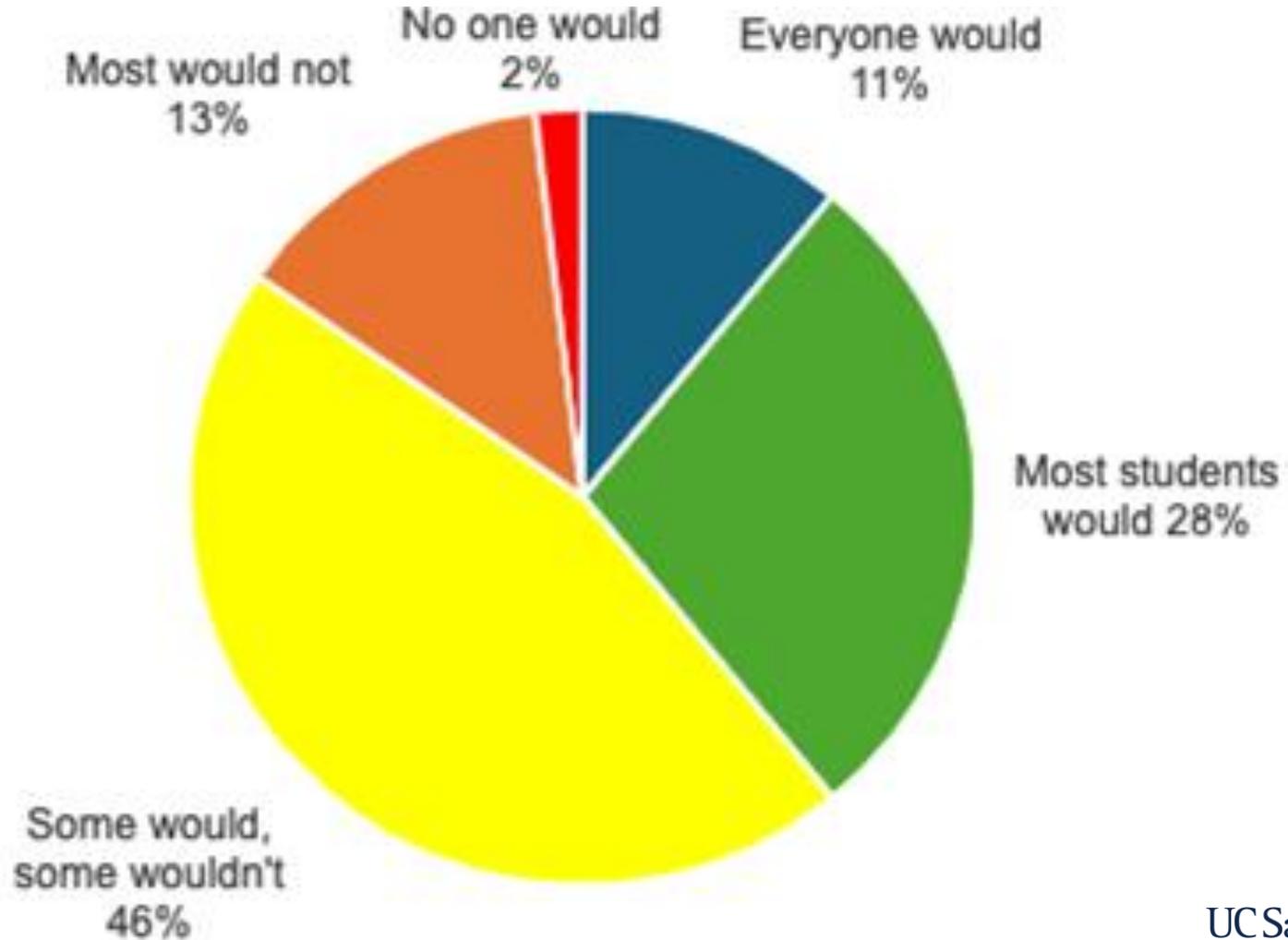
Emergency grocery gift cards/iTable/Yes Food



2%

Objective 4: Would UCSD students be willing to participate in a dining dollar donation program?

Would UCSD students be willing to participate in a dining dollar donation program? (N=156)



Conclusion & Recommendations

Conclusions

- Student awareness and use of food safety-net programs are low (20% and 3%, respectively)
- Almost a third of students ran out of dining dollars before the end of the year, nearly half had excess dining dollars
- Many students would be willing to donate unused Dining Dollars to students in need

Conclusions

- Upcoming updates to HDH Dining Dollar Plan (Effective Fall 2024)
 - No expiration on Dining Dollars for students who remain enrolled on a dining plan
 - Increased Triton Cash with all dining plans
 - New plans:
 - Commuter Plan (Triton Cash > Dining Dollars)
 - Yellow Plan
 - Trident Plan

Recommendations

- Publicize these safety-net programs to students
- Obtain more financial support to expand accessibility and strengthen programs
- Improve overall transparency with students regarding unused Dining Dollars
- Consider implementing a Dining Dollar donations program at UCSD to provide relief for campus residents facing food insecurity
- Monitor ongoing survey of food insecurity and Dining Dollar status among on-campus students



Triton Cash

- Applicable to both dining halls/markets, *and* on-campus (unaffiliated with UCSD) restaurants
- Restaurants include:
 - All restaurants in Price Center (Burger King, Panda Express, etc.)
 - Others such as Blue Bowl, Shake Smart
- \$50-\$100 Triton Cash included in Blue and Gold Dining Dollar plans
- Can also be used in UCSD Bookstore