Deep dive into food insecurity in higher education

Suzanna Martinez, PhD, MA
Assistant Professor, UCSF
Lead Researcher, UC Basic Needs Security
Presentation Map

State of the problem

Food insecurity in CA public higher ed

Factors related to food insecurity

Policy implications
State of the Problem
Student Food Insecurity in 2014

- 59% Oregon state univ. (n=354)
- 27% U Hawaii, Manoa (n=410)
- 39% City Univ. New York (n=1086)
- 56% Maryland community colleges (n=301)
- 14% U Alabama (n=557)
- 39% 10 Community Colleges (n=4312)
- 35% Illinois univ. (n=1882)
- 14 to 56% N=9375 students

40% U Arkansas (n=473)
The field grows...

56% Maryland community colleges (n = 301)

48% 8 Community colleges and 26 4-yr Universities (n = 3,752)

59% 70 Community colleges (n = 33,934)
Systematic review of food insecurity (28 studies)

Prevalence of food insecurity, %

Year of data collection

Weighted mean (SD): 47.2% (5.1)

Unweighted mean (SD): 37.4% (15.7)

Source: Nazmi et al., JHEN 2018
8 studies using USDA food security module

Source: Nazmi et al., JHEN 2018

- 43.5% (unweighted)
- 50.9% (weighted)
GAO Food Insecurity Report (Jan. 2019)

>30% U.S. college students experience food insecurity (21 studies)

9% to > 50% food insecurity:
31 studies of U.S. college students

Recommended that FNS:
1) Improve student eligibility information on web
2) Share information on approaches that state SNAP agencies’ are taking to help eligible students.
FOOD INSECURITY in California Public Higher Education

UC San Diego Food Pantry
University of California 10 Campus System

- Student enrollment (in 2013)
  - 72,500 low-income
  - 40% low-income backgrounds
  - 25% first-generation college-going
- Attending UC
  - 52% students' tuition fully covered by financial aid programs
  - 71% receive some form of financial aid

http://universityofcalifornia.edu/news/how-uc-serves-low-income-students
First UC Study (2015; N= 8932)

Student Characteristics

• 66% Female
• 76% 17-24 years old
• 34% Asian
• 31% White
• 21% Hispanic
• 2% Black
• 73% Undergraduate
• 58% Living off campus
• 63% Received financial aid

Source: http://regents.universityofcalifornia.edu/regmeet/july16/e1attach.pdf
42% food insecurity, past 12 months

2015 data
- 23% low food, 19% very low food
- N=8,932
- Random sample
- 14% response

Martinez et al., JHEN 2018
Undergraduate (n=63,000)
Graduate (n=6,764)

2016 data
- Census sample
- 33% response

Undergraduates
- White: 35% (5% Δ)
- Black: 57% (2% Δ)
- Hispanic: 26% (1% Δ)

Graduates
- White: 44% (4% Δ)
- Black: 62% (2% Δ)
- Hispanic: 57% (2% Δ)

Δ = difference
CSU 23 campus system
2016 data

In the past 30 days
20% low food security
22% very low food security

• N=24,324
• Census sample
• 5% response
In the past 30 days
20% low food security
30% very low food security

2016+2018 data

Food insecure
50%

N=32,256
Census sample
Response rate 5%

57 of 115 community colleges
Factors related to food insecurity
More students experiencing food insecurity were from minority groups and in their 2nd to 4th year.
Table 5. Odds ratios of student risk factors on food insecurity among University of California students surveyed in Spring 2015 (n = 8554).\(^a\)

<table>
<thead>
<tr>
<th>Student factors</th>
<th>OR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age group (in years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17–24</td>
<td>1.6</td>
<td>1.1, 2.3</td>
</tr>
<tr>
<td>25–34</td>
<td>1.6</td>
<td>1.1, 2.3</td>
</tr>
<tr>
<td>35+</td>
<td>1.00</td>
<td>Reference</td>
</tr>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic black</td>
<td>1.7</td>
<td>1.2, 2.5</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.8</td>
<td>1.5, 2.3</td>
</tr>
<tr>
<td>Asian</td>
<td>1.3</td>
<td>1.1, 1.6</td>
</tr>
<tr>
<td>Mixed race/other</td>
<td>1.4</td>
<td>1.2, 1.7</td>
</tr>
<tr>
<td>Non-Hispanic white</td>
<td>1.0</td>
<td>Reference</td>
</tr>
<tr>
<td><strong>Socioeconomic status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Childhood history of food insecurity</td>
<td>7.4</td>
<td>5.8, 9.4</td>
</tr>
<tr>
<td>No childhood history of food insecurity</td>
<td>1.0</td>
<td>Reference</td>
</tr>
<tr>
<td>Received need-based financial aid, grant, scholarship, loan</td>
<td>1.6</td>
<td>1.3, 2.0</td>
</tr>
<tr>
<td>Did not receive need-based financial aid, grant, scholarship, loan</td>
<td>1.0</td>
<td>Reference</td>
</tr>
<tr>
<td><strong>Academic year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-year undergraduate</td>
<td>2.0</td>
<td>1.4, 2.8</td>
</tr>
<tr>
<td>Second-year undergraduate</td>
<td>2.7</td>
<td>2.0, 3.5</td>
</tr>
<tr>
<td>Third-year undergraduate</td>
<td>3.0</td>
<td>2.5, 3.7</td>
</tr>
<tr>
<td>Fourth-year undergraduate</td>
<td>2.6</td>
<td>1.8, 3.7</td>
</tr>
<tr>
<td>Fifth-year or more undergraduate</td>
<td>4.1</td>
<td>2.8, 6.2</td>
</tr>
<tr>
<td>Graduate or other professional</td>
<td>1.0</td>
<td>Reference</td>
</tr>
</tbody>
</table>

\(^a\) Odds ratio and 95% confidence interval adjusted for age, sex, race/ethnicity, socioeconomic status, and academic year.
More students from underrepresented groups experiencing food insecurity

UC 2016 Data

Yes, 56%
No, 35%

Yes, 61%
No, 44%

Yes, 51%
No, 43%

Yes, 52%
No, 42%

Year Enrolled

1st yr, 41%
2nd yr, 45%
3rd yr, 46%
4th yr, 44%
5th yr, 57%
6th yr+, 59%

Family income

Independent, 59%
$0-49K, 55%
$0-99K, 46%
$100-149K, 36%
>$150, 27%

Food insecurity impacts all students regardless of income
I’ve heard [of] it. I don’t use it. It feels kind of weird to like intellectualize this process that just comes down to like, I’m hungry, and I don’t have money to buy food, you know.” — Undergraduate student

“I try to allocate [my refund check] for housing because housing is like really, really important, but what’s left over is like nothing for food.” — Undergraduate student

“The physiological effects of having poor quality of food really affects the way you think and the way you function as a student. . . Because good grades, ultimately, is a function of how well you are getting your physiological needs met.” — Undergraduate student

“I think an indirect effect that [food insecurity] has on academics is just the fact that people might feel obligated to sacrifice some of their academics to go work a secondary—a part-time—job, just to be able to afford food.” — Undergraduate student

11 Focus groups at UCLA (Spring 2016; N= 82)

Watson, Malan, et al., CA Agriculture 2017
One-on-One Interviews at UC Berkeley (Spring 2017; N=25)

Theme 1: Stress of food insecurity interfering with daily life

Theme 2: Fear of disappointing family

Theme 3: Jealousy or resentment of students in more stable food and financial situations

Theme 4: Inability to develop meaningful social relationships

Theme 5: Sadness from reflecting on food insecurity

Theme 6: Feeling hopeless or undeserving of help

Theme 7: Frustration and anger at the larger institution for not providing enough support

Meza et al., JAND 2019
# No food for thought

**Table 2.** Mental health indicators for 8705 students surveyed in spring 2015 about the past 12 months at University of CA.

<table>
<thead>
<tr>
<th>Have you ever felt ...</th>
<th>Total sample</th>
<th>Food secure</th>
<th>Food insecure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hopeless*</td>
<td>43 (3694)</td>
<td>36 (1912)</td>
<td>46 (882)</td>
</tr>
<tr>
<td>Overwhelmed by all you had to do*</td>
<td>82 (7080)</td>
<td>80 (4229)</td>
<td>81 (1534)</td>
</tr>
<tr>
<td>Exhaustion (not from physical activity)*</td>
<td>76 (6625)</td>
<td>74 (3891)</td>
<td>77 (1470)</td>
</tr>
<tr>
<td>Very lonely*</td>
<td>52 (4494)</td>
<td>47 (2489)</td>
<td>53 (1016)</td>
</tr>
<tr>
<td>Very sad*</td>
<td>55 (4792)</td>
<td>51 (2662)</td>
<td>58 (1112)</td>
</tr>
<tr>
<td>Overwhelming anxiety*</td>
<td>52 (4517)</td>
<td>47 (2447)</td>
<td>56 (1068)</td>
</tr>
<tr>
<td>Overwhelming anger*</td>
<td>28 (2459)</td>
<td>23 (1230)</td>
<td>32 (604)</td>
</tr>
<tr>
<td>Depression that made it difficult to function*</td>
<td>31 (2694)</td>
<td>24 (1284)</td>
<td>36 (680)</td>
</tr>
<tr>
<td>Tremendous stress*</td>
<td>15 (1324)</td>
<td>11 (563)</td>
<td>18 (337)</td>
</tr>
</tbody>
</table>

*Note.* Response options were no [0] or yes [1]; *p < 0.05

Martinez et al. J Health Psychol 2018
Average GPA by food security status (%)

<table>
<thead>
<tr>
<th></th>
<th>Food Secure</th>
<th>Food Insecure</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>49%</td>
<td>29%</td>
</tr>
<tr>
<td>B</td>
<td>39%</td>
<td>49%</td>
</tr>
<tr>
<td>C</td>
<td>9%</td>
<td>29%</td>
</tr>
</tbody>
</table>
# Food insecurity and health outcomes

**Table 2.** Lifestyle behaviors and health factors for 8705 students surveyed in spring 2015 at University of CA; data represent mean (SD) unless otherwise specified.

<table>
<thead>
<tr>
<th>Health factors</th>
<th>Total Sample</th>
<th>Food Secure</th>
<th>Food Insecure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body mass index (kg/m²) ***</td>
<td>23.65 (4.82)</td>
<td>23.22 (4.23)</td>
<td>24.30 (5.55)</td>
</tr>
<tr>
<td>Poor self-report health</td>
<td>3 (2–3)</td>
<td>2 (2–3)</td>
<td>3 (2–4)</td>
</tr>
<tr>
<td>(median, interquartile range)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overweight/obese (%, n) ***</td>
<td>28, 2349</td>
<td>25, 1270</td>
<td>33, 1110</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lifestyle behaviors</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily servings of F/V ***</td>
<td>2.30 (1.38)</td>
<td>2.50 (1.41)</td>
<td>2.00 (1.28)</td>
</tr>
<tr>
<td>No. days of enough sleep ***</td>
<td>3.34 (1.99)</td>
<td>3.64 (1.98)</td>
<td>2.87 (1.91)</td>
</tr>
<tr>
<td>No. days of MVPA **</td>
<td>1.77 (1.56)</td>
<td>1.81 (1.53)</td>
<td>1.72 (1.60)</td>
</tr>
</tbody>
</table>

*Note:* Range for poor self-rated health is excellent (0) to poor (5); no. days of enough sleep and MVPA refers to the last 7 days; fruits and vegetables abbreviated as F/V. *** Independent t-tests between food-secure and food-insecure groups significantly different at $p < 0.001$; ** $p < 0.01$. 

Martinez et al. Nutrients 2019
Food insecurity directly and indirectly related to poor health behaviors, and in turn increased weight status & poor general health.

MVPA = moderate to vigorous intensity physical activity.
What are Students’ Basic Needs?

N=60; 11 focus groups @ 5 UC campuses, Spring 2019 (unpublished)
The Reality

- Food insecurity
- Food is 2nd to housing
- Mentally stressful
- CalFresh
- Skipping meals/Poor diet quality
- On-Campus food $$$
- Long commute to affordable food
- Free food events
Policy Implications
UC Basic Needs Strategy

- Deepen understanding
- Evaluation of interventions
- Proactive Reporting

- Prospective Students
- Admissions
- 1st Year Experience
- CalFresh/FAP
- Skills/Services
- Emergency
- Crisis Resolution

- Local, state, regional, and national
- Policies, structures, decision making

- People
- Funding
- Environment

Research
Sustainability
Prevention
Advocacy
Presenting to UC Regents
HOLISTIC SUPPORT TO ADDRESS STUDENT BASIC NEEDS

Studies across the nation show that U.S. college students are not receiving sufficient financial aid and are struggling with meeting their basic needs, which include consistent access to nutritious food in addition to stable and safe housing. These core aspects are essential to the mental and physical well-being of college students. All three of California’s public higher education systems and stakeholders are committed to addressing student basic needs in a holistic manner to ensure that all students have the opportunity to be successful. As higher education populations, policies and practices continue to evolve, providing access to resources to help alleviate barriers related to basic needs is critical to academic success.

What is the cost of attendance? The total cost of attending college includes tuition and fees, housing, food, transportation, books, childcare, and more. Although California state and institutional aid programs can partially cover tuition and fees, almost all of students attending a California State University, University of California or California Community College, students struggle to pay for the total cost of attendance.

What is food insecurity? Food insecurity refers to individuals or households reporting that they did not have consistent access to nutritious food in addition to stable and safe housing. Food insecurity is considered a barrier to academic success.

What is housing insecurity? Housing insecurity is a broad term that includes inability to pay rent, having to move often, poor housing quality, unsafe neighborhoods, or housing instability. Homelessness is defined by the McKinney-Vento Act as individuals who lack regular and adequate nighttime residences.

Concerns Over College Affordability
- Each year over 300,000 eligible students do not attend Cal Grant because aid is not enough.
- The portion of the state grant that helps cover non-tuition expenses is worth less than $37 today, while non-tuition college costs can exceed $6,000 annually.
- Low-income students spend about half of their income on out-of-pocket costs after grant aid.

Who’s Affected by Food Insecurity?
- 40% of CSU students experience food insecurity.
- 46% of UC students experience food insecurity.
- 26% of UC Graduate Students experience food insecurity.

Who’s Affected by Housing Insecurity?
- 12% of CCC students have experienced homelessness within the past 12 months.
- 52% of UC students experience housing insecurity.
- 11% of CSU students are homeless.
- 9% of UC students are homeless.

California Higher Education Basic Needs Alliance
AB1930 (2016)
Improve access to CalFresh, make it easier for students to qualify for CalFresh

AB453 (2017)
Hunger-Free Campus Bill - food pantries, meal vouchers
One-time $2.5M investment to each UC & CSU

Trailer Bill (2018)
Higher Ed Trailer Bill - $15M investment to UC + CSU to address food insecurity + $3.5M for rapid rehousing

AB 77 (2019)
$1.5M investment to UC + CSU to address food insecurity

GAO 2018 Report
Call out to FNS!

1. EATS (Gomez; CA)
2. BASIC (Harris; CA)
3. Food for Thought (Schiff; CA)
4. Closing the College Hunger Gap Act of 2019 (Hayes; CT)
5. Campus Hunger Reduction Act of 2019 (Chu; CA)
6. STOP Campus Hunger Act (Fudge; OH)
UC progress to date

- Institutional basic needs committees
- Basic needs prevention models
- CalFresh application and enrollment efforts
- Emergency food provision efforts

100%

- Launched basic needs skills development efforts
- Basic Needs Centers to centralize information and services

75%

50%
Acknowledgements

• UC Students
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• UC Student Affairs + Diversity & Engagement
• UC Basic Needs Co-Chairs
• UC Systemwide Basic Needs Team
• Lorrene Ritchie (UC Nutrition Policy Institute)
• Erin Esaryk (UC Berkeley)
• Jessica Barthalow (Western Center on Poverty & Law)
• UC Student Association
• CHEBNA
Basic Needs

- Sufficient healthy Food
- Stability (peace of mind)
- Safe + Secure Housing
- Sleep
- Transportation
- Hygiene

Student Responsibility

University Responsibility
Food insecurity

Free food events

Food pantry

CalFresh

Skipping meals/ Poor diet quality

On-Campus food $$$

Long commute to affordable food

Mentally stressful

Food is 2nd to housing